

## Abstract / Kurzfassung

#### **English**

Contexts of mass housing estates have been found to pose challenges for social life between high-rise residents. In order for social cohesion to develop and persist between neighbors, adequately designed spaces of encounters in the form of social infrastructure are paramount. Employing a single-case study approach with semi-structured interviews and participant observations, this study examines the role of the rooftop swimming pools of Wohnpark Alt-Erlaa in Vienna in fostering local social cohesion. Although issues of accessibility are present, results indicate that the pools fulfil the architect's intention as social infrastructure for the estate: In a casual setting coined by public familiarity, they facilitate new encounters, allow the cultivation of friendships and acquaintances, enable in-group identity formation, necessitate the negotiation of (in)official rules, and promote local pride and identification. Thus, they contribute to social cohesion along all three dimensions of social relations, local identification, and common good orientation. Furthermore, the contestation of access restrictions through non-residents illustrates the position of Wohnpark Alt-Erlaa between openness and closure. These results are relevant for emerging literature on dynamics and design aspects of social infrastructure, as well as for research on the facilitation of social cohesion in mass housing estates.

#### **Keywords**

swimming pools, social cohesion, social infrastructure, housing estate, Alt-Erlaa

#### German

Großwohnsiedlungen stellen häufig eine Herausforderung für Zusammenleben der Bewohner\*innen ihrer Wohnhochhäuser dar. Für die Entwicklung und Aufrechterhaltung sozialer Kohäsion zwischen Nachbarn sind angemessen gestaltete Begegnungsräume in Form von sozialer Infrastruktur von zentraler Bedeutung. Die vorliegende Arbeit untersucht anhand einer Einzelfallstudie mit halbstrukturierten Interviews und teilnehmender Beobachtung die Rolle der Dachschwimmbäder des Wohnparks Alt-Erlaa in Wien zur Förderung örtlicher sozialer Kohäsion. Obwohl die Zugänglichkeit der Schwimmbäder Probleme aufweist, zeigen die Ergebnisse, dass die Schwimmbäder den vom Architekten vorgesehen Zweck als soziale Infrastruktur für die Siedlung erfüllen: Als ein zwangloses, von vertrauter Öffentlichkeit geprägtes Umfeld erleichtern sie neue Begegnungen, ermöglichen die Pflege von Freund- und Bekanntschaften, begünstigen eine gruppenbasierte Identitätsbildung, erfordern die Aushandlung (un)geschriebener Regeln und fördern lokalen Stolz sowie Identifikation. Damit tragen sie in den drei Dimensionen der sozialen Beziehungen, der lokalen Identifikation und der Gemeinwohlorientierung zum sozialen Zusammenhalt Die Infragestellung von Zugangsbeschränkungen durch Nicht-Anwohner verdeutlicht darüber hinaus die Position des Wohnparks Alt-Erlaa zwischen Offen- und Verschlossenheit. Die Ergebnisse der Studie sind sowohl für das aufkommende Forschungsfeld zu Dynamiken und architektonischen Aspekten sozialer Infrastruktur, als auch für Literatur zu Fragen der Förderung des nachbarschaftlichen Zusammenhalts in Großwohnsiedlungen relevant.

#### **Keywords**

Schwimmbäder, Soziale Kohäsion, Soziale Infrastruktur, Wohnsiedlung, Alt-Erlaa

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für Papa

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### 1. Introduction

In August 2025, the Berlin chapter of German Leftist Party *Die Linke* stirred up media controversy with an unconventional proposal: lamenting an increasing need for opportunities to swim and cool off throughout the German capital, party officials suggested that municipal housing actors should set up swimming pools on the rooftops of future residential complexes (Logan 2025). The outcry in online comment sections was immediate: *Far too expensive*, *utterly architecturally unfeasible*, and in any case, *nothing but socialist daydreaming*, commenters were quick to assert.

Well-established examples, however, show that there *is* potential for municipal housing with rooftop pools that are both affordable and structurally sound. In Vienna, this purported socialist dream has materialized into social-democratic reality: Almost 10.000 residents of the limited-profit housing estate *Wohnpark Alt-Erlaa* can access their own, semi-public swimming pools practically in front of – or rather, above – their doorsteps, with half of the estate's fourteen baths located on the rooftops, overlooking the city of Vienna. These pools have become a signature feature of architect Harry Glück, who devised them not merely as sites for aquatic exercise, but specifically as gathering places for residents to meet on eye level, along the motto: "In swimsuits, we're all equals".<sup>1</sup>

The idea of municipal mass housing with rooftop pools concerns three of the currently most pressing global crises: average temperatures are rising, while municipal pools as providing opportunities to cool off experience decay and closures in various countries (e.g. BBC 2025; CBC 2025; DIE ZEIT 2025), gradually making pools a private luxury (Escriva Saneugenio et al. 2024). Simultaneously, a crisis of affordable housing affects populations globally (Coupe 2021), and loneliness and social isolation are increasingly recognized as macro-societal problems (Goldman et al. 2024). The focus of this study pertains to the third aspect, that of a seemingly declining strength of communities; as it investigates the role of swimming pools for fostering social cohesion in Alt-Erlaa. Public attention has framed the residential estate as a role model for social housing (Beckmann et al. 2020), with commentators frequently remarking its high communal spirit - a finding that runs counter to prevailing notions of dense housing estates as anonymous and unadorned. Indeed, research on social cohesion has found that high-rise residency often poses challenges for the development of positive neighborly relations (Gifford 2007; Barros et al. 2019). Under terms like community spaces or social infrastructure, recent literature has begun to explore how providing well-designed spaces for sociality in mass housing can counteract this tendency (Nguyen et al. 2024b).

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<sup>&</sup>lt;sup>1</sup> This is the author's translation of "In der Badehose sind wir alle gleich", a quote frequently attributed to Alt-Erlaa's architect, Harry Glück. The verbatim quote has not been publicly documented; yet those familiar with Glück, such as journalist Wojciech Czaja, have confirmed it as a typical dictum of the architect.

Given these considerations, this thesis follows a three-part research interest. In short, it investigates whether the assertions of high social cohesion in Alt-Erlaa can be confirmed; it analyzes what role its swimming pools play in related processes; and finally, it explores whether strong internal cohesion leads towards elements of isolation and self-containment.

Fundamentally, investigating the role of Alt-Erlaa's rooftop pools as social infrastructure is expected to provide new insights on the under-researched dynamics through which amenities like pools may function as social infrastructure in mass housing. Hence, the thesis aims to explore the following central research question:

# In what ways can semi-public swimming pools in high-rise housing serve as social infrastructure that contributes to neighborhood social cohesion?

In order to approach answers to this question, **chapter 2** first introduces the guiding framework of community as urban culture according to Blokland (2017). This is followed by an assessment of research and criticism on the central concepts of social cohesion, particularly in high-density housing, and social infrastructure, with subsequent elaborations on swimming pools specifically. A summary concludes that the study of semi-public community spaces within housing estates, as well as the conceptualisation of pools as social infrastructure, constitute promising yet underdeveloped academic fields.

**Chapter 3** introduces the research site, Wohnpark Alt-Erlaa, situating it in its local, architectural and historical context as well as describing spatial and demographic characteristics.

In **Chapter 4,** the research questions, the study's methodological approach – a place-based, single-case study that employs the qualitative methods of semi-structured interviews and observations – and underlying considerations are outlined.

The empirical findings are presented in **chapter 5**, structured along the topics of local social cohesion, pools as social infrastructure, and the estate's position between autonomy and integration. The study finds social cohesion to be pronounced throughout the estate, identifies pools as sites that are involved in its facilitation through various underlying dynamics, and presents evidence of Alt-Erlaa exhibiting both impervious boundaries and permeable borders.

These results are discussed in **chapter 6** with reference to the theoretical framework, relevant research, and practical implications.

A conclusion in **chapter 7** completes the thesis, positing Alt-Erlaa's pools as a source of valuable insight on both the potentials and the perils of pools as semi-public social infrastructure in contexts of mass housing.

## 2. Theoretical Framework and Literature

In order to develop a thorough understanding of the subject matter and inform empirical work, this chapter offers a comprehensive review of the current state of art in regards to the study's central concepts. First, this review will outline in broader strokes the study of human co-habitation, guided by Talja Blokland's conception of "community as urban practice" (Blokland 2017) that suggests the idea of seeing community as practiced in social performances. Second, social cohesion as a measure of group interconnectedness is introduced more elaborately, beginning with the concept's historical trajectory and a working definition. Subsequently, neighborhood social cohesion, and the specific characteristics and mediators of cohesion within high-rise and high-density housing will be discussed. One such mediator is social infrastructure, with pertaining literature defining it as places that facilitate social connection reviewed in the third section, followed by discussions on the accessibility, publicness, and design of such places. A conceptualisation of swimming pools as social infrastructure - including their history, their particularites as spaces of encounters, their rare presence in housing projects, and their potential to exacerbate injustices - constitutes the fourth section. Finally, a summary of the literature and its shortcomings completes the chapter.

## 2.1 Context: Researching Urban Community

The practicalities of human co-habitation are perhaps the quintessential subject of social sciences, and the range of authors who have theorized about community and its conditions, forms, and consequences is vast - complicating attempts to pinpoint the object of inquiry for scholars concerned with community. One such attempt for a conceptual foundation is made by Blokland (2017) in her seminal study of community as urban practice, providing a theoretical framework that guides the understanding of the thesis. An urban scholar frequently dealing with topics like belonging and encounters in the public realm, Blokland draws on a rich array of sources to find new conceptualisations of community appropriate for contemporary developments like globalization and hypermobility. For this purpose, she first outlines how community has historically been theorized by two main schools of thought.

## Origins: From Place-Bound Collectives to Personal Networks

The first of these two, chiefly characterised by the fear of a loss of community in a context of increasing urbanisation processes, closely relates to the emergence of sociology as a scientific discipline. Important proponents of this approach were early sociologists like Simmel (1903), describing overstimulating city life as producing a 'blasé attitude' of indifference and loneliness, or representatives of the Chicago School of Sociology, like Wirth (1938), who emphasized how density and heterogeneity reinforce alienation by making urban ties more fleeting and fragmented. According to Blokland, this first strand sees

community as "a social entity situated in physical space with implied shared and fixed lifestyles and a notion of collective behaviour" (2017: 27). Hence, this conception entails a perspective of community as normatively desirable and explicitly rooted in place, emphasizing the relevance of proximity and spatial boundaries for the ways individuals act and embed themselves socially. While scholars subscribing to this school of thought are united in their impression of a demise of community, responses to this alleged deficiency differ: from a neoliberal call for individualised self-help to conservative fears of moral jungles or a social-democratic encouragement of local, bottom-up communities (ibid: 143).

Influenced both by the diagnosis of increasingly mobile, spatially detached societies and the introduction of mathematical tools into social sciences, social network analyses (SNA) constitute a second, more recent theoretical strand of investigating community. Disputing the idea of a bounded, clearly delineated social unit, its proponents posit that community emerges from patterns of relationships and interactions throughout multiple spaces and scales (Blokland 2017: 41f). Instead of being defined by geography or membership, community is seen as shaped by the density, strength, and networked configuration of connections among individuals, groups, or organizations. Coining the terms of strong and weak ties, Granovetter (1973) distinguished between close relationships and distant, infrequent contacts, suggesting that the latter can in some contexts be more influential than the former, for example by enabling individuals access to helpful knowledge and job opportunities. A continuation of this network-based lens on community is the idea of social capital, indicating how functional relationships enable individual and collective advancement; with Putnam's (2001) distinction between bonding (to 'get by') and bridging (to 'get ahead') social capital constituting a duality of relationships that are more or less close structurally similar to Granovetter's work (Claridge 2018). Moreover, Blokland describes Global South scholars as paramount in adopting and developing SNA, introducing notions of improvisation and temporality and counteracting the Eurocentric tendencies of the demise-oriented school of thought.

While acknowledging how these strands have been groundbreaking for the study of urban community, Blokland claims that both ultimately fail to fully grasp contemporary social realities increasingly shaped by diversity, individualization and hypermobility: The first tradition sees communities as place-bound and enclosed entities, focusing on *roots* and overlooking the relevance of *routes* (ibid: 143); the second reduces them to personal connections, overcorrecting in its renunciation of spatiality and omitting from its view absent ties (ibid: 41); and both views share a tendency to frame community as normatively beneficial while disregarding notions of power.

#### Framework: Community as Urban Practice

To account for these shortcomings, Blokland suggests a cultural lens of *community as urban practice* that foregrounds symbolic practices and their meanings (2017: 50f). She thus posits communities as "collective and cultural figurations brought about through practices" (ibid: 67)

Blokland remains consciously vague in determining what community is, instead focussing on how it comes about. Working with this framework does not, however, mean it is impossible to analyze a group of people or a certain geographical region, but it does imply shifting the unit of analysis from these rigid aspects towards the fluid practices, interactions, and networks of recognition that occur within and beyond the group and place. For Blokland, the relevance of thinking about community follows from the understanding of humans as fundamentally "relational and transactional beings" (2017: 121), which implies that any kind of personal identification process always necessitates social identification; and any social identification process that produces a "we" process necessitates the simultaneous production of a "they" (ibid: 145), dynamics she calls boundary work (ibid: 66). Such processes of boundary work are mediated by power relations, which are therefore relevant for community not only narrowly in moments of decision making, but indeed in every moment of interaction between individuals (ibid: 127). Blokland specifically scrutinizes feelings of belonging; highlighting that they are not synonymous with having roots or prolonged residence somewhere, but can emerge in more anonymous and fluid settings (ibid: 143).

#### **Doing Community across Social Ties**

To discuss the actual interpersonal relationships along which boundary work and social identifications take place, Blokland suggests extending the scope of ties beyond the weak-strong-dichotomy of SNA. Building on Weberian concepts of (ir)rationality (to what extent actions (or ties) are based on reasoned thought processes), and sociality (whether they are meaningfully oriented towards others), she proposes instead a two-dimensional framework to place social connections. On one end of the first dimension of rationality, Blokland distinguishes between zweck- (purpose) and wertrational (value) ties, the former deemed conducive towards achieving a predefined goal, the latter describing ties that are consistent with an individual's norms and values. On the other end of this dimension, non-rational ties are based not on deliberate reasoning but on emotional responses (affects) or habitual practices (traditions). The second dimension concerns whether the tie relates to the specific person with their individual qualities and characteristics (social) or just their role or relative position, largely independent of the person itself (instrumental).

Constituting the four corners of this matrix, Blokland identifies four ideal types of ties, as seen in Table 1: Transactions, Interdependencies, Bonds and Attachments.

Table 1: Four Types of Ties (adapted from Blokland 2017: 73)

Ideal Type of Tie	Rationality	Sociality	Example (from the point of view of an arbitrary individual)
Transactions	yes – purpose	instrumental	a street vendor selling newspapers, a fellow train passenger helping with luggage
Interdependencies	no	instrumental	a stranger shouting through the street at night, a politician signing a decree that affects my livelihood
Bonds	no	social	a good childhood friend, an abusive family member
Attachments	yes – value	social	a fan of "my" soccer team, a member of the same religious group

Crucially, none of these ties are predefined as weak or strong, and in different ways, all can facilitate *community*. For Bonds and Attachments, this relationship is fairly straightforward – as socially-oriented ties, they concern individuals' personal networks, which can "in many instances work as [their] personal communities, too" (Blokland 2017: 105). To illustrate how Interdependencies and Transactions – coined by instrumentality and usually considered to constitute superficial or even non-existent ties – contribute to community, Blokland suggests a second matrix.

#### **Relational Settings and Public Familiarity**

This matrix concerns the varying socio-spatial contexts where individuals practice and experience (non-)belonging. Such *relational settings* are positionable on the dimensions of **privacy** and **access**. The dimension of privacy relates to the amount of control an individual has about what personal information it reveals to others; thus, privacy is equivalent to the affective – not geographical – proximity or distance between individuals or groups in a given setting, ranging from the ideal-types of full anonymity to complete intimacy (Blokland 2017: 90ff). Similarly related to matters of control but from a spatial instead of personal perspective, the dimension of access concerns the extent which to enter and leave urban spaces (ibid: 106): On this gradient, relational settings differ according to how many and which people (can) freely access and leave them, positioned between (the ideal types of) fully public and fully private spaces.

Importantly, Blokland makes no claims that any settings are more or less conducive to community - instead emphasizing how relational settings "differ in the possibilities, constraints and specificities of practicing belonging and identification in the urban space" (Blokland 2017: 86). In settings that are located broadly in the middle of this matrix, two dynamics that Blokland discusses as central to community take place: "fluid encounters" and "durable engagements". The former describe unplanned, usually brief and superficial moments of everyday interactions with strangers. Blokland posits that while fluid encounters tended to be denigrated as irritating by early sociologists, and disregarded as irrelevant by social network analysts, they in fact play a crucial role in practices of community, as they constitute moments where individuals can develop familiarity and feel belonging even vis-a-vis strangers (ibid: 71). Durable engagements, on the other hand, describe repeated social practices in institutionalized contexts, or "the social relationships of people who engage with an institution or activity over time and form attachments that do not depend on their interactions as persons" (ibid: 70). Blokland illustrates this with the relationships to other parents in a school's parent-teacher-association, which might be long-lasting (and can evolve into actual ties), but depend largely on the institutional position and role of participants - "when the school closes, [...] most or all of my relations are lost" (ibid: 68).

What unites these dynamics is that together, fluid encounters and durable engagements facilitate the emergence of public familiarity, "a social fabric of the city where [...] individuals are able to socially place others, to recognize them, and even to expect to see them" (Blokland 2017: 117). This concept describes settings where others are known and recognizable through the merit of simply having encountered them before, often without ever having had any explicit verbal interaction. Because relational settings defined by public familiarity clarify expectations about what may happen in a given public place, they help urban dwellers navigate public space and everyday situations through feeling "in the know" (Blokland 2017: 117). While public familiarity can thus produce notions of comfort and trust, its consequences are not necessarily pleasant: Blokland illustrates this with a neighborhood where residents know to avoid crime and trouble by staying inside, utilizing public familiarity, yet with the consequence of confining themselves to their homes (2017: 118).

#### Critical and Practical Remarks

Such assertions also point to a last important remark: "Community does not have to be nice" (Blokland 2017: 118). Akin to critical scholars emphasising how home tends to be framed as intrinsically positively, but in practice is a complicated, sometimes ambiguous or even dangerous place (Højring & Bech-Danielsen 2021), Blokland stresses that community association can have detrimental consequences, such as when it postulates the adherence to harmful social norms or when it exerts control over an individual's bodily autonomy (2017: 118f). Together with explicitly taking into account practices of exclusion

and notions of power as described earlier, these two facets make Blokland's conceptualisation an inherently critical theory.

Situated in an academic context of growing interest into matters of urban conviviality and the relevance of distant ties, Blokland's theory has recently seen increasing scholarly use, with authors applying concepts such as doing community (Sointu & Häikiö 2024), comfort zones (Felder 2020) or public familiarity (Peterson 2017; Zahnow & Corcoran 2024) in various contexts. For the study of an estate like Alt-Erlaa, the conceptualisation of community as a practice is fruitful as it centers everyday interactions as well as intentional or unintentional acts of in- and exclusion, instead of reducing community to residency or network membership. It also allows the consideration of spatial aspects, including, but not limited to, social infrastructure, for questions of sociality, without succumbing to a self-evident equation of community with spatial proximity. Furthermore, her emphasis on public familiarity expands the perspective towards relationships that go beyond close and weak ties, highlighting the role of absent ties and recurring encounters for neighborhood belonging. Finally, the fact that Blokland's framework foregrounds a critical examination of community as a necessarily political concept (2017: 17) sharpens the analytical lens towards questions of power and exclusion.

### 2.2 Social Cohesion – The Glue of Society

A concept that is commonly used to assess the strength of communities more concretely is that of *social cohesion*, introduced and problematized in this section. After an overview on the history of the term and the challenge to pinpoint its meaning, a working definition is presented. The second section elaborates more specifically on local, neighborhood cohesion and its consequences. Finally, contributions on the intricacies and drivers of cohesion in high-density and high-rise housing conclude the chapter.

#### Concept, Dimensions, Criticism

Throughout recent decades, social cohesion has seen increasing interest within both academic research and policy discourses (Berger-Schmitt 2000). Fundamentally, it denotes the interconnectedness within a group, yet concrete definitions and scope of the term vary widely: from empirical-descriptive to normative, spanning multiple scales - e.g. local (see 2.3.2), national (Schiefer et al. 2012), European (CDCS 2004) - and encompassing countless subdimensions. Consequently, numerous authors have attempted the arduous task to synthesise existing literature into comprehensive definitions (Chan, To & Chan 2006; Novy, Swiatek & Moulaert 2012; Schiefer & van der Noll 2017; Fonseca, Lukosch & Brazier 2019; Beauvais & Jenson 2022). Noting that public interest in matters of social cohesion has historically corresponded to times of societal upheavals and restructurings, Fonseca, Lukosch & Brazier (2019) trace the historical origins of the concept back to scholars as early as Gustave Le Bon and Emile Durkheim, who introduced rudimentary understandings of social cohesion as a powerful but homogenising or, respectively, beneficial and stabilizing group characteristic (Fonseca, Lukosch & Brazier 2019: 233).

This thesis subscribes to a conception of social cohesion by Schiefer & van der Noll (2017), themselves building on Chan, To & Chan (2006). Synthesising decades of research and policy documents, Schiefer & van der Noll suggest social cohesion as a multidimensional characteristic of a social entity, assessable at micro, meso and macro levels, and consisting of three subdimensions explained below: "social relations, identification with the geographical unit, and orientation towards the common good" (2017: 579). While shared values, (in)equality, and quality of life are aspects commonly mentioned in the context of social cohesion, the authors find these to constitute relevant "determinants or consequences" (ibid: 579) instead of constitutive parts of the concept, thus omitting them from their definition.

First, **social relations** constitute the perhaps most straightforward subdimension of social cohesion. Hereunto, Schiefer & van der Noll identify components such as the strength of social networks, the aspect most closely related to the idea of social capital; trust, i.e. the belief in others' benevolence and reliability; and civic participation such as association membership

(2017: 585ff). Moving from relational to ideational spheres, Schiefer & van der Noll name **identification with the geographical unit** as the second dimension. This aspect concerns questions such as place attachment and senses of belonging, as well as the formation of individual and social identities, and distinctions between in- and outgroups (ibid: 588f). The third and last dimension is **orientation towards the common good**, which entails a sense of mutual responsibility as well as the "the acceptance of the social order and the compliance to social rules and norms" (ibid: 589); i.e. submitting individual disagreements to the collective good and adhering to the group's – informal or institutionalised – rules. Concludingly, a socially cohesive group is one where the attitudes and behaviours of its members display "close social relations, pronounced emotional connectedness to the social entity, and a strong orientation towards the common good" (ibid: 592).

While a fruitful starting point for analysis, this three-piece conceptualisation is not without issues.<sup>2</sup> Its categories necessarily influence one another and can overlap: participation in localized voluntary work, for example, may arguably relate to all three dimensions. Hence, the distinction between the three subdimensions should be treated less as a clear-cut differentiation and more as a helpful, but provisional analytical tool.

This difficulty to narrow down the concept's meaning, paired with the complicated distinction between its causes, contents and effects, poses great challenges for academic work with social cohesion. Accordingly, Miciukiewicz *et al.* consider it a "Problematic Scientific Concept" (Miciukiewicz *et al.* 2012: 1856). Relatedly, the great variety of definitions complicates operationalization and inhibits comparison between studies. While this thesis aims to combat this phenomenon by adhering to clearly laid out dimensions as described above, the issues of overlapping categories and debatable compararability with related studies remain – in short, not every paper (and, even less so, not every policy document) that *says* cohesion actually *deals with* cohesion in the sense applied here.

Mirroring Blokland's emphasis on the ambiguity of *community*, a second point of contention is the conventionally positive image of social cohesion: Critics problematise both its conditions and consequences, raising questions of exclusion, group conformity pressures, or reproduced inequalities. While research has at times found group homogeneity, in characteristics such as income or ethnicity, to be a conducive factor towards cohesion (Lenzi *et al.* 2013) and related concepts (Putnam 2007); scholars have since challenged this notion by explicitly foregrounding notions of diversity, equality, and associated attitudes in their definitions, by calling in question either the positive association, or the conceptual value altogether, of social cohesion (Portes &

 $<sup>^2</sup>$  Interestingly enough, the authors do their own (miniscule) part for conceptual impreciseness by alternatively referring to the second dimension as "identification with the geographical unit", "attachment", "belonging" (all see Schiefer & van der Noll 2017), and "connectedness" (Schiefer *et al.* 2012).

Vickstrom 2011), or by stressing that the confounding factor for such findings is inequality, not diversity (Dekker *et al.* 2011; Abascal & Baldassarri 2015). Concluding, any comprehensive examination of social cohesion necessitates a critical assessment of its conditions and consequences. As Schiefer *et al.* summarize: "there are forms of cohesion that are detrimental to an open, democratic, and diverse society and threaten its capability to master the challenges of the future in a globalised world" (2012: 10).

### Effects of Neighbourhood Social Cohesion

In the context of major societal reshifts of the 1990s, social sciences rediscovered neighborhoods as the arena of processes of community (Blokland 2017: 41f): In a similar fashion to how industrialization had sparked the emergence of social sciences, scholars were now becoming increasingly interested in how the powerful, macro-societal processes of deindustrialization and globalisation were influencing and possibly uprooting community structures in the Global North. Thus, social cohesion in neighborhoods became a focus of sociological and urban studies (Forrest & Kearns 2001), and frequently problematized bv policymakers. Simultaneously, scholars epidemiology began discussing local cohesion and related factors as drivers of individual and collective health outcomes (Kawachi & Berkman 2000). Still, Blokland (2017) cautions that by itself, what being neighbors implies is residential proximity, not any specific kind of social relation. As lived neighborly relationships differ widely between full social integration, complete alienation and outright hostility, we are reminded that neighborhood social cohesion is intricate and neither natural nor self-evidently positive.

Nonetheless, individuals reporting their neighborhood to exhibit social cohesion are generally found to be healthier in regards to both physical and mental aspects, with specific research focussing on older citizens (Choi & Matz-Costa 2018; Kim et al. 2020), young adults (Breedvelt et al. 2022), or disadvantaged communities (Henderson et al. 2016; Dawson et al. 2019). Robinette et al. (2013) found that "higher perceived neighborhood cohesion predicts fewer self-reported daily stressors, higher positive affect, lower negative affect, and fewer physical health symptoms" (2013: 1), mediate positive health outcomes of environmental characteristics (Kress et al. 2020) such as greenspace (Van Den Berg et al. 2019). Furthermore, scholars have discussed the relevance of neighborhood cohesion for averting child neglect (Maguire-Jack & Showalter 2016) or perceptions of safety (De Jesus et al. 2010); and other disciplines that have explored neighborhood cohesion include public health (Kim et al. 2020) and community-based research (Bateman et al. 2017).

One of the reasons for the benefits of high cohesion facilitates the flows of information and, in consequence, the provision of care, which Fisher & Tronto define as "a species activity that includes everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible. That

world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web" (1990: 40). In tightly knit communities, members can support one another – in social cohesion terms: motivated by local identification, they activate their social relations to exhibit common good orientations. In a neighborhood context, such acts of care can range from small gestures of lending missing cooking ingredients to entrusting others with watching one's kids to, in extreme cases, the decision to step in when a fellow resident appears to be in danger. Related to these aspects is the phenomenon of gossip, neutrally defined as the exchange of social information about others when they are not present, which, both cause and consequence of high cohesion, can bode "inclusive and integrative implications" (Driel & Verkuyten 2022: 591).

Besides health effects, high social cohesion and place attachment within neighborhoods has been shown to be strongly associated with general residential satisfaction (Mouratidis & Yiannakou 2022; Ahmadi et al. 2024) as well as increased happiness (Bekalu et al. 2021; Samavati & Veenhoven 2024). Concludingly, research has found social cohesion to constitute one factor that makes cities livable (Mouratidis & Yiannakou 2022). In light of these benefits, critical scholars emphasise how local social cohesion may both depend on and exacerbate conditions of inequality and segregation. Studying neighborhoods in Santiago, Chile, Méndez et al. conclude that cohesion "works as a form of privilege accumulated by particular residents in particular areas" (2021: 1707). When low residential turnover leads to increased place attachment and a sense of collective ownership of a neighborhood in more established residents, they may furthermore become "less accepting of newcomers of immigrant origin" (Toruńczyk-Ruiz & Martinović 2020). Similarly, studies discussing the complicated relationship of cohesion and ethnic heterogeneity stress the important role of inequalities (Dekker & Bolt 2005), disputing the policy goal of adding 'social mix' to allegedly deprived neighborhoods.

With plentiful literature on drivers of neighborhood cohesion and its components, one frequently investigated factor for social networks, place attachment, and other indicators related to social cohesion has become the built environment (Gifford 2014; Weijs-Perrée *et al.* 2017; Mazumdar *et al.* 2018; Mouratidis & Poortinga 2020; Mouratidis 2021) – including considerations on the influence of high-density housing.

## Cohesion in High-Density and High-Rise Housing

This section aims to explore the specificity of social cohesion in residential settings shaped by high density, mass housing, or high-rise buildings. While plentiful research discusses the social consequences of such contexts, the specific investigation of *residential social cohesion* in high-rise contexts, as Muhuri & Basu (2018) remark, is less frequent.

Generally popularised in the Global North in post-war decades, large-scale housing estate (LHE) developments have seen decades of public and scholarly attention, directed mostly towards their flaws and failures in design and subsequent management. The seminal work "Estates on the Edge" (Power 1997) provides a comprehensive account on the rise and fall of LHEs in Northern Europe, pointing at "liabilities of mass housing" (ibid: 8) that include political disregard, poor maintenance, social disarray and societal stigma, leading to high rates of crime and deviant behaviour. In recent decades, scholars have increasingly explored these complex challenges, the lived experiences of residents, and differing policy and planning approaches, including demolitions or targeted measures framed as urban regeneration schemes (Rowlands, Musterd & Kempen 2009; Hess, Tammaru & Van Ham 2018). Opposing the common image of LHEs as places of despair, systematic comparative studies on residential satisfaction concluded that "at least part of the post-Second World War estates are actually rather nice places to live" (Dekker et al. 2011: 495). Furthermore, scholars have emphasized that the relationship between social factors of LHEs and subsequent quality of life is both highly dependent on local context (Köberl et al. 2024) and subject to temporal fluctuations (Kabisch et al. 2022).

Following the surge of LHEs, scholars began investigating their influence on social issues. By the late 1970s, researchers examining US public housing, for example, increasingly linked building type and density to residents' social relations, finding high-rise dwelling to correlate with isolation, lower participation in associations, limited mutual aid, and weaker social cohesion (Amick & Kviz 1975; McCarthy & Saegert 1978; Rodgers 1982). Interestingly, Rodgers (1982) noted that subjective feelings of crowding were found to correlate only weakly with objective density, suggesting that architectural design could mediate such effects.

More recent scholarly work deals with similar questions in European countries, while other studies reflect the growing relevance of high-rise construction in non-Western contexts. In a Taiwan-based study, Huang (2006) finds very low levels of interaction and social withdrawal between high-rise dwellers. For deprived residents of Glasgow, Kearns *et al.* (2012) note that among other social and psychosocial outcomes, frequency of contact with neighbors was worse for high-rise residents, although residing on higher floors partially mitigated this effect. Noting a lack of research on the influence of housing typologies on place attachment, a recent study on estates in Budapest found that "low-rise estates generally foster a more positive perception of the social environment, stronger community connections, and higher trust among neighbours" (Nzimande & Morris-Kolawole 2024: 1) than high-rises. Post-occupancy evaluation studies come to similar results, describing "anti-social behavior, lack of social cohesion, and lack of social contact with neighbors" (Dwijendra *et al.* 2021: 1) as typical for high-rise buildings (Kalantari & Shepley 2021).

A study on high-rises in Vienna notes that "living in a residential tower certainly poses a great challenge for social cohesion" (Reinprecht & Dlabaja 2014: 82, author's translation) in the Austrian capital, too: within the five estates investigated, contacts among residents as well as engagement in neighborhood activities were rare. Furthermore, the authors found the architectural peculiarity of high-rises leading to isolation of a second kind, remarking that architecturally monolithic, separated high-rise buildings often constitute 'islands' that are visually and socially disconnected from the surrounding urban fabric (ibid: 83). Relatedly, different studies dealing with the influence of density conclude that population density is negatively related to social cohesion (Lenzi et al. 2013; French et al. 2014; Mazumdar et al. 2018; Mouratidis & Poortinga 2020; Koohsari et al. 2021), especially when there is little diversity of land use (Sonta & Jiang 2023).

One of the reasons high-rise residents might choose to be more careful about who they engage with may be (fear of) crime: in an act of risk aversion, self-isolation becomes a safety measure (Gifford 2007). Scott *et al.* (2015) comment on the reciprocity of this connection – just as the perception and fear of crime influence the use of public spaces, strong social relations likewise also may have positive impacts on safety, 'keeping order' through neighborhood control processes (ibid: 38). Related aspects that scholars have utilized to explain negative social effects of high-rise living are overwhelm (Gifford 2007: 12) and a perceived lack of privacy (Gibson *et al.* 2011) and social control (Nguyen *et al.* 2024a), as well as the fact that the associated vertical movements and viewing axes of residents are less conducive to neighborly interactions than walking horizontally and seeing others on the same level (ibid: 3).

With most studies discussed so far of quantitative nature, qualitative approaches have seldom been applied to the topic of cohesion in high-rise housing; hinting at the research gap this thesis aims to address. A recent study in Hong Kong that "investigated how younger and older people interact in high-rise neighborhoods and identified the factors that hinder intergenerational interactions" (Lau 2024) concluded that due to different habits of using public spaces and communication technologies alike, points of contact between young adults and older residents were sparse, which posed difficulties for the establishment of intergenerational care structures.

It would be ill-conceived, however, to present an exclusively negative picture of cohesion in dense housing context, and critical scholars have remarked how such notions especially in public discourse can be related to racist and classist stereotypes. Studying Slovenian cities, Sendi et al. (2023) reported that contrary to their hypotheses, inhabitants of both socialist-time LHEs and post-socialist, low-density complexes were similarly attached and comparably satisfied with inter-neighborly relations and resident connectivity (ibid: 13). As Baxter (2017) showed, the "vertical practices, such as those associated with the view" (ibid: 1) associated with high-rise living may even facilitate unique ways of home-making and place attachment. Other studies find high-rise living to be

beneficial towards life satisfaction (Du et al. 2017), dense cities to exhibit higher cohesion than suburban settlements (Damurski 2022), urban proximity to facilitate social cohesion (Mombelli, Miralles-Guasch & Marquet 2025), or cycling, enabled by moderate to high density, to be associated with stronger common good orientations (Schuster, van der Noll & Rohmann 2023). Even when mass housing does lead to anonymity, this characteristic might have unexpected positive effects: a case study of a high-rise estate inhabited by both Jewish and Arab Israelis in Haifa, for example, found that its anonymity fostered peaceful coliving among the residents by concealing their religious or ethnic differences (Arviv & Eizenberg 2021), adding nuance to the debate: besides leading to isolation, the concentration of city dwellers that have few things in common may also enable peaceful coexistence by levelling differences, illustrating how cohesion and social harmony don't presuppose one another.

To summarise and notwithstanding some empirical exceptions, literature reviews conclude that dense and high-rise living are predominantly associated with lower measures of neighbor interaction and social cohesion, in turn leading to worse mental health outcomes (Barros  $et\ al.\ 2019$ ). A range of architectural as well as socio-economic factors, however, mediate these findings.

#### Influence of Personal and Architectural Attributes

In order to qualify these observations, this section discusses two categories of factors that influence measures of social cohesion in mass housing arrangements: socio-economic attributes of individuals and groups and characteristics of the built environment including architecture, landscaping and institutions.

Regarding demographic factors, resident age and household structure is one commonly researched dimension, with ambiguous conclusions: On one hand, high-rise living is found to be less appropriate for the psychological and social needs of (families with) children (Gifford 2007), yet at the same time, the presence of children in a household is usually found to facilitate contact with neighbors, thus improving social relations of household members (Van Den Berg & Timmermans 2015). The later years of life often mean smaller social networks due to mobility-limiting health issues, thus negatively impacting the social relations dimension of cohesion (ibid); yet older residents simultaneously appear to be more resistant to some of the negative social impacts of high-rise housing (Kearns *et al.* 2012), and may have increased feelings of place attachment due to longer durations of residence (Nguyen *et al.* 2024a: 3).

The relationship of financial and social capital means that affluent residents usually experience stronger social contact (Van Den Berg & Timmermans 2015), while poverty is associated with a decline in "contacts frequencies and the

resource potential of a network" (Böhnke & Link 2017: 615). Residing in an owner-occupied apartment is generally found to be associated with higher cohesion than renting a similar apartment is (Leviten-Reid & Matthew 2018). One explanation for this phenomenon might be that owner-occupiers tend to have had more agency in their residential choice as well as report higher feelings of control over their domicile (Bate 2021). Similarly, length of residence has often been found a key driver of social cohesion, as it allows residents to continuously develop a sense of attachment to the neighborhood (Toruńczyk-Ruiz & Martinović 2020) and build trusted relationships, an effect reported to be mediated by neighborhood poverty (Keene, Bader & Ailshire 2013). Recent literature by Blokland et al. (2023) questions this assumption, showing that the relationship of length of residence and place attachment is sensitive to both specific contexts and, particularly, the public familiarity generated through use of local infrastructure. As far as group attributes are concerned, sociodemographic homogeneity is found to be beneficial towards social cohesion in dense housing arrangements (Scott et al. 2015).

Turning to features of the built environment, the presence, design and accessibility of outdoor spaces matters for cohesion in mass housing contexts. Greenspace and nature around and between estates can provide a "social context" (Coley, Sullivan & Kuo 1997) for connections between residents to grow, with the link between parks and social cohesion mediated specifically by their safety, maintenance, and endowment with amenities that facilitate interaction (Clarke et al. 2023). As Huang (2006) showed, it is in particular circulation, scenic and activity spaces that promote social interaction. Especially when outdoor space is lacking or underdeveloped, indoor spaces of high-rises become crucial for social cohesion. To begin with, scholars have emphasised the "architectural design of spacious, attractive and naturally well-lit semi-public spaces (e.g. corridors and shared entrances) that facilitate personalization and support social interactions" (Barros et al. 2019: 272), especially given that these transitional spaces are frequently found to be the most relevant - or only - site of resident interactions (Reinprecht & Dlabaja 2014; Nguyen et al. 2020). Similarly, recent literature has explored how different facets of social cohesion are facilitated by the presence, design, and use of facilities called third places (Thompson 2018), public (Barrie et al. 2023) or communal spaces (Nguyen et al. 2020, 2024b, 2024a, 2025; Wu & Xin 2020). Repeatedly, these authors have stressed the role of privacy, safety and appropriate design, and recommended policymakers and architects to prioritize such spaces (Reinprecht & Dlabaja 2014; Wu & Xin 2020; Nguyen et al. 2024b). Often without explicitly phrasing it that way (with Whitzman (2001) as an early exception), such studies can be considered as analyzing high-rise or mass housing through a lens of social infrastructure, a concept explored in the next section.

#### 2.3 Social Infrastructure - Places of Encounter

Urban communities need spaces to grow – here, social infrastructures as "places that bring people together" (Zahnow 2024: 1) come into play. Beginning with an introduction into the concept as coined by Eric Klinenberg, the section then discusses key questions of accessibility, publicness and design.

#### Concept and Implications

An important precursor of the concept of social infrastructure is found in Ray Oldenburg's book "The Great Good Place". Oldenburg examined informal gathering spots such as cafés, pubs and bookstores as locations where social interactions take place on a voluntary and relaxed basis, coining the term "third places" (Oldenburg 1999) in distinction from home and work as first and second places. His core argument is that by enabling the development of community bonds, such places of encounter are vital for healthy societies and vibrant civic life. Furthermore, Oldenburg laments a decline of third places in the United States, which he consequently declares a crucial driver behind growing measures of loneliness and isolation (ibid: 21). By emphasizing the relevance of third places as explicitly spatialized nodes to foster civil life and interconnections, he laid important groundwork for the later seminal work "Palaces for the People" by Eric Klingenberg (2019). He describes how during research on heat-wave-related deaths in Chicago, he had noticed that mortality rates varied between neighborhoods not only along socio-economic variables, but also according to the strength of social ties and the presence of communal spaces: Facing this public health crisis, areas with places like libraries, parks, and community centers fared significantly better than others, as these had helped to grow mutual support networks and a sense of collective responsibility (2019: 4f). To describe these places, Klinenberg claimed a term that until then had been used sparsely and with varying definitions (Enneking, Custers & Engbersen 2025): social infrastructure.

Developing Klingenberg's work, Latham & Layton provide a suitable working definition for this study, claiming that "social infrastructure refers to the networks of spaces, facilities, institutions, and groups that create affordances for social connection" (2019: 3). Accordingly, social infrastructure brings people together; both literally and figuratively, as will be elaborated on. They further specify that such "facilities serve distinct functions" (ibid: 4) besides fostering social connections – a library distributes books, a café provides sustenance. Finally, social infrastructures are "also—in different and varying ways—public spaces" (ibid), a consideration explored in detail below but, essentially, defining them as locations that are accessible at least to some degree. The *infrastructural* aspect of such places relates to their property as hidden and normally unnoticed – infrastructure scholar Star (1999) claims that infrastructures often only become "visible upon breakdown" (ibid: 382).

Stemming from an urban geographical discipline, this definition is fruitful as it avoids the pitfalls of other conceptualisations (for a critical review, see Joshi & Aldrich 2022) that might be too diffuse by essentially including any place supporting daily lives of citizens (Davern *et al.* 2017),too narrow by only considering places with free access or the explicit, *primary* goal of community-building, or misleading by focussing on the "sociality [...] around conventional hard physical infrastructures" such as water or power lines (Latham & Layton 2022: 660, referencing Graham & McFarlane; 2015).

The range of potential social infrastructures is vast. Building on Latham & Layton's provisional categorization, a recent systematic literature review of Enneking, Custers & Engbersen (2025) identifies seven categories: public institutions, commerce, recreational facilities, places of worship, transit, digital infrastructures and (groups of) people. Importantly, these categories can and do overlap, and this definition also includes facilities that are not explicitly fixed in place, highlighting the role of both digital elements and social structures for facilitating interconnection, and allowing the analysis of *mobile* social infrastructures such as bus lines (Wilson 2011; Koefoed, Christensen & Simonsen 2017).

Klinenberg's early insights into its role in times of crisis demonstrate how social infrastructure may entail substantial benefits for individuals and groups, contributing to both personal wellbeing and the functioning of communities and cities. Fundamentally, the distinct functions of such places, like a mosque providing room for prayer rituals or a playground fostering children's active play, service communities in manifold ways. Moreover and pertinent to this study, what sets social infrastructure apart is its role in building social cohesion and social capital, as it "fosters contact, mutual support, and collaboration among friends and neighbors [through] sustained, recurrent interaction, particularly while doing things they enjoy" (Klinenberg 2019: 5) - a dynamic research has confirmed since before the term of social infrastructure was coined (Lenzi et al. 2013). In addition to these two effects of service provision and sociality, Enneking, Custers & Engbersen name further social functions as central, highlighting how social infrastructure can enable collective action, heighten identification and belonging, allow for social control, and facilitate disaster response (2025: 5).

As elaborated on earlier, the impacts of these social functions entail secondary effects on happiness, resilience, mental or physical health (Cattell *et al.* 2008; Zahnow 2024). Furthermore, authors like Manthe (2024) posit that encounters enabled through social infrastructure ultimately foster democratic mindsets: only in unpredictable, physical encounters with strangers do citizens learn to navigate compromise and negotiation, challenge their stereotypes, and essentially acquire the know-how for peaceful and cohesive coexistence – not just locally, but on a societal level. Reminiscent of Oldenburg's arguments, Manthe accordingly contends that a contemporary decline in everyday gathering places ultimately constitutes a danger for democracies, advocating

for a "politics of encounter" (Manthe 2024: 125, author's translation) that safeguards social infrastructure

### Unsocial Infrastructure? – Accessibility, Publicness and Design

Scholars investigating the spatiality of social exclusion (e.g. Cass, Shove & Urry 2005) would point out that how social infrastructure benefits populations is neither ubiquitous nor straightforward, warranting some critical remarks. Accessibility, shaping the extent to which people can make use of spaces through, inter alia, physical, financial, legal, and temporal aspects, is shown by Enneking, Custers & Engbersen (2025) to be a core characteristic along which social infrastructure is assessed. Relatedly, Latham & Layton (2019) presume a notion of publicness as essential to their definition of social infrastructure, distinguishing between four dimensions - being among others; addressing an audience: issues which concern communities or societies; and the collective (often state-run) provisioning of services and welfare (2019: 4) - that are commonly considered as public. Besides these remarks, however, the relationship to publicness often remains underdeveloped in social infrastructure literature.

In practice, many kinds of social infrastructure are not freely available to everyone, making them semi-public spaces – another term with surprisingly little academic elaboration that has, however, been explored in relation to negotiations of difference in hyper-diverse (Jones et al. 2015; Peterson 2017). One influential theorist of publicness is Richard Sennett (2020), who relatedly employs the concepts of open and closed systems, as well as boundaries and borders, to distinguish between two types of urban spaces and their edges (ibid: 45ff). Boundaries, he argues, are rigid divisions, separating and containing closed urban systems. Open systems, by contrast, feature borders; porous edges that encourage interaction, exchange, and permeability. Such concepts are applicable across different scales; for example, Sennett describes "highways cut through cities [as] invisible walls" (ibid: 46) as a typical urban boundary while also discussing the role of national borders through these concepts.

In particular, scholars of urban political economy have challenged the idea of social infrastructure as self-evidently beneficial, pointing out its role in "the production of differentiated inequalities across processes of accumulation by dispossession, urban citizenship (un)making, social reproduction and survival" (Horton & Penny 2023: 1711) that more optimistic authors, like Klingenberg, are said to underestimate. Indeed, social infrastructure can act explicitly exclusionary; producing and reinforcing inequalities by withholding populations from its benefits through the presence of formal or practical access barriers, (Fraser *et al.* 2024), or through the outright lack of social infrastructure in disadvantaged neighborhoods or cities (Alcaide Manthey 2024; Tomaney *et al.* 2024; Kymäläinen & Kuoppa 2025). Furthermore, early research suggests that to what extent the presence or lack of social infrastructure affects health measures of populations is also mediated by local deprivation (Stahlmann *et al.* 2022).

Reminiscent of Blokland's matrix of relational settings, Enneking, Custers & Engbersen emphasize that one pressing task of social infrastructure scholars is investigating the "tension between the accessibility and intimacy of spaces" (2025: 10): While access limitations might result in the segregation of privileged groups in some contexts, they may be necessary for the protection of safe spaces for vulnerable communities in others. The authors thus conclude that while "specificity risks exclusion, arguing for neutrality risks depoliticization" (ibid).

Besides public accessibility, another prerequisite for functioning social infrastructure is that its material design facilitates sociality. Literature on social infrastructure design, however, is notably lacking; Enneking, Custers & Engbersen identify a research gap in the "limited in-depth exploration on [...] physical and material conditions and how they shape social life" (2025: 10). To approach such an analysis from a built-environment perspective, I draw on the work of Jan Gehl. While his analyses mostly formed around streetscapes and other in-between-spaces, the emblematic *life between buildings* (Gehl 2011), the criteria he offers for assessing tangible qualities of public space can also help evaluate social infrastructure; especially as he centers design that fosters interaction and communication. Briefly put, Gehl asserts that high-quality public spaces provide pleasant environments with comfortable opportunities for mobility, communication and activities, protected from hazards and discomforting sensations (2010: 238f).

## 2.4 Pooling Together - Social Aspects of Swimming

Tying together the discussion of relevant literature, this section focuses on swimming pools as social infrastructure, first, by summarizing the social history of urban swimming and reflecting on the sparse literature conceptualising pools as social infrastructure. Subsequently, socialities around swimming in a broader sense, the phenomenon of (rooftop) pools in housing projects, and the exclusionary potentials of swimming are discussed.

#### Historical Background

Centering urban conviviality around water dates back millenia – already in the Roman Empire, thermae (central, large, public) and balneae (dispersed, public or private) bathing facilities were found in most cities (for a seminal overview, see Fagan 1999). They were seen not merely as sites for hygiene and wellness, but indeed also as indispensable places of encounters, sociability, and even the conclusion of transactions (Decker 2024). Furthermore, roman baths were comparatively egalitarian in character as they "had no or low entrance fees and were open to everyone, [with] no areas reserved for higher-ranking patrons. Combined with the splendid architecture and opulent decoration of the baths, this ensured that even the most humble servant would have a taste of luxury" (ibid). While the relevance of bathhouses and similar institutions declined in Europe after the fall of the Roman empire, traditions of public bathing persisted in various forms elsewhere. In particular, hammām public baths have long combined hygienic and social functions with religious and cultural significance (Graiouid 2004).

With the onset of the 19th century, cities in the Global North rediscovered the virtue of public pools and baths in the context of industrialization and urbanization processes. As urban centers got increasingly densely populated by factory workers and their families, living conditions worsened – overcrowding and illnesses were often the consequence. Attempting to relieve urban populations of some of these ailments, the United Kingdom, for example, passed a so-called "Baths and Washhouses Act" in 1846 to stimulate the construction and upkeep of public baths. Similar measures "to improve the health and well-being of the general population" (Gandy 2006: 14) were taken in the following years throughout much of mainland Europe (Marino 2010). In the United States, comparable developments followed with some delay, with hundreds of municipal pools built by the turn of the century (Wiltse 2007: 2).

By the early 20th century, such motives of health and sanitation were supplemented by novel ideas of leisure (Marino 2010). In Canada, for example, social sciences and labour activism jointly promoted "the creation [...] of provincial public recreation services" (Tillotson 2013: 199) such as public swimming pools. Within New Deal programs, almost 750 pools were built in the United States in just half a decade between 1933 and 1938 (Wiltse 2007: 6). In the United Kingdom, comparable developments of soaring construction even gave

rise to a specific local term, *lido*, for public outdoor pools (Smith & Inglis 2006). A further boom of pool construction began some years after the end of World War II, when a combination of cheap materials and energy and growing popularity of swimming coincided with a renewed economical and political understanding of states as key actors of public welfare. Pools were now no longer seen merely as recreational luxuries but as essential urban infrastructure tied to health, social equity, and civic life (Marino 2010). As newly evolving welfare state ideologies emphasized collective wellbeing and equal access to leisure, municipal pools thus became a materialization of public welfare. In Sweden, the archetypical social-democratic welfare state, scholars of welfare and planning have discussed how the usual research focus on housing obscures the view on recreational spaces as part of welfare systems, highlighting how investment in leisure facilities in Sweden increased by a factor of 50 between 1961 and 1981 (Pries & Qviström 2021).

Tides began to turn throughout the Global North in the 1970s, as neoliberal ideology in the context of oil and fiscal crises fundamentally transformed urban governance systems from providing services of general interest towards austerity and privatization. Exacerbated by recent increases in labour and energy costs as well as by trends towards private pools (Escriva Saneugenio et al. 2024), municipal swimming pools - alongside many other publicly funded infrastructures - have in recent decades suffered significant budget cuts, leading to higher admission fees, deterioration of facilities, and, in numerous cases, outright closures (McShane 2009; Lewi & Nichols 2014). In Germany, for example, public pool visits saw a 5,7% price increase from May 2024 to 2025 (Destatis 2025), while over two thirds of municipalities reported refurbishment needs for their pools (baukultur 2025: 190). In the UK, 85% of municipal pools as of 2022 were planning to reduce services (Ana 2022), and a 2023 report noted growing numbers of closures for the Austrian region of Tyrol (Mayerhofer 2024: 16ff). While such findings illustrate a common trend, they remain spotlights in a largely unexplored field. Reliable and comparable data on declining numbers of pools are lacking; evidence for recent closures in countries like Germany, Canada, or the UK has been discussed in journalistic contributions (BBC 2025; CBC 2025; DIE ZEIT 2025), but not (yet) addressed by academia.

Given the popularity of swimming – for example, over 80% of Germans "consider swimming pools to be indispensable" (baukultur 2025: 74) – these trends are met with resistance, which frequently refers to their social benefits. One example is the 'Don't Put a Cap on Swimming' campaign launched in the UK in 2023 that aims to raise awareness and advocates for investments in swimming infrastructure, referring to, inter alia, its "social value" (Swim England 2023). Similar processes are reported in other countries, with depleting numbers of public facilities followed by "community groups [...] fighting to 'save their pools" (McLachlan 2012: 5) in in Aotearoa/New Zealand (ibid.), Australia (Lewi & Nichols 2014) or the United Kingdom (Collins 2021).

Some civil society protest against the closure or lack of pools even offers productive counter-proposals. In Brussels, for example - a city lacking any and all public outdoor swimming pool - grassroots-organized groups under the name POOL IS COOL have stepped up by building and operating their own: In 2021, the non-profit organization launched FLOW, a temporary open-air pool in the neighborhood Anderlecht, as a proof of concept to demonstrate both demand and feasibility. Although the pool saw intensive use and was met with considerable public appraisal, it ultimately closed down in mid-2025, with organisers claiming its purpose to be fulfilled and emphasising "the responsibility of public authorities to provide decent, accessible, and sufficient outdoor swimming places" (POOL IS COOL 2025). Similarly, residents have recently taken over upkeep of previously municipal pools after fears of closure over a lack of funding in German cities like Seltmans (Fuchs 2025) and Schieder-Schwalenberg (Krohn 2025). To conclude, civil society resistance moments are interesting in social cohesion terms because actors often reference social benefits of pools, and because mobilization around threats can unite citizens under the banner of a common good.

#### Swimming Pools as Social Infrastructure

Although (public) swimming pools are commonly mentioned as archetypical by social infrastructure scholars (for example, Latham & Layton (2019) immediately mention them within their opening remarks), notably little academic effort has been devoted towards their explicit conceptualisation as social infrastructure, and most contributions that draw this connection are non-academic in character.<sup>3</sup> Especially regarding media articles, declarations that insist on the social role of pools have seen an upswing in recent years (Hatherley 2021; Gay 2023; Florian 2024; Schloffel-Armstrong 2024; Volpe 2024), although such claims are by no means novel:

In 1991 a New Yorker article commented on [...] pool closings in New York City. The author claimed that closing municipal pools significantly degraded the quality of community life in the city. The neighborhood pools, he observed, brought people together and provided a public space—amid the highrise apartments, passing cars, and hurrying pedestrians—where neighbors actually communicated with one another. Closing the pools, he implied, would make local residents more anonymous to one another and erode the local sense of community that they fostered. (Wiltse 2007: 139)

While the idea of pools as sites of community life does seem intuitive, such reports rarely offer robust evidence to support their assumptions, and peer-reviewed articles explicitly conceptualising pools as social infrastructure remain rare. Notable exceptions include Collins' (2021) study investigating "efforts to resist the loss of social infrastructure in the context of three British

<sup>&</sup>lt;sup>3</sup> This includes policy briefs and advocacy reports (KfW 2017; RLSSA 2021; Bäderallianz Deutschland 2023; RLSSWA 2024), art and design projects (*21 Days - 21 Pools: Searching for traces in swimming pools* 2024; *Liquid Public Space* n.d.) and radio segments or podcast episodes (Radio CORAX 2023; Chlorgesänge 2025).

community-led, historic swimming pools" (ibid: 2), emphasizing their open and free access as well as their central role in collective identification dynamics, and the undertaking of Yeomans *et al.* (2024) to measure the impact of Australia's public aquatic facilities on social capital through qualitative interviews. They assert that swimming pools constitute "social spaces to build relationships, provide social support, and foster feelings of trust and connection" (ibid: 12), while noting that "academic research has rarely delved into aquatic facilities as key for acquiring social value" (ibid: 1).

There is, however, an argument to be made to consider swimming pools as a specific manifestation with unique characteristics of the broader social infrastructure category of recreational facilities, i.e. "infrastructures that facilitate everyday sports and fitness practices" (Latham & Layton 2020: 2). This assertion mirrors how increasing attention has been given to the peculiarities of bodies of water in environmental research, a discipline that has often seen blue space prematurely subsumed under green space (White et al. 2020). Yeomans et al. argue that the diverse spectrum of uses that are supported around pools and the specific properties of water that enable gentle exercise even for bodies with physical limitations mean that "aquatic environments are uniquely positioned to serve a broader spectrum of the community, including those often underrepresented in traditional leisure spaces" (2024.: 13). Moreover, Watson highlights how water exhibits specific "affective powers" far beyond a mere resource or material, it evokes emotion, connections between individuals and their environment, and political attachments; often blurring the lines between public and private, and challenging norms along axes of gender, race, class, and space (Watson 2019a: 137).

Finally, encounters at swimming pools are highly intimate and embodied, as "facilities for swimming, in many cases, map onto a more fraught relationship between strangers' bodies" (Latham & Layton 2019: 5) in close spatial proximity. Constant negotiation processes around "issues of power and accessibility, conflicting swimming approaches and culturally specific communication" (Collins 2021: 64) have led scholars to discuss pools as spaces of "negotiated order" (Scott 2009). Given how attire shapes both people's impressions of others (Hester & Hehman 2023: 427) and self-perception (Slepian *et al.* 2015), the casual attire around pools can be theorized to influence how visitors encounter one another – relatedly, the highly intimate space of Saunas has even become an arena for confident, high-level political talks in Finland, a phenomenon coined as "Sauma Diplomacy" (Sysiö 2022). Nevertheless, specific research on peculiarities of such lightly or un-clothed encounters is notably lacking.

Extending the scope from *pools as social infrastructure* towards the overall socio-urban study of water thus allows for the consideration of further academic literature. Thomson (2003) finds that public swimming pools yield health benefits to users not only through allowing physical exercise. It is "in particular the facilitation of social contact" (2003: 666) that has strong effects on neighborhood health by alleviating feelings of stress and isolation. Similar

studies have revealed how a major reason for elderly citizens to participate in Masters swimming is its function as a third place (Hutchings 2014) and how swimming fosters feelings of connections with self, nature, and others (Denton & Aranda 2020). Building on Watson (2019), Moles (2021, see also Bates & Moles 2024) suggests that open water swimming can be understood as a "social world based on shared understandings, rules and codes of behaviour that are produced interactionally and in dialogue" (2021: 17) even during moments without verbal conversations; it has also been found to foster social capital through casual interactions with strangers (Greenwood & Fletcher 2021) and facilitate a sense of social connectedness (see Overbury, Conroy & Marks 2023: 13f for an overview). Such findings reflect the behaviour of pool guests: Observing public swimming pools in Tasmania, Gould found that "chatting, watching and playing occupied 82% of the time" (2010: 3) that adolescents spent in and by the pools – only 1% of time was spent swimming horizontally.

#### Swimming Pools in Housing Projects

While multiple housing projects in Vienna include swimming pools for their residents, often impressionably positioned on rooftops, this procedure appears to be the expectation globally.4 While this rarity is perhaps expectable given concerns regarding statics and maintenance, media attention suggests increasing interest in rooftop pools, thus warranting further scientific exploration. To my knowledge, compilations of swimming pools within housing projects, let alone thorough assessments of the motivations behind and challenges surrounding such measures, have not been undertaken. Sparse, industry-associated research on pools within skyscrapers posits them as a "classic feature of luxury buildings" (Work & Ursini 2022: 44) - illustrated by one of the perhaps most famous exponents, the SkyPark Infinity Pool crowning the Singaporean Marina Bay Sands luxury hotel, a structure so memorable it has over time become a landmark of the city-state. Evocating exclusivity, leisure and luxury<sup>5</sup>, such fully private pools only serve residents, guests and visitors of the home or plot they belong to. Given their externalities like high water and energy consumption in contrast with austerity measures primarily affecting public pools and their users (Domene 2014), private pools can be understood as a distinct spatial manifestation of inequality. Accordingly, the proliferation of private pools has been used as a proxy to study socio-economic disparities through satellite imagery (Zambon et al. 2017; Escriva Saneugenio et al. 2024).6

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<sup>&</sup>lt;sup>4</sup> Le Corbusier's Cité Radieuse or Unité d'habitation in Marseille One better-known example for rooftop pools, yet this building features only a shallow body of water on its roof, not a swimmable pool. In Madrid, large apartment buildings with rooftop pools include Edificio Mirador and Torres Blancas.

<sup>&</sup>lt;sup>5</sup> Illustrating this association, an <u>upscale design school</u> asserts: "Rooftop pools are reshaping city life by blending urban design, immersive experiences, and brand strategy to meet Gen Z's demand for retreat."

<sup>&</sup>lt;sup>6</sup> An intriguing data-journalistic inquiry about the distribution of private pools in Berlin was published in German newspaper <u>Tagesspiegel in August 2025</u>.

#### Dark Waters: Swimming Pools as Sites of Exclusion

These remarks on pools as materialized inequality point towards the fact that notwithstanding their social capacities, swimming pools can also constitute sites of conflict, inequality, and exclusion. Calling to mind Blokland's (2017) notes on the dialectical relationship of in- and exclusion, it is arguably exactly their *potential* as social infrastructure that necessitates their perils to work as sites of exclusion processes of communitymaking. It is thus crucial to acknowledge what roles swimming can play in perpetuating injustice.

Abundant evidence is provided again by Wiltse (2007), showing how municipal baths in the United States had historically been used as tools to exercise social control along changing axes: In the beginning, they were usually open to Americans of all races, while excluding poorer citizens. Beginning approximately by the 1930s, however, they began to be increasingly coined by stark racist divides yet an integration of different classes (2007: 3). In the second half of the 20th century, processes of suburbanization and sinking construction costs paired with racism and classism led to an exodus of public pools and a surge of fully privatized backyard pools or suburban community pools with racially motivated, socially exclusive access restrictions like membership fees or residency requirements, for affluent White Americans. Simultaneously, municipal pools fell into disarray through retracted funding, or were rather closed than letting them be used by African Americans (ibid: 6). Other authors have since explored in detail the legal and practical dynamics of racialized discrimination and segregation of American public pools historically (Waller & Bemiller 2018) and even today (Rodriguez 2022).

Mirroring Wiltse's findings, DeLuca (DeLuca 2013) showed that while membership of the semi-public *Pine View Swim and Tennis Club* might certainly foster a sense of community and attachment for visitors, this dynamic implies "socially segregated boundaries offering members a significant, yet hidden vehicle through which they can facilitate their class and race-based privilege" (ibid: 340).

Given the role of swimming pools as sites for swimming lessons, such class- or race-based exclusion can have life-or-death consequences: Reporting on swimming skills and related accidents, Hastings, Zahran & Cable find persisting, stark racial imbalances not least due to differing access to public pools, poignantly claiming that affected minorities are, quite literally, "drowning in inequalities" (Hastings, Zahran & Cable 2006). Finally, a recent preprint study posits that in Germany, "exposure to ethnic diversity in public pools increases far-right support" (Riaz & Roemer 2025: 1) by increasing the salience of immigration as a political issue, which far-right parties subsequently benefit from; and Collins & Boumechaal (2024) showed that strict regulation of swimwear can be a discriminatory practice(ibid: 332). Together, these findings underscore that swimming pools can be sites of exclusion and injustice.

## 2.5 Summary and Literature Gap

Synthesizing existing literature reveals that while both community and social cohesion are ambiguous concepts with potential downsides, high cohesion can contribute to safety, health and happiness. High-rise and mass housing, however, may challenge the development of interpersonal relationships and a sense of belonging. When well designed and easily accessible, social infrastructure can contribute to social cohesion by providing the affordances for various social functions, among them allowing for residents to meet, familiarize and interact, as well as develop place attachment. Swimming pools, which have historically served as sites of both community building and exclusion, constitute a unique kind of social infrastructure. Table 2 summarizes the central concepts of this study.

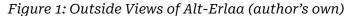
Table 2: Overview of Central Concepts

Concept	Definition and Characteristics	Key Source(s)
community	a dynamic, situational construct emerging from urban practices and encounters, built on shared symbols & narratives and shaped by acts of in- & exclusion	Blokland (2017)
social cohesion	a measure of group interconnectedness, influenced by various characteristics of groups and their environment, and composed of three dimensions: - social relations - identification / belonging - common good orientation	Schiefer & van der Noll (2017)
social infrastructure	places that facilitate interactions and connections by fulfilling various social functions, assessable along characteristics of accessibility and design	Klinenberg (2019) Latham & Layton (2019) Enneking, Custers & Engbersen (2025)

However, some gaps in the literature prevail: the lived experience of community building in high-rise estates remains understudied, with scholars arguing that qualitative insights into such processes could shed light on the more intricate details of how social cohesion in high-rise estates is established and experienced. In regards to social infrastructure, the topics of accessibility and exclusion as well as architecture and design remain understudied. More specifically, an in-depth examination of swimming pools as social infrastructure has rarely been attempted: While their role for communities and sociality is frequently discussed in public discourse, no systematic investigation about dynamics in which they might build connections has been undertaken.

## 3. Case Study: Wohnpark Alt-Erlaa

Introducing the research site, this section embeds Alt-Erlaa (see Figure 1) in its local, architectural, and social context. First, an introduction into Vienna and its housing market is given, followed by some remarks on the estate's architect and his principles, as well as a description of core characteristics and swimming facilities of Alt-Erlaa. Finally, recent public reception and scientific evidence of residential satisfaction and social cohesion in the estate are discussed.





## 3.1 Vienna – Capital of Social Housing?

With its two million inhabitants, Vienna is the second largest German-speaking city in the world (City of Vienna 2025). Located by the Danube river in the east of Austria with a close vicinity to the borders of the Czech Republic, Slovakia and Hungary, the capital has long been considered the country's political, economical and cultural centre. Vienna consistently ranks highly or even first in various city rankings on quality of life – perhaps most famously topping the Economist's *Global Liveability Index* from 2018 to 2024 (City of Vienna 2025), only recently being ousted by Copenhagen.

One reason for such high rankings is the city's comparatively eased housing market: Although Vienna has, like many European cities, recently faced rising costs of living, its boasts high shares of municipal and social housing which helps moderate housing costs and protects large parts of the population from private rental market pressures (Reinprecht 2014; Glaser 2020). This is rooted in the Red Vienna (*Rotes Wien*) period of 1919-1934: following the hardships of World War I, the social democratic party (today's SPÖ, then called SDAP) implemented ambitious programs of municipal housing construction to address severe housing shortages, and improve living conditions for the working class. Financed by a progressive housing tax (*Wohnbausteuer*) and levies on luxury goods, their program resulted in the construction of more than 60,000 municipal

housing units, including landmark projects such as Karl-Marx-Hof, that were then provided at affordable prices to qualifying residents using a point system to prioritize the most underprivileged (Verlič 2016: 122f). The architecture and design of such complexes reflected the ideals of collective welfare, often integrating communal facilities such as laundries, libraries, kindergartens, and gardens, and thus aiming to approach a social democratic vision of a just and egalitarian urban society. GESIBA, the company that would later construct and maintain Alt-Erlaa, was founded in 1921, initially tasked only with sourcing building material but soon beginning to become a relevant actor in housing construction (Gruber 2016: 91).

While *Red Vienna* ended with the fascist takeover in 1934, municipal housing construction resumed in the post-war years to address war damage and population growth. Such construction efforts often comprised LHEs, peaked in the 1970s, and furthermore increasingly involved a second pillar in the form of non-municipal, but publicly subsidized housing (Reinprecht 2020): under strong regulation to not realize financial gains, such associations have especially in recent years become the main driving force behind affordable housing construction in Vienna (Reinprecht 2014). Today, as the municipal housing stock comprises around 220.000 apartments (Glaser 2020: 26), Vienna's rental housing system be be considered a mixed system with municipal housing and limited-profit social housing, respectively, providing a home to approximately a quarter of citizens, and the other half residing in private rental apartments (ibid: 24).

## 3.2 Harry Glück: Architect and Vision

Approximately around the mid-1960s, attitudes in Austria had begun to shift about mass housing and LHEs, which were criticised on both aesthetic and functional grounds. The 1966/67 exhibition *Neue Städtische Wohnformen* (new urban housing concepts) by the newly established Austrian Society for Architecture (ÖGFA) caused a stir by demanding, inter alia, a turn towards "the mixed-use city, the community-building city, the pedestrian-friendly city and, more generally, an awareness of residential construction as the most responsible building task of our time" (Beckmann *et al.* 2020: 139, author's translation). Suburbanization and urban sprawl, amplified by a recovered economy and the advent of automobiles, had also begun to shape urban development around Vienna. Around the same time, Harry Glück, who was born in 1925 and initially had been trained and worked as a set designer, founded his architectural practice in 1966 (Seiß & Glück 2017).

Explicitly drawing on inspirations of Red Vienna in architectural form and political aspiration, Glück's stated goal was to create housing that combined elevated living standards with affordable prices and high density. Motivated by utilitarian philosophies of maximising utility for the highest possible number of people, this social-democratic ambition found its architectural consequence in the provision of amenities that would usually be considered as a luxury. More specifically, Glück aimed to integrate the following elements into his dwellings (Seiß & Glück 2017: 14):

- contact with nature
- access to water
- conviviality/sociability
- opportunities for physical activity<sup>7</sup>

In order to enable the density of units necessary for the provision of such amenities through economies of scale, Glück frequently resorted to terraced housing, an architectural style thus far often frowned upon due to the significant parts of buildings unexposed to sunlight that this construction style necessarily entails, but that had characterised many exhibits of the trend-setting 1966/67 housing exhibition. Furthermore, rooftop pools – building more than 50 throughout his work, the first constructed in 1967 – soon became the architect's hallmark. Aside from allowing access to water, the architect explicitly considered these as bonding (bandstiftende) locations, hoping that they "serve to strengthen bonds by initiating communication among residents, just as the church, the tavern, or the merchant used to do in villages in the past, where people automatically came together, [which] in the first place enables a community to develop in such a large population as the one in Alt-Erlaa" (Seiß & Glück 2017: 68, author's translation). Perhaps inspired by Harry Glück, several

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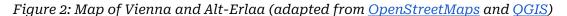
<sup>&</sup>lt;sup>7</sup> Additionally, some sources cite panoramic views as well as architectural memorability and readability as features pursued by the architect (Seiß & Glück 2017: 42).

other Viennese housing projects, among them many public or non-profit and some private developments, now boast semi-public (rooftop) pools (Zoidl 2022).

By the end of his life in 2016, Glück had been involved in more than 130 projects – the grand majority in Vienna, some found in other Austrian and German cities, or even Los Angeles (Seiß & Glück 2017: 227ff). With over 15.000 apartments built in Vienna alone, he is considered one of the city's most important housing architects, although his reception within Architecture remains mixed (Weber 2014).

### 3.3 Alt-Erlaa and its Residents

Wohnpark Alt-Erlaa, located in Vienna's 23. district Liesing in the city's south-west (see Figure 2), can be considered Harry Glück's most prestigious project. Planning began in 1968 on a plot of 240.000 m<sup>2</sup>, with construction commencing in 1973, extending westwards, and concluding in 1985. In three north-south-oriented, terraced blocks of 23 to 27 storeys, the estate comprises almost 3.200 flats of various types - from 35m<sup>2</sup> single-person apartments to those with 130m<sup>2</sup> and five rooms (MBR 2021). Furthermore, the complex includes a mall (Kaufpark) with stores, offices, service and hospitality providers, a church servicing around 2.800 parishioners, two tennis courts and one municipal sports hall, multiple doctors, a public library, and several kindergartens, elementary and middle schools. In the middle of the three buildings, large, windowless areas necessitated by the terraced shape provide ample space for amenities, including several indoor playgrounds, rooms for around 30 associations, 21 saunas, as well as swimming pools, as described in more detail below. Connecting the estate, an underground parking garage underpasses it, while extensive parks fill the space between the buildings. Through a transit hub in its south-east, Alt-Erlaa has been connected to Vienna via a rapid tram service until the mid-1990s, and through a U6 Metro connection since.



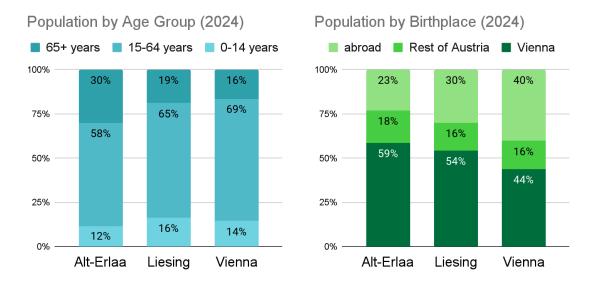


The estate is managed by a subsidiary of GESIBA, the joint-stock company AEAG (Gemeinnützige Aktiengesellschaft Alt-Erlaa) that acts as facility management (Hausverwaltung) by servicing the buildings and apartments, administering commercial and residential leases, and employing an external security provider for the estate. Tenure in Alt-Erlaa corresponds to Vienna's second pillar of affordable housing: non-municipal, limited-profit housing. This has two implications: on one hand, AEAG is not permitted to realize financial gains, keeping rents low for tenants and reinvesting income into the estate. On the other hand, however, tenants are required to buy a share and invest in an apportionment upon moving in, which altogether amounts to upfront costs of several thousand Euros. Even though financing schemes exist and both fees are reimbursed when moving out, this does present a significant entry hurdle towards residency in Alt-Erlaa that can be assumed to substantially influence resident demographics. As purchasing a share practically makes residents co-owners of the estate, they are also entitled to political participation, which is arranged in the form of the Mieterbeirat tenant advisory board. Elections are held every three years, with each neighbor from the age of 16 possessing active and passive voting rights. Access to buildings, hallways, apartments and facilities is regulated by electronic key chips given to residents.

As of January 2024, a total of 9.239 people were registered with their main residence in Alt-Erlaa (Wien MA23 2025). Demographic statistics on residents, however, are sparse: With the exceptions of population numbers by sex, age, and country of birth, as well as localized election results, most of the plethora of public data on education, income, unemployment, etc. provided by the city of Vienna is available only on district level. As previous research has explored the relevance of such characteristics for measures of neighborhood cohesion, the lack of granular data on key socio-demographic indicators like education or income limits any attempt to evaluate or analyze measures of social cohesion.

Nevertheless, two demographical differences between Alt-Erlaa and the rest of the city are striking: Its considerably high shares of older citizens as well as of those born in Vienna or Austria (see Figure 3). In Alt-Erlaa, around 30% of residents were 65 or older in 2024 as compared to 19% in Liesing and 16% in Vienna (Wien MA23 2025). Furthermore (but related), the share of residents born outside Austria amounted to only 23%, vis-a-vis 30% in Liesing and even 40% in Vienna. Both figures betray not only local peculiarity but also significant changes over time; with the population born abroad having increased by 6 percentage points from 17% in 2008, and the share of residents aged 65+ having almost doubled since (ibid). Together, both findings describe a population that is older and more ethnically homogenous than the Vienna average.

Figure 3: Demographic Comparison of Alt-Erlaa (adapted from Wien MA23 2025)



Politically, a first interesting finding is the relatively high voter turnout in Alt-Erlaa, amounting to 72,5% of 4.439 eligible voters as compared to 63,1% in Liesing and 62,7% in Vienna for the 2025 Gemeinderat elections (Wien 2025). Secondly, the combined vote share of the three biggest parties (ÖVP, SPÖ and FPÖ) amounts to a remarkable 79% in Alt-Erlaa, 10 percentage points more than the Vienna total of 69% (ibid). Accordingly, the vote share of more recent parties NEOS and Grüne (Greens) is significantly smaller in Alt-Erlaa (17%) than in the rest of the city (25%). It can be hypothesized that these findings reflect the demographic structure of the Wohnpark, with a higher share of older citizens increasing both general voter turnout and support for traditional *Volksparteien*. Although available data even allows separate analyses per block, no remarkable differences in voting behaviour are present.

## 3.4 Swimming Pools in Alt-Erlaa

Alt-Erlaa offers seven indoor and seven rooftop pools: two in blocks A and C, three in block B. This corresponds to one rooftop and indoor pool per four staircases, with the exception of physically detached block B1/2 that offers separate facilities. Given the building height of 23 to 27 stories, the rooftop pools are situated up to 85 meters above ground, resulting in remarkable views towards the surrounding area. As the official regulations state, access is restricted to residents, who can enter the facilities with their chip and bring along up to two guests per household (AEAG 2025). Calling to mind earlier discussions of accessibility and publicness, Alt-Erlaa's pools can thus be referred to as semi-public spaces, allowing access to thousands of potential guests but by no means to a genuine public.

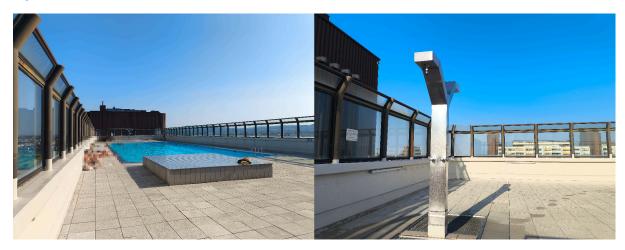
Coming from the top floor corridor, visitors first enter an open-air platform covered with green carpet (see Figure 4), henceforth referred to as the *downstairs* (rooftop) area. Besides constituting the access level for restrooms, wardrobes and utility rooms, this area provides space to relax and sunbathe below the respective pool. Located on a raised platform in the center of the area, the pools are accessible by another set of stairs, with one on each end.

Figure 4: Downstairs Rooftop Area (author's own)



The pools themselves constitute the centerpieces of the upstairs areas (see Figure 5). They are surrounded by a handful of benches and two sets of two showers on each end, positioned on an otherwise unobstructed, stone-slabbed plane.

Figure 5: Upstairs Pool Area (author's own)



Three rooftop pool designs exist: While the original plan realized in blocks A and B envisages notches of 10 meters at the longer ends of the basin, pools in the most recently constructed block C and B1/2 follow a standard rectangular layout (see Table 3). Lastly, the pool and surrounding area of B1/2 are smaller than their counterparts due to size constraints.

Table 3: Rooftop Pool Dimensions and Shapes

Length	Width	Shape and Notes	Location(s)	Image (adapted from QGIS)
23m	8-12m	rectangular with notches original design	A1-4, A5-8, B3-5, B6-8	
25m	10m	rectangular including square benches	C1-4, C5-8	
15m	8m	rectangular	B1/2	

Pool depths do not exceed 1.40 meters, which is not only an architectural choice due to weight and space restrictions, it furthermore has implications for their usage and eliminates the need for lifeguard staffing. Instead, all pools are centrally monitored by facility management via a camera system, and occasionally patrolled by the security provider. The rooftop pools can only be accessed in a period of approximately four months between mid-May and mid-September, with the downstairs area accessible independently. Besides the rooftop pools, Alt-Erlaa also boasts a total of seven indoor pools (see Figure 6).

Figure 6: Indoor Pools A5-8 (left) and A1-4 (author's own)



While exhibiting depths of up to 1.60 meters, length and width of these indoor pools are considerably shorter than the rooftop pools'. Their position in the buildings' second floors, however, makes them more accessible, as they are open year-round and independent of weather conditions. While the immediate area around leaves little space for sojourning on the floor, the indoor pools are flanked by benches as well as changing rooms, shower facilities, and Saunas.

## 3.5 Public and Scientific Reception

Alt-Erlaa has increasingly raised interest globally: a plethora of media articles in German and English addresses the estate and its assets, among them density, walkability and green space access, but also its alleged social cohesion, commonly referring to village-like structures within the complex (among others, see Wenderoth 2011; Seiß 2016a, 2016b; Ö1 2018; Pühringer 2020; POLITICO 2022; Mari & Locatelli 2023; Access Guide Magazin 2024; Krasniqi 2024).8

Furthermore, two media projects centered around Alt-Erlaa have received widespread coverage: the photography project "Du, meine konkrete Utopie" (you, my concrete utopia) by artist-architect Zara Pfeifer, as well as Bianca Gleissinger's 2023 documentary movie "27 Storeys", both of which inspired the present study. Finally, Alt-Erlaa is elaborated on – and praised by – various examples of specialist literature on architecture and planning (HB2 TU Vienna 2012; Oberzaucher 2017; Beckmann et al. 2020; Wasner 2022) or anthologies on the estate (AEAG 2016) and its architect (Seiß & Glück 2017).

Scientific studies, or otherwise robust data on life in the estate, however, are sparse. A commonly cited 2004 study on different estates throughout the city conducted by Vienna's department of city development sees Alt-Erlaa - along with two other projects of Harry Glück - at a clear first place for residential satisfaction (Wien MA18 2004: 84). Community areas and playgrounds were among the features especially appreciated among the respondents, and 87 percent of inhabitants disclosed a moderate to high level of communal spirit (Zusammengehörigkeitsgefühl). With more than half of residents reporting close friends among their neighbors, and only two percent unaware of community-organized social structures (e.g. schoolwork support) within the development, Alt-Erlaa posed a significant exception from the other estates analyzed regarding measures pertaining to social cohesion (ibid: 75ff). Furthermore, pools were reported to be used by 93 percent, and other shared spaces by 43 percent of residents (ibid: 40). Unfortunately and for undisclosed reasons, Alt-Erlaa has been excluded from similar studies that have been carried out since. The 2004 report thus constitutes evidence for strong measures of local cohesion and use of social infrastructure, but leaves questions regarding developments in the two decades since.

A more recent, qualitative study on residential satisfaction in Alt-Erlaa concludes that abundant community features are key satisfaction drivers (Radinger 2017). Moreover, two Master's theses on Alt-Erlaa are available online: While Weber (2014) outlines the architectural history, changing image and public reception of the complex, Pizato (2015) used semi-structured interviews

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<sup>&</sup>lt;sup>8</sup> Moreover, various media articles on rooftop pools in Vienna include Alt-Erlaa's facilities, often as a prime example of the practice (for example Seidel 2016; Zoidl 2016, 2022, 2024; Ansichtssache 2018; Marits 2018; Leb 2019; Hatherley 2021; ORF 2024).

to analyze the perception and construction of safety and security in Alt-Erlaa, with results pertaining this study insofar as the performance of in- and out-groups is prominently described. Furthermore, pools are mentioned as focus points for neighborly cooperation, and the thesis' outlook involves a call for in-depth study of cohesion (ibid: 149f).

To summarise, Alt-Erlaa has attracted attention for its high residential satisfaction, strong social cohesion, and ample social infrastructure; marking it as a unique case within the landscape mass housing estates. The specific characteristics, key factors, causes, and consequences of social cohesion in Alt-Erlaa have however not been studied yet in sufficient detail.

# 4. Methodology

To address the literature gap identified in chapter 2.5 by contributing to research on the nexus of swimming pools, social infrastructure, and social cohesion in mass housing contexts, as well as to scrutinise public assumptions about Alt-Erlaa as described above, a guiding research question as well as an adequate methodological approach were developed, as described and justified in this section

# 4.1 Research Question and Subquestions

Initially, the research project aimed to broadly explore measures and drivers of social cohesion in Alt-Erlaa. Throughout an iterative process of field visits, academic supervision and literature research, a focus on swimming pools as potential social infrastructure was established, ultimately giving rise to the following generalized research question:

RQ: In what ways can semi-public swimming pools in high-rise housing serve as social infrastructure that contributes to neighborhood social cohesion?

Connecting all primary areas of literature discussed above, this question serves as a guiding thread to the empirical inquiry. By applying what is known from research on social cohesion and social infrastructure to the selected case, approaching an answer to the research question aims to both generate further knowledge regarding the specific dynamics that play out by Alt-Erlaa's swimming pools and provide generalizable theoretical and practical insights on the topics at hand.

Pointing towards fruitful related topics, two sub-questions qualify the investigation by investigating more concrete dynamics at play in the specific local context. To begin with, the project's original focus of identifying local peculiarities of social cohesion is retained in the first sub-question:

SRQ1: What are the measures, drivers and consequences of social cohesion in Wohnpark Alt-Erlaa?

Second, the initial expectation of a highly cohesive and self-sufficient housing estate raised questions as to whether Alt-Erlaa might be self-contained to a point of limiting its interactions with the urban fabric beyond. Employing Sennett's (2020) terms of boundaries and borders, as well as open and closed systems, a second sub-question thus asks:

SRQ2: To what extent does Wohnpark Alt-Erlaa constitute a closed or open urban system through socio-spatial boundaries and borders?

# 4.2 Research Framework, Approach and Positionality

To answer these questions, a *qualitative approach to a place-based single-case study* was employed, the components, justifications and implications of which are to be substantiated hereinafter. Fundamentally, this study follows a post-positivist paradigm, which "implies the existence of an ultimate reality that we can only approximately—not completely—understand" (Schoch 2020: 246). This means that insights generated throughout the thesis are treated as fallible and provisional; approaching, instead of fully achieving, answers to its research questions.

In order to generate knowledge, a case study "investigates a contemporary phenomenon [...] in depth and within its real-life context" (Yin 2018: 15). This latter element is crucial, as case study research presupposes thorough contextualisation, situating the studied phenomenon within the social, spatial, and temporal settings that shape it. Furthermore, such approaches are coined by the fact that "the researcher is situated in the activity or organization being studied" (Schoch 2020: 256)) - their relationship to the case is thus never neutral or objective, but shaped by presumptions, privilege, and mutual influence. In an ideal scenario, the goal of a case study is to generate knowledge that is simultaneously specific in character and transferable to other cases; as exemplified by the above elaborations on the (sub-)research questions. The idea of a "place-based case study" (Paddock, Pottinger & Ehgartner 2021) qualifies this approach, by emphasizing spatiality and foregrounding "interconnections between social structures, geopolitical systems, and patterns of experiences, as embedded within a particular place" (ibid: 164). The authors further posit that such approaches are especially suitable for studies relating to practices of community (ibid: 169). As place-based case studies can be characterized as immersive, malleable, and self-reflective in character, they also allow projects to 'change direction' and narrow their focus progressively without losing sight of the bigger context. In this study, for example, substantial introductory work that had already been completed by the time swimming pools were identified as specific locations of interest could be retained and adapted to an increasingly narrowed research focus.

Employing a single-case study instead of a comparative approach is a fundamental choice that may limit the explanatory power of this thesis. Investigating only one site was however not arbitrary, but relates to, first, the specificity and complexity of the chosen site, and second, the intimacy of the topic, with fieldwork touching upon highly personal spheres such as personal apartments and pool settings. As Yin posits, single-case studies can be fruitful particularly when their case is "critical, common, unusual, revelatory, or longitudinal" (2018: 288), and Alt-Erlaa's peculiar characteristics as demonstrated above plausibly situate it as an *unusual* and potentially *revelatory* site. I therefore argue that given existing time and resource constraints, confining the research to only one site was not only a necessary, but also a

beneficial choice that allowed me to *dive into* local peculiarities while generating generalizable findings.

As methods that "elicit the meaning behind data through detailed examination and interpretation of social phenomena" (Peake, Razavi & Smyth 2024: 188), qualitative methods were chosen not only because they are typically associated (and by no means synonymous) with case studies (Kohlbacher 2006), but chiefly because they allow centering the lived experience and subjective meanings of participants (Riger & Sigurvinsdottir 2016: 35), which is crucial for studying community as urban practice (Blokland: 59f). Moreover, such approaches are particularly useful in urban studies as critical scholars posit that "architects, planners and urban designers often have limited knowledge about the specific community and the socio-economic impacts of their projects" (Stollmann 2016), suggesting to supersede, or at least supplement, quantitative methods with critical, qualitative ones.

Critical research approaches build on the work of feminist scholars, who have long scrutinized ordinary research paradigms. Feminist contestations include that research should not be conducted *about*, but *with* or *for* the subject, and an emphasis on knowledge as situated, partial, and attentive to complexity rather than generalisation (McDowell 1997). Similar reflections are demanded by ethnographic methods (Smyth & Peake 2024: 205f), and while it is debatable at what point repeated field visits constitute "long-term immersion in a cultural group" (Burkholder 2020: 85) that defines theses methodologies, some notes on researcher positionality and ethical considerations are warranted.

On one hand, my positionality as a male, able-bodied, White German gave me the privilege and confidence to enter fieldwork in the hope to gain valuable insights, while also raising questions regarding access to intimate spheres such as pools. On the other hand, I was concerned about how potential differences in age, dialect and habitus, as well as my undeniable position as an outsider - or "sojourner" (Dewalt & Dewalt 2011: 78) - and the potential extractiveness of research, might both complicate knowledge gains and impede on informants. Given increasing public fascination with Alt-Erlaa, the related question arose whether its residents feel over-researched and put on display, or proud and happy to share its 'secrets', or a bit of both; concerns that will be discussed in results chapter 5.3.3. Throughout fieldwork, I by and large gathered the impression that my presence and research interest was in most cases approved of; or even advocated for: in multiple instances, some particularly moving, I noticed my informants beginning to proactively engage in the research: One gatekeeper who brought me upstairs to the pools began to chat with other visitors about the research process, reporting their insights back to me subsequently. Another told me how our repeated encounters had had an impact on how they see life in the estate and the relevance of their pools. Arguably, such moments contain small hints of co-created, reciprocal knowledge.

## 4.3 Methods of Data Collection and Analysis

Two empirical methods of data collection were employed: semi-structured interviews and participant observations. Other methods, among them mapping practices, social network analysis or diary studies were considered, but ultimately not employed for reasons of practicality or relevance.

#### Semi-Structured Interviews

Representing the centerpiece of data collection, semi-structured interviews were conducted with estate residents and informants to gather information on pool usage, social cohesion, and related experiences. These interviews combine some degree of standardization to ensure broadly comparable answers for systematic analysis, with as much flexibility as possible to let respondents share what they find relevant in their own words (Galletta 2016). For this purpose, an interview guide was drafted, adhering to common best practices of interviewing, like avoiding leading or yes-no questions, remaining easily comprehensible, and asking only one question at a time. As the guide was continually adapted throughout the process, its final version (see Appendix I) can thus be considered a rough orientation; not corresponding exactly with each conducted interview.

After an introductory element, the purpose of which was to disclose research intent, clarify participant rights through a consent form (see Appendix II) and create a comfortable atmosphere for the subsequent parts (Galletta 2016: 46), participants were invited to share their insights in two sections that built strongly on both theoretical literature and local knowledge (ibid: 49). The first aimed to explore the usage of, experiences with, and associations attached to the swimming pools in the estate, with a focus on the interactions during and around visits. Afterwards, community life in Alt-Erlaa was explored through various questions aiming at the three dimensions of social cohesion, as well its drivers (including places of encounters and community actors) and consequences (including positive effects and possible moments of exclusion). The final question was consciously kept open, explicitly offering respondents to mention whatever they deem necessary or important about any possible topic discussed, which served a dual purpose of both maximizing information gain and displaying openness to respondents (ibid: 52). This offer was not always made use of, but generally well received, with some respondents saying a lot more after claiming to not have anything more to say. Following each interview, a casual, off-record debriefing would take place, and respondents were provided with a small gift to honor their time and commitment.

One interview was conducted as a go-along (also called walk-along) interview (Bibi & Ehgartner 2021). Different from 'regular' semi-structured interviews, such formats constitute a significantly more liberal approach, allowing the interviewee to lead the process and exposing both conversation partners to,

ideally stimulating, changing settings and contexts (ibid: 181). No specific template was created for the go-along interview, as such interviews are defined by the conscious impossibility to be planned – "you never know where research participants will take you" (ibid: 183). Furthermore, involved mobility would have rendered unnatural and impractical the usual setup of clipboard, pen and paper, inhibiting a genuine conversation. Instead, questions were improvised *in situ* based on research interest and accumulated knowledge, as well as current location and the respondent's priorities. Responses were gathered as phone notes and supplemented through a memory protocol immediately after.

## Participant Observations

Additionally, observational methods were used to confirm, challenge and supplement respondent knowledge. Drawing from disciplines such as anthropology, sociology and education, the ethnographical method of participant observations is "more than just the act of looking" (Byrne 2021) - it combines the attempt to systematically generate knowledge with the embodied presence of the researcher within the studied case (Dewalt & Dewalt 2011: 28). While in some ways, all field visits and interviews included ethnographic elements through field notes and reflections, the rooftop pools specifically were chosen as distinct observation sites. Similar to the interviews, a semi-structured observation guide (see Appendix III) including rubrics as well as empty space for notes on both the people-centered observation of users, uses and interactions, as well as reflections on architecture, design and atmosphere, was created. As the guide allowed for description and categorization of interaction, and provided a guide to analyse the built environment by adapting Jan Gehl's twelve criteria for high-quality public spaces (2010: 238f), it constituted a hybrid between structured - standardized, systematic, controlled (Byrne 2021: 129) - and naturalistic (ibid: 131) approaches to participant observations. After each observation session, the filled-in guide was digitalized as an observation protocol.

## Qualitative Content Analysis

Data gathered by these means – interview transcripts and completed observation guides – was then analyzed via a framework of qualitative content analysis (QCA) after Mayring (Kohlbacher 2006; Mayring 2014) that involved elements of thematic analysis (Riger & Sigurvinsdottir 2016). QCA is an established method appropriate to restructure, report and interpret the data gained by qualitative collection methods and is characterized by the subjective coding process through a researcher, who aims to integrate both latent information and knowledge about the research context into the process. (Mayring 2014),

Accordingly, interview transcripts (in German) and observation notes (in German and English) were organized into data following iterations of deductive as well as inductive coding: Some categories were established before the first

iteration of coding, based on the theoretical literature and mirroring the interview guide, for example incorporating the three subdimensions of social cohesion. In order not to neglect any relevant information and to incorporate priorities and subjectively important statements of informants, however, more categories were then added *in vivo*, based on emerging themes (Riger & Sigurvinsdottir 2016) in interviewees' responses and observation findings. After passing through all interviews once, the codebook was finalized, and all transcripts as well as observation protocols were examined a second time with the goal of identifying and categorizing as much relevant information as possible and clarifying earlier ambiguities. Segments were coded to be as long as necessary while as short as possible, which usually included one or multiple full sentences. In order to stay as true to the original meaning of respondent answers as possible, the coding process took place in the original German language. MaxQDA was used to facilitate this process.

# 4.4 Field Access, Sampling, and Final Dataset

As the character of this study necessitated a thorough process of getting acquainted with the case (Paddock, Pottinger & Ehgartner 2021: 162), the empirical fieldwork was embedded in a comprehensive program of desk research, preparatory interviews and site visits. Furthermore, screenings of the 27 Storeys documentary (27 Storeys 2023) and a resident-made documentary (Der Wohnpark Alterlaa, eine Erfolgsgeschichte 2021) as well as a thorough perusal of the "Du, meine konkrete Utopie" (Pfeifer, Schnell & Chaimowicz 2017) photobook on the estate helped me to make sense of the site. Preparatory interviews with three pundits were conducted: With Zara Pfeifer, the architect and artist behind said project, with sociologist and housing expert Dr. Cornelia Dlabaja, and with longtime Alt-Erlaa resident and community figure Brigitte Sack. Additionally, I attempted to acquire as many socio-demographic data as possible on Alt-Erlaa, which included reaching out to Vienna's department of Urban Development and Urban Planning MA18, the Data Centre of Universität Wien's Sociological department, and GESIBA/AEAG, the institutions managing the Alt-Erlaa estate. Unfortunately, a lack of fitting data in some cases and non-response in others means that ultimately, only population and election statistics as reported in chapter 3.3 were available.

Besides desk research, various field visits in the span between April 2024 and June 2025 were conducted to get acquainted with the field, conduct interviews and observations. The points of contact for recruitment of participants were manifold: participation in three different social clubs, chance encounters in the neighborhood, social media inquiries, as well as snowball recommendations through earlier respondents. More contact options were considered, among them the use of the estate-wide infoscreen or the distribution of flyers in the local library, but ended up not appropriate, not feasible, or not necessary. The sampling goals for interviewees were respondent diversity among demographic features, and theoretical saturation (Burkholder 2020: 234).

Respective entry restrictions meant that access to the pools themselves proved to be the biggest hurdle in the process. While illicit access is theoretically (and practically, as the interviews showed) possible by tailgating residents, it was indisputable that I only wanted to access the estate in contexts that hosts were voluntarily introducing me to. For that purpose, I got involved in the field through joining club meetings, entering into conversations with residents and build up trust. Throughout this process, I found myself, for example, preparing and eating dinner with residents, participating in a weekly board game event, or (surprisingly) winning a round of Bingo with a group of elderly neighbors. While I always transparently communicated my research interest as the reason for my presence, I made a point of engaging in everyday conversations so as to avoid instrumentalizing the encounters for research alone.

After finalizing field research, a total of 10 interviews with 11 informants<sup>9</sup> have been conducted in German, transcribed, and analyzed. The final sample (see Table 4) consists of 6 men and 5 women, with an average age of 59 years. Nine respondents were residents of the estate (R\_x), two were not: one is a frequent visitor and active member in clubs of Alt-Erlaa (N\_3), another has decades of work experience for the estate's technical staff (S\_8), making both invaluable informants for the project. The residents cover all three blocks, have moved in between 1978 and 2021, and live in diverse apartments regarding floorspace and household size from the third to the twentieth story. Together, all interviews lasted 11 hours (average: 66 minutes). Furthermore, four separate multi-hour participant observations at three different rooftop pool sites (C1-4, C5-8, A5-8) were conducted, recorded in field notes, and added to the analysis

Table 4: List of Interviewees

Nr.	Age Group	Gender	Block	Notes	Duration
R_1	66-79	female	С		70 min.
R_2	18-35	male	С		59 min.
<b>N</b> _3	66-79	male		non-resident	46 min.
R_4	51-65	female	A	daulia interniana	76 min.
R_5	36-50	male	A	double interview	
R_6	66-79	male	С	non-recorded interview	25 min.
R_7	66-79	female	В		62 min.
<b>S_8</b>	36-50	male		technical staff, go-along	120 min.
R_9	80+	female	A		63 min.
R_10	36-50	female	В		61 min.
R_11	36-50	male	A		78 min.

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<sup>&</sup>lt;sup>9</sup> One interview was a double interview with two respondents, resulting in a joint transcript but treated separately during coding.

Concludingly, the sampling goal to depict a diverse range of residents among core characteristics was successful, with respondents furthermore differing in their use of swimming pools as well as their embeddedness within neighborhood structures. Nonetheless and as is usual for qualitative case studies (Yin 2018: 196), no claim to statistical representativeness can be made, and some areas of weakness need to be acknowledged: perspectives of young adults, those with mobility impairments, or especially those affected by racialized or other dynamics of social exclusion remain under- or unrepresented in this sample and should be deliberately included in future research. Furthermore, a selection bias of participants can be expected, as neither the presence in associations, which was one key access to respondents, as well as the inclination to agree to an interview presumably follow an equal distribution among residents. Keeping these constraints in mind is vital for an appropriate presentation and interpretation of findings and implications.

# 5. Empirical Results

Building on interviews<sup>10</sup> and observations, the following results are structured along the (sub-)research questions: social cohesion, pools as social infrastructure, autonomy vs. integration. Introductory remarks about residential satisfaction set the scene, providing a first overview on life in the estate.

Interviewees unanimously emphasized high residential satisfaction, which they attributed to numerous reasons. Pools, unsurprisingly given the questionnaire focus, came up most prominently, as did statements surrounding the topics of facility management, security, and the sense of being cared for. <sup>11</sup> More than half of residents each mentioned architectural features along Harry Glück's vision; the balconies, loggias and their view; communal spaces and community life; walkability and density of offers; accessibility and cross-generational comfort; and affordable rents, as drivers of satisfaction. Finally, some interviewees praised opportunities for physical activities; resident political participation; architecture that enables privacy; and Alt-Erlaa's location and environment. Rarely, complaints were voiced regarding thin flooring; a recent decline of commercial and medical offers; as well as, relatedly, the impression of an estate struggling to adapt to its aging population. The estate's tremendous density was not perceived negatively (or not perceived at all) by residents. Instead, some highlighted it as a positive feature that enables the provision of specialized services and facilitates encounters with interesting neighbors. When density or height were thematized, notions of comfort instead of overwhelm prevailed, and the idea of village-like structures - or even of Alt-Erlaa as a Grätzl, a Viennese term describing specific, compact, micro-neighborhoods with strong local identity - was mentioned frequently:

That's the most fascinating thing there. You don't feel like you're living with 10,000 people. Do you, right now, feel like we're living here with 10,000 people? And even when you're inside, in the rooms, when you walk around or something, you don't get that feeling either. (R\_4)

I also think that there is more community spirit in Alt-Erlaa than in the countryside. I have to say, honestly, that I find that fascinating, but it's true. Alt-Erlaa is a town in its own right, or a village in its own right, but a village that is somehow positive.  $(R_{-7})$ 

<sup>&</sup>lt;sup>10</sup> While interviews were conducted in German, quotes in this chapter are presented in English, following careful translation to retain as much as possible of both speech patterns and original meaning. Occasionally, parts were shortened or slightly modified for better comprehension, indicated by [brackets]. Non-verbal expressions, interviewer remarks, or important background information are presented in (parentheses).

<sup>&</sup>lt;sup>11</sup> As staff member S\_8 told me tongue-in-cheek, almost none of the staff resides in Alt-Erlaa: only this way, without constant inquiries through residents, can they maintain some work-life-balance.

## 5.1 Social Cohesion: Measures, Drivers, Consequences

#### Dimension 1: Social Relations

While quality and quantity differ, respondents unanimously reported at least some social relations within (respectively towards) Alt-Erlaa, which for all informants comprises the full range between loose acquaintances and close friendships. Relationships with immediate hallway<sup>12</sup> neighbors were predominantly described as indifferent-friendly, with multiple respondents claiming they rarely see them, or have little in common in terms of values or lifestyles. Still, such contacts are mostly described in a neutral to positive light; Respondent 2 posited that the polite greetings he cultivates with his hallway neighbors already surpass an alleged Viennese average of neighbors just passing one another without comment. One kind of neighborly relationship that was, when mentioned by respondents, more often than not associated with negative emotions is that with residents immediately above and below: noise due to thin floors or diverging opinions about proper use of the loggia (e.g. feeding pigeons) have lead to complaints both by and about the residents in the sample, commonly challenging the development of amicable relationships. Respondents 2 and 10 offer positive counterexamples, reporting that noise complaints of the neighbor below (R\_2) or a monthly downstairs visit to collect toys dropped by the kids in the past weeks (R\_10), respectively, were reasons to become acquainted in the first place.

Yet while immediate surroundings were not a significant realm of connections, investigating the estate as a whole reveals diverse, and robust, social networks. Generally, there is agreement that residents "are friendly people across the board" (R\_1), and residents' circles include neighbors of other blocks – particularly through club participation. Some informants reported that friends and acquaintances from elsewhere happen to live in the neighborhood, with those respondents mentioning such connections alluding to, or explicitly claiming, this as an influence on their move-in decision. A majority of residents – as well as non-resident N\_3 – also reported to have made friends or even close friends within the estate. Importantly, these connections are not limited to the own hallway (as previously explained) or even block. Instead, residents unanimously reported connections into the other buildings:

Yeah, so it's all throughout, basically. It's not [limited to] block C. You're not able to control that anyways, when you're meeting someone.  $(R_1)$ 

Mentioned by around half of the sample, another type of local connection are family relations. While these "family neighbours" (Logan & Spitze 1994) complicate the analytical distinction between neighborhood cohesion and 'simple' family matters, they also serve as powerful indicators of neighborhood

<sup>&</sup>lt;sup>12</sup> Hallways typically comprise around five units each, exceptions being penthouses and some hallways that serve up two 10 single-person apartments.

attachment that transcends – and connects – multiple generations. The epitome of this dynamic was seen in residents who have grown up in Alt-Erlaa and, when older, move into their own apartment within the estate, gaining independence from parents while maintaining close proximity. Some, like Respondent 11, even return after having lived elsewhere.

None of the respondents reported social isolation or loneliness. Instead, when the keyword of *lonely* came up twice, the context was the statement "if you're lonely in Alt-Erlaa, it's your own fault" (R\_4, R\_7), hinting at the plethora of possibilities and social infrastructure in the estate. Importantly, Respondent 4 challenged this claim by pointing out that joining social structures that have grown and evolved over decades can be quite difficult. Regarding social isolation, even the respondent with fewest relationships in the estate attributed this to their own lack of outreach due to their strong outwards social bonds, not to a shortcoming of Alt-Erlaa's design or population.

Finally, the dimension of social relations also pertains to measures of mutual trust. While not operationalized explicitly in the interview guide, responses commonly pointed towards a general level of trust. For example, Respondent 1 expressed confidence in the future willingness of her neighbors to offer help if she were in need, and the interviewed facility manager claimed that residents know they can rely on both one another and the estate staff.

### Dimension 2: Identification with the Geographical Unit

The interviews reveal high measures of place attachment for most consulted residents, indicated by a strong identification with the neighborhood and an explicit will to keep residing in Alt-Erlaa in the future. In fact, Respondent 1 allocated enough importance to her place attachment to bring it up immediately in her introducing words:

...a tenant in Alt-Erlaa for 25 years, ehm, a busy, happy retiree. Currently 67 years old. Well occupied, well housed. Love living here. And still a fan of Alt-Erlaa. The plan is never to move out. Unless I'm carried out feet first. (R\_1)

This linguistic picture of being 'carried out feet first', implying the dedication to leave only upon death, is indeed a recurring theme in perceptions of Alt-Erlaa, mentioned by three informants independently, and a reflection of its low turnover and high residential satisfaction. While not all respondents phrased it as vividly, this sentiment of insisting on residing in Alt-Erlaa as long as possible was present throughout the sample. In a similar vein, many residents mentioned or implied various long-term plans relating to life in the Wohnpark. This most prominently occurred with R\_2 and R\_9 – those residents with the fewest local connections – who both stressed their intention to engage in more clubs once their time constraints allow for it; a sentiment shared also by R\_4 who is already somewhat well-connected but is "in the process of becoming more rooted here, as I will be retiring" (R\_4). Relating to family connections within the estate, R\_10

mentioned having decided with her son to waitlist him to move into his own apartment in a few years.

When explicitly asked about their identification with the estate, residents commonly emphasized that Alt-Erlaa plays at least some role in their self-image. Many said to consider themselves as "part of it" as a bigger entity, displaying identification in the literal sense of *being one* with the Wohnpark. Interestingly, Respondent 4 – nevertheless exhibiting high place attachment – hesitated to express local pride, linking it to a notion of patriotism she doesn't endorse:

(pensively): "Alt-Erlaa is a part of me..." I think, in general, well, I think it depends on the person, and I've thought about it a lot, yes, it also has something to do with attachment to one's homeland, fatherland, pride, patriotism... "I am Austrian, I am Viennese, I am Alt-Erlaa"... I don't think that's the case for me, yeah. (R\_4)

Aside from residential stability and identification, place attachment also manifested in commonly mentioned moments of advocating for Alt-Erlaa against outside scepticism. Resident 1, for example, claimed to be "defending Alt-Erlaa wherever I can, and I promote it everywhere" (R\_1) when faced with negative stereotypes about architecture or life in the estate. The fact that such criticism can evoke affects of feeling "personally attacked" (R\_1), making respondents "take [Alt-Erlaa] under protection" (R\_9) or "set [its] image straight" (R\_10), illustrates how residents are entangled in processes of identification. In some moments, high local identification can even overrule identification with Vienna as a whole, as Respondent 2 reported, who said he sometimes wouldn't introduce himself to strangers as Viennese, but primarily as an Alt-Erlaa resident. In sum, the informants presented Alt-Erlaa as a place that goes beyond just satisfying housing needs, but instead serves as an anchor point of affection and identification:

I wouldn't want to live anywhere else. And I identify with it, 100 percent. Like, this is where I dwell and where I *live*. It's my ecosystem. Everything that's here, all the places I can visit, the people who belong here... And that also creates a sense of community, because so many people identify with it. So, I think that a lot of people would say, "I am the *Wohnpark*." (R\_11, author's emphasis)

Looking inward is one thing, but pride and identification were also revealed in residents' outward perspectives: when comparing Alt-Erlaa – often unpromptedly – to other districts or housing estates, residents frequently displayed underlying self-confidence. The nearby estate *Am Schöpfwerk* in particular served as a frequent point of reference, allowing Alt-Erlaa residents to distinguish themselves in terms of demographics, architecture, or orderliness, occasionally drawing on pejorative stereotypes. Still, this local pride rarely appeared to limit engagement with the wider city. Relatedly, one respondent explicitly situated Alt-Erlaa as part of the more upscale 23. district in order to frame local pride as something not exclusive to Alt-Erlaa but commonly found throughout Liesing.

Regarding place attachment, practically no differences in identification between blocks were reported – at most, Respondent 2 posited minor rivalry "for the fun of it" (R\_2). This matches the finding that respondents reported social relations throughout the entire estate, and might correspond with the high interconnectedness of and negligible architectural differences between the estate buildings. Finally, non-resident Respondent 3 demonstrated that identification with Alt-Erlaa is not limited to its residents: After years of frequent visits to the Wohnpark and considering his manifold connections to its residents and institutions, he claimed that he does identify as "part of" (N\_3) Alt-Erlaa. This interesting finding serves as a first hint towards a fluidity of Alt-Erlaa's community: it appears that even geographical outsiders have a chance of integration into community structures, up to a point where they feel a sense of belonging.

### Dimension 3: Common Good Orientation

Findings regarding the presence of orientation towards the common good, the third dimension of social cohesion, were mainly found in claims made about involvement in organized neighborhood structures, questions of tolerance and compromise, as well as regarding compliance with written or unwritten rules.

As far as involvement in neighborhood institutions goes, a first qualifying distinction can be made between a more passive engagement with clubs and the events they offer and an active, conscious decision to contribute to the community, which can happen in clubs or otherwise. Most residents interviewed expressed some level of involvement, with many enjoying the events of different clubs and some holding positions within them, or acknowledging how others put in considerably more work and time. Generally, Respondent 7 surmised that around a third of residents are engaged in the clubs in one way or another, which corresponds with the statistics reported for 2004 (Wien MA18 2004: 78). Some residents not only frequent clubs as a guest, but explicitly engage within them by fulfilling official roles. Those who are less institutionally involved stressed that this is not due to a general lack of will, knowledge, or interest, instead naming time constraints through employment and university, or stable social networks outside the estate, as paramount to stopping them from putting in more time and efforts into the local community. This dynamic of current constraints but future intentions suggest a level of forward-looking commitment to the common good.

Strikingly, multiple interviewees downplayed their engagement only to then name several associations they are involved with.<sup>13</sup> Aside from clubs, residents show local involvement in the political body by voting for members, engaging with its processes, or even (successfully) running for elections themselves.

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<sup>&</sup>lt;sup>13</sup> It stands to reason that in these moments, residents compare themselves with those neighbors who are very prominently and visibly engaged – instead of with residents of other housing estates who probably are, as the 2004 study suggests, in most cases not engaged in neighborhood clubs in the first place (Wien MA18 2004: 68).

Lastly, less institutionalized commitments to the common good – organizing joint visits to restaurants in the surrounding area, planning and hosting parties in the hallways or by the rooftop pools, and more – are evident in both the informants' activities and those they report from others. Generally, consensus exists that local involvement – particularly that of the active kind, even if potentially providing a sense of purpose and fulfillment – requires substantial individual time and effort which is not always possible:

The exercise ball won't inflate by itself. (S\_8)

No one will come to your door and knock and say, come on, would you like to come with us, will they...? No.  $(R_5)$ 

Furthermore, Respondent 11 theorizes that establishing and maintaining community associations has become increasingly bureaucratic and burdensome, and is not as appealing to residents today as it used to be. Aside from personal motivation and open-mindedness, the factor (or constraint) of time resources is named most prominently, with retirement discussed as the paramount condition enabling involvement.

Regarding conflicts and disagreements in Alt-Erlaa, the general sentiment in the sample is that cohabitation is coined by peacefulness and mutual acceptance of differences. To the extent that conflicts do occur, they were described as ordinary, expectable discord – especially with thousands of residents living in high density – which is usually resolved easily either between residents or, if necessary, with local security. The fact that tolerance was discussed as something both exhibited by respondents ("Yes, it doesn't bother me. That's just how it is. (R\_7)) and expected by others ("I mean, we all have different views here. And there simply has to be tolerance for that, yes." (R\_4)) points towards residents' abilities to subordinate personal interests to the common good, as do generally reported impressions of safety and generally non-deviant behaviour. Similarly, S\_8 pointed out how the fact that the unprotected, large-scale artworks in all entrance halls have never been vandalized is a good indication of a well-behaving population.

Nevertheless, noteworthy frictions that complicate amicable relationships that interviewees mentioned were noise-related conflicts, as discussed above, and intergenerational tensions related to the high share of older residents. One way or another, such frictions came up in practically every conversation on life in Alt-Erlaa, with implications for various arenas of neighborhood relations. Regarding the estate's associations, for example, the opinion was expressed that it is hard for younger residents to integrate into clubs inhabited and shaped by strongly bonded older, long-term residents. Another field of contestation was (semi-)public space, illustrated for example by spatial conflicts of children on bikes and elderly residents with walkers. As discussed in chapter 5.2.4, some of these conflicts are mirrored in experiences in the estate's swimming pools.

## Architects of Cohesion: Community Makers

A number of actors – individuals, groups, institutions, places – were identified as crucial to the creation and maintenance of local cohesion. Most prominently, the around 30 self-organized clubs housed deep within the buildings were named again and again: Here, residents and non-residents are provided with the space and resources to pursue their hobbies, improve their health, acquire new skills, and – equally important – socialize with like-minded neighbors, fostering connections through shared interests. Similar characteristics (an opportunity to mingle for residents and outsiders) apply to the estate's schools and kindergartens, serving as bonding elements within as well as beyond the neighborhood.<sup>14</sup>

While clubs and educational facilities have a clear spatial placement, both *Hausverwalung* and *Mieterbeirat* were named as ubiquitous organizations that not just facilitate life in Alt-Erlaa, but explicitly foster cohesion. While facility management usually takes a hands-off approach to neighborly relations, only intervening in more serious incidents that require police intervention, it contributes to community through frequent guided tours for neighbors which build mutual trust and positively influence behavior (S\_8, R\_10), as well as by consistently appearing as approachable and responsive to resident matters. The resident political body, "certainly a relevant factor in life here" (R\_11), is praised as a well-established exception to the rule of such institutions usually forming around one issue and disbanding soon after (R\_11), and posited as the simultaneous cause and effect of cohesion.

Many respondents furthermore mentioned individuals with strong social commitment and manifold connections, corresponding to what Felder terms "socialisers" (2020: 11f) as backbones of the community; and three interviewees brought up the 3000-member Facebook Group "Wir wohnen in Alterlaa" as a digital arena of neighborhood communication. In a similar vein – although not explicitly emphasized in interviews – I noticed during field visits and informal conversations how neighborhood group chats act as community facilitators, allowing residents to plan next week's group event or request missing onions for a recipe in no time. Finally, two residents each mentioned the intercom system, which by allowing residents to call enabled connectivity before mobile phones were common; the local church organizing public events with food and drink during summer; and the resident-organized *Wohnpark-TV* channel, as relevant actors and institutions that connect residents and enable flows of information.

These community actors are entangled in various relationships, for example when *Mieterbeirat* and *Hausverwaltung* deliberate or through socialisers

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<sup>&</sup>lt;sup>14</sup> During fieldwork, I could frequently observe parents chatting while waiting to pick up their children, and to my initial surprise, many of those parents I struck up conversations with indeed were from outside the Wohnpark.

occupying positions in multiple organizations simultaneously, and frequently serve as gateways for residents to get involved in other community activities. Furthermore, interviews revealed synergy effects where different community actors acted in concert to create moments of connection, for example when clubs advertise events in *Wohnpark-TV* or the Facebook group, or when organized water gymnastics take place at the pools. In a particularly striking example, Respondent 11 recounted how in summer, the youth club regularly organizes a public water slide in the estate park area, with water access provided by facility management. Taken together, such dynamics paint a picture of a highly symbiotic, interactive social ecosystem. Following the comprehensive definition of social infrastructure of not necessarily spatially rooted, all groups and places described above – as well as the spaces of encounters mentioned in the following section – can be considered as manifestations of social infrastructure.

### Daily Encounters - Spaces of Public Familiarity

While the former section discussed specific, institutionalised *actors doing community*, this section focuses on locations – relational settings – that serve as the backdrop for more unintentional, fleeting encounters and interactions. Generally, fieldwork revealed that a quick but friendly greeting upon encounter is *the* paramount interaction of Alt-Erlaa, named by all respondents and frequently experienced by me on-site. This was reported to be "self-explanatory" (R\_1) and "simply part of it" (R\_2), regardless of whether the counterpart is an acquaintance or a stranger. As staff member S\_8 pointed out, this can be a learned behavior: if others greet, one is likely to mimic this act, creating a positive feedback loop of friendly interactions. Often, greetings are followed by short conversations – commenting on the weather, checking in on health concerns, or discussing gossip. Yet not every encounter necessitates interaction, and interviewees repeatedly expressed how just recognizing one another helps build trust, or stressed the importance of simply being able to see others:

In that one spot where there's a stage, there's always a bit of quiet music playing, there are seats, and I've sometimes seen people sitting there, taking a break with their shopping trolleys or walkers. [...] You see people, yes. And it's very important to see people. For me, anyway. (R\_9)

Over time, residents may develop acquaintanceships with neighbors without knowing specific details about them like their names or where they live, but still engage in friendly conversation. While Respondent 10 reported that for block B1/2, its comparatively smaller size furthermore facilitates such familiarity, almost all respondents agreed that recurring encounters lead to feelings of familiarity, trust, and safety.

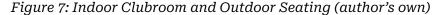
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<sup>&</sup>lt;sup>15</sup> Interestingly, some of the information attained during interviews was itself attributed to rumours (over)heard over coffee, in the elevator or by the pools, with respondents happy to share what they had *heard somewhere*.

Through this greeting and through this, let's say, familiarity, because of course you can only come in here if you have the chip. And when you see the same faces again and again, you feel more at home. (R\_2)

Some sites were named prominently by multiple respondents: the club rooms, the estate hallways and elevators, the Kaufpark shopping mall with commercial spaces as well as two 'plazas' providing opportunities to sit outside and inside, and the various elements of play and leisure – indoor and outdoor playgrounds, the park, and its dog park elements (see Figure 7). Relatedly, dogs and children were named in multiple instances as household elements that facilitate interactions. One resident each mentioned the mailbox rooms, and the underground garage, which, serving simultaneously as a sheltered access tunnel throughout the estate, can be a point of encounters especially during bad weather.





#### Further Drivers of Cohesion

More drivers of local cohesion were explicitly mentioned by interviewees or inferable by informant statements and background information. First and foremost, the conscious decision of moving to Alt-Erlaa was widely discussed. This applies to more recent residents, with all respondents reporting that they *decided* to move into the estate instead of exhibiting indifference, having their apartment allocated, or being forced by outer circumstances:

I think that Alt-Erlaa is a very conscious choice. [...] This shapes identification with the estate, of course: [...] I don't live here by chance; I know why I live here, and I know why I won't be moving away. (R\_11)

Even more prominently, however, the deliberate choice to move in was discussed as a feature of the first generation of residents. Interviewee reports – as well as coverage in journalistic and popular media – paint a narrative, in

some cases almost a sort of local legend, of a very specific demographic of first occupants that shaped Alt-Erlaa from the moment of their arrival: young and motivated families, an atmosphere of optimism and *Aufbruchsstimmung* (a sense of new beginnings), as citizens from humble backgrounds and lacklustre apartments finally experiencing upward mobility. Thus, Wohnpark Alt-Erlaa seems to have been infused with a, typically modernist, *faith in progress* from its inception. Related to this notion of conscious decisions are the high measures of residential stability, which, while attributed to high standards of living, crucially also relate to the specific regulations on social housing in Vienna that allows residents to retain their apartments, even if their income surpasses the threshold necessary for initial eligibility (S\_8). Positive effects of long-term tenure, then, were said to concern all dimensions of social cohesion: building familiarity and stable social networks, facilitating identification, and fostering a sense of shared responsibility for the common good.

Aside from these resident characteristics<sup>16</sup>, respondents also named local estate properties as paramount, often *explicitly* quoting club rooms and those spaces discussed above as cohesion drivers. Importantly, they stressed how Alt-Erlaa offers flexibility and freedom of choice – residents can be as involved or uninvolved as they wish, without pressure or obligation. A comprehensive response by Respondent 7, asked about reasons for high social cohesion serves as an accurate summary of resident sentiments throughout interviews:

I think that a lot of it has to do with the community facilities here. Because you can always choose where you want to go. I mean, there are so many different types of clubs. So, I think there's something for everyone. And another positive thing is definitely the shopping centre at the front. And you can sit there and someone always comes along and sits down on the bench to gossip. Or, as I said, sometimes you're at *Anker* having a coffee. And I think that makes a big difference. [...] For the community. (R 7)

#### Positive Effects of Cohesion

Summarizing the results thus far, it can be assessed that the high levels of social cohesion initially expected were generally confirmed by respondents, and attributed to a specific demographic that has been equipped with the architectural means to build and sustain community easily. Turning towards consequences of this cohesion, various residents were able to name concrete positive effects on their lives. For Respondent 1, the potency of reciprocal care networks was most prominent:

It's certainly no problem if I need something now, that I call someone I know and ask, can you get this for me, can you go shopping, can you go to the pharmacy

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<sup>&</sup>lt;sup>16</sup> Notably, many of these attributed reasons are somewhat interrelated: Taken together, interviews, demographic data, and site impressions leave an impression of the residents of Alt-Erlaa as a somewhat homogenous group, raising questions towards the generalizability of findings relating to cohesion in mass housing.

for me or can you do something, so... Someone will definitely be found. [...] That's a good feeling, yes. [...] I mean, at the moment, since I'm one of the younger ones in the pensioners' club, I'm naturally more the one who helps or supports others. But it will come back. I'm one hundred percent convinced of that. (R\_1)

In a similar vein, many respondents offered anecdotes that indicate how amicable social relations in the neighborhood make life easier for residents through dynamics such as watching pets, watering plants, or providing each other with missing cooking ingredients on a Sunday. The high level of trust residents enjoy in the neighborhood was mirrored in the fact that Respondent 2 and some of his neighbors have decided to share their chips (i.e. keys) with one another. This comes in handy on occasions such as in one story when his neighbor accidentally misplaced her key, but managed to regain access to her apartment almost instantaneously by calling R\_2, who happened to be at home and could lend the key he had been entrusted with. Other residents discussed how strong social connections paired with a shared sense of responsibility are a key driver for quick flows of information, particularly on local matters such as pending *Hausverwaltung* repair work.

## Exclusion and Non-Belonging

Some respondents waved off the idea of potential negative effects of strong social cohesion, while others named downsides that they or others experience. While acknowledging that choosing to spend a lot of time in one specific group might risk some interpersonal frictions, Respondent 2 stresses that the estate's strong social ties are a conscious decision and not related to any peer pressure: If residents decide to not engage with their neighbors, they will neither be forced to do so nor castigated for their choice.: "No, no, no, not at all. Anyone can do that if they want to. Or not." (R\_2). Similarly, Respondent 1 agrees that while not every single resident is engaged in neighborhood matters, it is theoretically possible for everyone to participate, and no specific subpopulations of the inhabitants are seen as outsiders to the group by the interviewed residents. On the other hand, some respondents mentioned strong bonds between older residents to hinder younger and more recent neighbors from with the estate's social structures:

There's certainly a difference between being born and growing up here, and moving here. [..] The old people, they definitely pulled together. They also moved in at the same time. [...] Now you, me, come along much later and try to get to know people. Then the old people, the old-established people say, well, if you're lonely in Alt-Erlaa, it's your own fault. That's not true, because I'm trying to get in now. (R\_4)

Moreover, non-resident Respondent 3 reported his impression of rising xenophobia, noting an increase in negative remarks about newly moved-in non-native residents. While the respondent considered this a general societal

trend reflected also in Austria's recent election results, <sup>17</sup> he suspected that the high density of Alt-Erlaa causes these kinds of frictions to become particularly apparent. Similarly and although verbally speaking out against racism, one of the residents expressed their understanding that alleged fundamental socio-demographic change can overwhelm locals, leading to ethnic tensions.

### 5.2 Pools as Local Social Infrastructure

While the intended scope of the interviews included both rooftop and indoor pools, not all statements could be clearly attributed to one of the two settings. Most conversations also naturally evolved to focus on the rooftop pools, which are not only more attractive to many residents due to their spaciousness and outdoor location, but altogether appear to be more representative, playing a significantly bigger role in resident's mental imaginary of Alt-Erlaa. In consequence, the following results, unless specified otherwise, represent either swimming pools as a whole or, more often, rooftop pools specifically.

## Usage – Motivations and Patterns

All interviewed residents reported to use the swimming pools to some degree, and even Respondent 3, albeit not a resident, had been offered (but has declined) to visit them. This seemingly high level of usage contrasts with the fact that according to residents, staff members, and my own impression of fieldwork even in perfect conditions, they rarely appear crowded. Besides swimming, activities carried out at the pools include sunbathing, reading, playing, eating, visiting the Sauna or exercising other sports like Yoga, diving or gymnastics; illustrating how swimming pools are by no means monofunctional.

Within the sample, visiting the pools alone was mentioned marginally more often than joint attendance. Such visits are coined by spontaneity and brevity, sometimes comprising no more than twenty minutes between leaving and returning to the apartment. For solemn visits, the main motivations were physical activity and refreshment; some respondents also named the goal of relaxation or even solitude, seeking out times where they hope to be entirely undisturbed by anyone else; and three respondents – as well as many visitors during observations – use the opportunity to marvel at the view:

I go for a swim and then, when I walk to the pool, when you walk up there, along the path by the fence, I look down and [...] I look at Vienna. (R\_9)

The majority of the sample also enjoys joint visits with other neighbors, family, or outside guests. The baths then serve as catalysts and focal points that gives

<sup>&</sup>lt;sup>17</sup> At the time of the interview, the far-right FPÖ party had won the last national elections and was expected to be leading a new government.

<sup>&</sup>lt;sup>18</sup> As the next section will show, even those solemn visits, however, can contribute to neighborhood cohesion.

neighbors both an occasion and a location to meet, families an opportunity to combine relaxation and play, and residents with guests the ability to present to them a highly prestigious amenity of their home. For Respondent 2, the pools are the place he and his neighbor friend spend most of their summer weekends at, exemplifying how they constitute the backdrop for residents to maintain and develop their relationships. This holds true especially as visits with friends and family are reported to often take significantly longer than solemn visits:

We're up there in the afternoons, after kindergarten or from four [pm] or so, when it's not so hot anymore, we're actually up there all the time, until seven, eight. Indeed, hours at a time, that you spend fully up there. (R\_10)

Group dynamics can even be a main driver to visit the pools: Respondent 1, regularly exercising with her friend group, employs peer pressure to overcome her own laziness. Before and after such visits, she told me, coffee, gossip and computer fixing sessions take place in her apartment, indicating how pools have become part of a social routine that connects residents even beyond their physical site itself. In a similar vein, Respondent 4 claimed to not be using the pool-adjacent saunas for the simple reason that alone, "it's boring. [...] Yes, in a group, I'd do it in a heartbeat" (R\_4).

Besides curiosity, arranged visits with neighbors were furthermore mentioned as the only reason to visit *other* pools than the closest one, as all respondents stressed the convenience of the pools that are located not only in walking distance, but are accessible without getting wet from the apartment for most of the day: Due to every block boasting multiple facilities, and with high-speed elevators moving between floors rapidly, the closest pool is never more than a few minutes of fully indoor travel away. Again and again, respondents stressed that this proximity fundamentally changes how they view and utilize the pools; allowing frequent, spontaneous, and short-time visits. Accordingly, most residents also change into swimwear within their own home, an aspect further discussed below.

When I know I have the rooftop pools just upstairs, then I go up with the children or with my parents for an hour, an hour and a half, and then I go down again and am back in my apartment. (R\_2)

Unusually for Alt-Erlaa, multiple steps along the way make its rooftop pools not barrier-free – with the exception of the recently upgraded, centermost pool B3/4, now boasting a stairlift to guarantee accessibility even to wheelchair users (MBR 2024), an investment appreciated by one elderly interviewee. As facility manager S\_8 disclosed to me, however, this modification represents a certain mismatch with actual needs: Not only is using the stairlift complicated and limited to *Eurokey* owners, it furthermore is not suitable for rollators, a walking aid that is significantly more common in Alt-Erlaa.

Turning towards usage of *others* as reported by interviewees, most informants claimed that as the pools serve many different purposes simultaneously, patterns of (non-)usage are evenly distributed. Some differences are noted between rooftop and indoor pools, such as the latter being more popular with children, but overall, it can be assessed that pools are used and appreciated by residents across the board.

I couldn't say that it's this or that demographic or this or that social class. It's used just as much as it's not used. Many tenants don't use it at all. Many tenants use it. But I couldn't say that it's this or that group of people. (R\_11)

Three temporal usage dimensions were discussed in interviews: extensive opening hours help distribute usage across the day, although afternoons as well as the hours surrounding opening and closing were reported to be somewhat busier times. Many residents exhibit a certain kind of routine in their visits, indicating how the pools have found their ways into their everyday lives, and multiple interviewees claimed that they know which neighbors they can expect to meet at what point of the day as residents "do indeed have their routines" (R\_10). Accordingly, some residents consciously adapt their usage to avoid busy hours. Second, usage throughout the week or year fluctuates based on personal temporal constraints as well as seasons, weather and temperature. Weekends and holidays see more use, especially driven by families and employees, as does the height of summer, particularly during the dog days<sup>19</sup> of July and August. The closure of rooftop pools for two thirds of the year means that then, usage partly disappears and partly shifts to indoor pools. Finally, multiple respondents shared that in the context of rising average temperatures, increased awareness of (skin cancer- and heat-related) health issues, and changing lifestyle patterns, long term pool usage patterns have shifted from extended lounging sessions to more brief cooling-off dips. Nonetheless, long-time staff member S\_8 asserts that overall usage levels have remained fundamentally similar, only patterns and distributions have evolved.

# Interactions – From Fleeting to Institutionalized

### **Acknowledgments and Greetings**

Whether visiting alone or in company, various kinds of interactions were reported by the respondents. Encounters begin even before guests arrive at the pool: from the moment residents leave their apartment, they can run into neighbors in the hallways and elevators. Mirroring the phenomenon of greetings in these spaces, mere coexistence at the pools is practically always accompanied by a mutual acknowledgement of some sort, from a simple nod to a short greeting:

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<sup>&</sup>lt;sup>19</sup> While not exclusive to Vienna, the concept of "Hundstage" – popularized also by a 2001 movie of the same name by Austrian director Ulrich Seidl – is evocative in Viennese life, as the city gets very hot and humid during this period, with the term often appearing in media, literature, or casual conversation.

But I very often find myself in a situation where I'm swimming and there's a second or third person with me, and I do recognize their face. And then, of course, we say "hello", "hello", yes, "have a nice evening", "have a nice evening". (R 2)

Due to the pool area being small enough to recognize others even at the opposite end and manageably low frequencies of visitors arriving and leaving, it usually seems appropriate and practicable to devote a swift greeting to any encounter, and correspondingly, most visitors briefly see themselves off when leaving. During site visits, I found it easy to orient myself and establish a sense of who was around me within minutes; a process that would take significantly longer in any public pool. Together, these dynamics contribute to a significant sense of poolside familiarity. As reported by informants and observed by me, such interactions take place between residents across ages and ethnicities, although Respondent 7 qualifyingly mentioned:

So it's always, you always [...] greet each other, except for a few young people now, but that's the problem everywhere. (R\_7)

These aspects link back to the themes of usage patterns and accessibility mentioned earlier: While individual routines and the restriction of access to chip holders might limit the number of new encounters and the range of possible contacts, they may also help residents establish familiar faces quicker and more easily. Noting that she doesn't follow any specific routine, Respondent 1 contrasted this experience:

It's a surprise every time. You can't say you go down and meet someone because they always go at the same time, rather... The audience is always changing. (R\_1)

#### **Quick Chats and Gossip**

Going beyond plain greetings, the theme of casual interactions like sharing gossip (*tratschen*), discussing neighborhood issues or catching up on recent events emerged prominently in interviews and observations, with topics ranging from water temperature to future plans to family dramas. Quick chats like this take place with acquaintances and friends alike:

Every now and then, you meet others. And then you talk. I often don't even know people's names, I only know them by sight, but we talk. (R\_7)

But the thing is that when I come up, I naturally meet neighbors, have a quick chat with them and, yes, I can talk to them on a low-threshold basis. Of course, there are sometimes people from my club who are there, or my [immediate] neighbors, where you just say "hello, how are you, what's going on?" That sort of thing. (R\_11)

Not all respondents, however, find joy in this activity, and not every other visitor is seen as worth talking to:

No, I don't have to have these [constant interactions], because I don't want to chat only. I'd really like to be able to swim, too, to be honest. (R\_9)

Well, I don't know, there are some people upstairs that I talk to that I don't know. But there are [some] I don't really feel the need to make contact with, right now.  $(R_{-}11)$ 

Besides interviewees repeatedly naming gossip as one of the most common poolside activities alongside swimming and relaxing, observations revealed that chatting with other guests indeed takes up substantial portions of time during a typical visit. Most of the time, the number of guests engaging in conversation in and by the water greatly surpassed that of visitors currently swimming. Strikingly, I had noted by the end of one observation that without exception, all ~15 present guests had talked to each other in varying constellations at least once. During another, one corner of the pool served as a continuous site for conversation between swimmers and sunbathers with participants dropping in and out: After an hour, none of the initial interlocutors were present anymore; gossip, however, simply progressed in new configurations. A final noteworthy example of chatting saw one resident who had packed up and was walking to the exit stopped in their tracks by a swimmer. The couple – one crouched, one clinging to the edge – went on to spend twenty more minutes gossipping.

In some cases, mingling with others may even serve as the *primary* motivation to visit the pools, with taking a dip appearing secondary: "It's not a sports pool", staff member S\_8 told me, "people come up here to chat". Similarly, Respondent 4 used the example of one neighbor to illustrate her frequent observation about elderly residents:

Old and young knew [this neighbor] and gossiped with him. But I think that because of their age, they don't swim so much anymore. They just sit on the bench, [...] warm up in the sun first, then get wet for a moment, and then go back to gossiping. They certainly do that, as you say, because of these social aspects, yes.  $(R_4)$ 

There's a lot [of people] that goes up there and, sure, they go into the water for a short time, from what I've seen. But largely, they gossip. (R\_5)

Retired neighboring resident N<sub>3</sub> confirmed these dynamics, sharing how he experiences his local friends to regularly arrange a time to visit the pools to continue their coffeehouse chatter in a different setting:

Yes, yes, they also often make arrangements to meet up at the swimming pool, when drinking coffee in the morning. Then they say, I'll be up there in the afternoon.  $(N_3)$ 

### **Forging New Friendships - and Maintaining Existing Ones**

Sometimes, interactions extend beyond quick chats, such as when neighbors play board games, share food, look after each other's children, or spend entire days upstairs together:

And then, of course, you get together, so you have towel lines, towel landscapes, exactly, and then the peanut flips are shared, or [...] watermelons, which are then passed around, then someone gets an ice cream from downstairs from the apartment...  $(R_10)$ 

In these moments, familiarity and trust facilitate the emergence and reinforcement of mutual networks of care, with proximity allowing residents to comfortably drop in or out or bring replenishments from downstairs. During one observation, I saw a family with children joining the pool, with the parents departing soon after, but leaving their kids behind after making sure someone else could keep an eye on them in the meantime. While it wasn't obvious in the moment if that someone were family, friends, acquaintances or strangers; the general impression is that it doesn't even matter – as the upcoming section elucidates, the general atmosphere by the pools is one of trust.

Some residents claimed that due to repeated encounters and the ease of striking up a conversation, facilitated by, for example, the presence of children or the remarkable views, they have made new contacts or even friends by the pools.

Yes, by now, yes. I mean, [...] especially through the children. Children are basically always how you come into contact with others very quickly, especially when people have children of the same age. (R\_10)

Such relationships may persist in everyday neighborly life, like for R\_7, whose chance encounter by the pool has since not only developed into a friendship but also served as her entry towards club participation.

I did, I did. And it was thanks to her, that I joined the pensioners' club. (Interviewer: Oh, really?) Because she then explained to me, "yes, there is something" and why and so on. And I said, "yes, okay, let's look into it". And that's how the whole thing came about.  $(R_{-7})$ 

In these moments, poolside encounters serve as a medium for ongoing contact, poignantly described by R\_11 as "certainly a *slide* [...] to approach" other neighbors, i.e. a slippery slope leading towards closer contacts. Misunderstanding my question towards the emergence of relationships by the pools to be aimed at romantic encounters, Respondent 4 posited:

I've met new people at the pool, but none, in that sense...  $relationship \ didn't \ work \ out, no. (R_4)$ 

During our interview that took place on the downstairs rooftop area, Respondent 11 utilized the question whether he encounters new faces by the pools to elucidate how such acquaintances can become friends:

I see new faces here, for example, when I turn around now. (He takes a quick look behind him at some other visitors.) I have no idea, I don't know them. Now I've encountered new faces, but I don't have any contact with them, so I don't know them. But I have a concept now; when I meet them in the elevator next time, I think to myself, "Ah, I saw them on the roof the other day". And so they'll become familiar faces, and thus I'll have the opportunity to get in touch with them when the opportunity presents itself. Or to ask them, for the next hallway party, "Ah, now that I see you in the elevator, we're having a hallway party today!" (R\_11)

### **Institutionalized Group Visits**

While privately organized joint visits or spontaneous moments of interaction prevailed in interviews, two kinds of more institutionalized gatherings were also discussed. First, the estate's gymnastics club organizes weekly water gymnastic lessons, with R\_7 as a regular visitor and R\_9 expressing her interest to participate:

And now there is, well, it's probably been around for a while, now I've read about it, there's [...] water gymnastics. [...] I have to write down the exact times, because I would take part in that too. (R\_9)

While an interview request to those offering the program was unsuccessful, R\_7 provides insights about how the offer is not only very popular, it also helps her connect with neighbors:

You have to register, right? Otherwise it's impossible, if there are too many people. Yes, and they have the swimming noodles and everything, and you can do water gymnastics there in peace, so, of course you'll know plenty of people to chat to. (R\_7)

Second, just like the hallway parties described earlier, privately or club-organized festivities on the rooftop occasionally take place. Although more popular in the past and only happening seldomly nowadays, such pool parties still enable participants to establish new and consolidate existing relationships amongst conviviality, drinks and music – all within the constraints of rules and neighborly considerateness:

And exactly, well, we really [host] a cocktail bar. We have ingredients with us that we fill into plastic bottles, of course, because glass bottles are forbidden around here. And yes, I'm a bartender, we make cocktails. I buy ice, I bring all the stuff with me. There are cocktails in, exactly, plastic cups. (R\_11)

Nonetheless, it remains noteworthy that multiple informants lament how such happenings have become rare:

We used to do that a few years ago, that we kept meeting up here. But that somehow also faded. (R\_11)

And when I was young, when I moved in, basically everything took place on the roof. (R\_7)

### Atmosphere and Attire

The interactions discussed in the previous section are facilitated by an easygoing and casual atmosphere. During observations, I remarked how the soundscape of chatter and laughter, splashing water, and a gentle breeze of wind helps establish a pleasant *vibe*, contributing to relaxation and a high quality of stay. How much mutual trust prevails around the pools is illustrated by an observation during one site visit that would be a rare sight at public pools: a smartphone charging by the door, unsupervised, for around an hour. Similarly, the overall cleanliness of facilities including the bathrooms was remarkable, further contributing to a pleasant stay. Furthermore, multiple respondents noted that the sun and open sky of the rooftop pools evoke a sense of being on vacation, while one respondent mentioned that the design elements of the indoor baths positively reminded them of a thermal spa.

Regarding factors that facilitate poolside interactions, clothing was discussed extensively in interviews: Unsurprisingly, attire at the pools is casual, with swimsuits and bathrobes as well as occasional nudity, creating a comfortable atmosphere. No matter the social background of a pool visitor, the usual distinctions through clothing and style are levelled, and all visitors appear equally approachable and vulnerable – a recurring notion was that by the pool, the manager and the cleaning lady meet at eye level:

You can't see how much money there is, in the background. It's the bath towel, it's the bath robe and that's it. Everyone is all *zerwuzzelt* [tousled], when they get out of the water. (R 10)

[Outside the pools], one is wearing his work clothes, with the  $Strau\beta$  (workwear brand) trousers, and the other is wearing a suit. The way they make contact may be different. (R\_11)

Importantly, however, clothing *does* serve as a distinction in another way – marking in- and out-group belonging. While changing rooms exist, observations and interviews unequivocally confirmed that they are used by residents only in the rarest of cases. Practically anyone showing up at the pool to change there or in the changing rooms can thus be immediately identified as a non-resident; a dynamic highly relevant to the research process itself: whenever residents would take me upstairs, they would stress the relevance of this distinction, urging me to change into appropriate attire in the apartment so

as to not reveal my outsider identity by the pools: "Leave the backpack here, so you won't look like a stranger." Accordingly, one spontaneous rooftop visit in everyday clothing left me feeling distinctively out of place; marking myself as an intruder through attire. Indeed, encountering such others constitute some of the only poolside scenarios where residents reported the atmosphere to become uncomfortable:

It's nice when you go up there and you know each other. And you don't like it, generally not, that's what I've experienced all these years, when you, well... Nobody likes it when you don't know the people. Everyone whispers about it, to be honest.  $(R_4)$ 

While the general atmosphere can thus be described as pleasant, some incidents may (seem to) threaten the peace and calm, as the upcoming section demonstrates.

### Rules, Conflict and Exclusion

This section discusses rules and regulations that came up frequently in interviews, relating to accessibility issues as well as conflicts and moments of irritation surrounding the pools. Visitors have to cross multiple access doors with their chip – one respondent even compared access with a prison's high security wing. Upon entry, guests are immediately met with signage that emphasizes various rules and bans (see Figure 8), illustrating how these spaces are highly regulated, with clear distinctions on which usages are (not) permitted. Although security occasionally patrols the pools, they are mostly unsupervised – instead, multiple respondents painted the picture of a certain group of vigilant neighbors that sanctions deviant behaviour.





The more people visit the pools, the bigger the risk for smaller conflicts regarding, for example, noise or space. Respondents commonly cited children as potential troublemakers through loud play, illicit jumps, or other recklessnesses; however, most interviewees agreed that such scenes are usually tolerable and to be expected of children; and if they do become unendurable, they are resolved without bigger drama, in summary, mirroring minor non-pool related disputes as discussed earlier. In a similar vein, when I noticed a man using soap in the shower during one observation, my host later explained that this is technically prohibited but generally tolerated, not least because residents sometimes cannot use their apartment's bathing facilities.

When there are children [...], and no one else is really there, and they really get on my nerves. I mean, of course I reprimand them. Sometimes it works, sometimes it doesn't. It always depends on the children. But all in all, things go relatively smoothly. (R\_1)

The rules are generally followed. I've heard from other residents that it... used to be much more philistine, so today it's much, much more relaxed. We still don't play music upstairs. Music boxes are forbidden, so there's a little sign saying what you can and can't take with you. But like, quarrels? I haven't noticed any. Maybe once in a while someone is briefly addressed because of noise or balls from the children. But nothing dramatic that in a normal swimming pool... wouldn't happen. (R\_2)

But while interview respondents overwhelming plead for tolerance and *turning a blind eye* on minor inconveniences, other residents are said to be less lenient:

There are a few old ruffs, it has to be said. Do you know the expression?(Interviewer:I have a hunch what it might mean.) Yes, and... They'll grumble, yes. And then if someone jumps in, sure, it's not allowed, but I think to myself, my goodness, let them jump sometimes, the children [...]. They act up straight away. Yes, I always think to myself, [...] "Don't you have children, haven't you ever been a child [yourself]?", or something. [...] There are always people like that who think they're the house police or whatever. But I'll ignore that. (R\_7)

And it's also the case that, those who swim a bit excessively, when you join, you disturb them. They'll give you a poisonous look. (R\_4)

And as I said, there are a few who play pool sheriff up there [...]. Who also have their usual spot, so God have mercy on your soul if you happen to get there earlier and lie down in 'their' corner and put your towel there, you'll be shunned away like nothing. (R\_1)

Together, these responses paint the picture of a demographic of well-established, elderly residents with a tendency to sanction deviant behaviour with odd looks, direct confrontation, or even by calling security. Respondents and non-interviewed residents alike frequently referred to this clientele derogatorily as "pool witches", "house police", "vultures", "rulers of the pools" or "pensioner's police".

A second, more intense dynamic sanctioned by this "pool police" that represents the highest escalation level of conflict reported in interviews were instances where non-residents gain unauthorized access to the pools; an occurrence that used to be more frequent before access chips were introduced, but still happens occasionally. Two features purportedly mark such outsiders in the eyes of neighbors and security: clothing and age.<sup>20</sup>. Strikingly, multiple informants relayed to me moments of 'overcorrection', where suspicions targeted even actual residents, accused of non-belonging:

You notice it when the security service arrives, [...] they're very selective. Yes, you know, when they come up, the first thing they look at is, where are the young people. That's always the first thing they look at. It's never any adults, it's always young people he goes after. And it's not just once that I've seen young people from the estate, that I've really known for years, who are up there with two or three friends. And they get picked out. (Interviewer: They have to prove themselves first, so to speak?) They have to, exactly, whether they live there and where they live. (R\_10)

[They] eye everyone suspiciously who they don't know yet. It happened to me, too. At the very beginning, when I went swimming, one of those pool witches, I'll put it that way, sat there and looked at me suspiciously. And when I was close enough, she said to me, "Do you live here?" To which I said, "I do, do you?" [...] I swam on. (R\_1)

My son's apartment was over in the B-Block, that's where it gets really nasty, when you come up to the pool, "Do they even live there? Prove that you live here, show your chip!" or something like that. (R\_4)

Given these moments, it is not surprising that some residents I chatted with outside of interviews expressed reservations towards, or even avoided, visiting the rooftop pools specifically, quoting an uncomfortable atmosphere. Not all residents discussed vigilant neighbors critically ("But my goodness, maybe that's not such a bad thing, I think to myself, if there's someone there who does keep a bit of an eye out."), and even those who did generally appreciated the rules and regulations in place to prohibit outsider access, and some residents relayed to me how they experience (alleged) outsider presence as suspicious or unpleasant, although others claimed to be more unbothered:

And there are always three or four young lads there... I have to say, I was a bit suspicious of them. [...]. I don't know if they were from here. I did think to myself, well, how did they get up there? And so I wasn't sure that they were from there.  $(R_{-9})$ 

Well, I have an issue with it, like the one time when there was a whole horde of young people, I have to be honest, that's excessive, yes. So coming in there illegally and then... that's not okay. (R\_7)

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 $<sup>^{\</sup>rm 20}$  Outside interviews, some residents also alluded to xenophobic stereotypes based on ethnic appearances.

I'm not one to call the security service and complain. If I think, well, then just do it. If you kind of stick to the rules, then it shouldn't really be a problem. (R\_10)

While conflictual, the dynamics described here harbour two important ways of doing community: During smaller moments of irritation, residents need to either develop and employ conflict resolution skills or disengage and build tolerance towards frowned-upon behaviours. Secondly, the policing of (alleged) non-resident visitors illustrate exclusionary social identification processes related to local social cohesion: While this behaviour helps partaking residents showcase and consolidate their status and group identity, it simultaneously clearly has detrimental effects on those targeted.

### Designed for Interaction?

This section focuses on material aspects that influence use and interactions. First, the low water depth makes the pools appropriate for non-swimmers, but less suitable for athletic uses such as diving or jumping. Similarly, its smaller dimensions and a lack of clearly demarcated lanes hinder the ability to swim standardized laps. In practice, this results in usage patterns that, at any given point, typically see a majority of even those pool guests who are inside the pool to be standing or walking and chatting, and only a minority engaged in swimming. The medium of water and the movement of swimming furthermore induce specific kinds of encounters, requiring visitors to be constantly aware of their surroundings. Waiting for an elderly visitor to descend the ladder, readjusting one's own swimming path or moving out of the way all constitute diminutive moments of irritation that, taken together, refine residents' abilities to cohabitate; mirroring dynamics of neighborhood life on a small-scale, embodied level.

Regarding the differences in pool layouts between rectangular and those featuring notches<sup>21</sup>, some see the latter as curiosities, while others highlight their practicality in contrast to the rest of the pool:

I mean, it's nice in the coves, you can sit in the water and don't have to move at all. But that's the only thing. It doesn't really have an impact, it just looks different. (R 1)

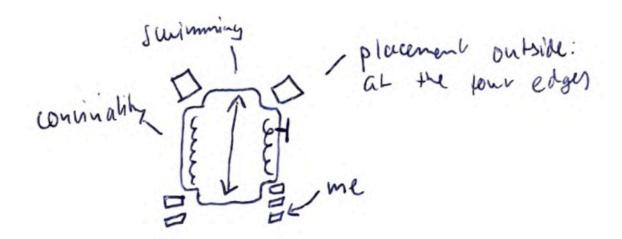
So the notch, I think, is actually quite practical.(Interviewer: In what way?)Well, because then people who like to stand, they stand in the notch and don't disturb the swimmers.  $(R_4)$ 

In any case, there are always people in these ears. And that's also where I retreat when I just want to cool off, when I don't want to swim. There are days when it's just too hot to swim. And then I do my lap and then I stand there and cool off. (R\_11)

<sup>&</sup>lt;sup>21</sup> The terms used by residents to refer to the notches varied, which might be interpreted as a sign that conversations about their presence and peculiarities are seldom.

During observations, further distinct usage patterns emerged: With the center of the pool free for (lane) swimmers, the coves provided explicit space for conviviality, usually hosting multiple guests socializing in various constellations – not only within the water, but also interacting with guests positioned right beside it. A quick sketch made during one observation (Figure 9) illustrates this, identifying the middle part for swimming and the notches as sites of conviviality, and furthermore denoting how pool guests had in most cases gravitated to setting up their blankets right by the edges.

Figure 9: Sketch of Typical Rooftop Pool Usage (author's own)



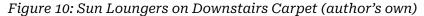
Besides this proximity to the water, visitors typically also oriented themselves towards the pool in terms of visual direction, which allowed for frequent interactions with those in the water. Indeed, the effects of the pool edges were remarkable, they constituted the areas with highest activity and most interactions. R\_10 emphasized how the space surrounding their pool is just about wide enough to lie down comfortably, but also small enough to make contact with others unavoidable:

There's more than enough space, so you can really lie right by the pool. [...] You're relatively close to each other at the top. There is, as I said, 15 meters [of] pool, there's not too much space to the left or right. You get into conversation relatively quickly, yes. (R\_10)

These notions point towards a central design feature, the presence or lack of opportunities to sit — on the pool level, online a handful of seats are available; downstairs, none at all. Relatedly, S\_8 pointed out an intricate conflict between accessibility and comfort, as every fixed seating element constitutes a barrier to movement. Hence, some of the benches that existed before had to be removed in order to comply with safety measures, which improved accessibility, but reducing seating. Similar dynamics concern umbrellas, which could provide pleasant shade but are prohibited as a tripping hazard. Indeed, no installations with the explicit goal of giving shade are present; only the lift tower sometimes

provides some coverage. Downstairs, at least one side of the surface at any given point is protected from the sun, due to the raised pool structure casting shade.

Of course, visitors still sit or lie down, utilizing either the pre-given seating benches or the floor, using towels or blankets. Downstairs, however, an interesting established practice is bringing personal lounging chairs from the apartment (see Figure 10).<sup>22</sup> While this might be interpreted as a clear lack of amenities, placing a burden on residents with responsibility shifted from facility management to individual users, I suggest to understand it instead as a feature that gives residents the liberty to design, depending on their needs, individual oases of tranquillity as much as collective talkscapes.





Balustrades mark the outermost elements of both the pool and the downstairs area. They serve as physical support to lean on when standing, enabling visitors to either watch what's happening around the pool or enjoy an impressive view (see Figure 11). In this latter role, they serve as conversation starters between residents – airplanes landing at Vienna airport or detecting a new, interesting building in the distance served as reasons for unacquainted visitors to begin a chat. The ability to access the downstairs balustrades all year and without impeding on pool visitors means that these draw in even neighbors who do not plan on going for a swim. A resident I chatted with during fieldwork, for example, explained to me how taking others upstairs to the rooftop is the indispensable highlight of every time he shows interested visitors around. Multiple others explicitly brought up the view as a crucial element of their pool visits. It follows that the position of the pools at the rooftop and the views this provides seem to heighten both sociality and identification around pools.

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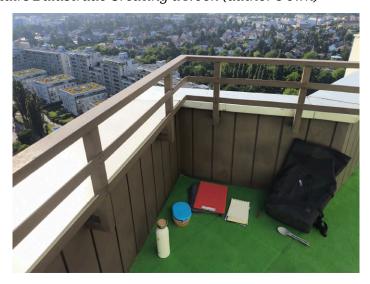
<sup>&</sup>lt;sup>22</sup> Once again, the proximity and accessibility of the pools is paramount, as these enable residents – even elderly ones – to transport such gadgets upstairs.

Figure 11: Rooftop Views as a Distinct Feature (author's own)



A last notable feature of the downstairs balustrades specifically is their distinctive, contorted form: As an upward continuation of apartment walls, they retain the particular shape of the balconies, which manifests in nooks that provide opportunities to settle and "hide" on the carpet, providing space and shade for pool guests (and urban scholars, see Figure 12)

Figure 12: Downstairs Balustrade Creating a Nook (author's own)



Altogether, the design of the pools can be considered simultaneously pragmatic and emblematic, with the downstairs green carpet illustrating this duality poignantly.

Well, I spent my childhood here, on this green carpet. We went to the rooftop pool every day in the summer, and by fall, I had webbed feet. (R\_11)

On one hand, their distinctive colour makes the carpets a prominent feature of both residents' perceptions and public imagery of Alt-Erlaa's pools. On the other hand, the carpets were not originally foreseen in the design, but added later to minimize noise emissions caused by visitors in wooden clogs. This

dynamic are representative for the experience as a whole, described by residents dialectically as simultaneously unspectacular – an easily accessible element of everyday life in the estate that they have happily become used to – and special, evoking fascination, pride, and luxury.

Based on interviews and observations and addressing above considerations as well as adding further aspects, Table 5 on the next page utilizes the three dimensions of Gehl's quality criteria for public space to list positive (+), neutral (/), and negative (-) design aspects of the rooftop pools. As the assessment demonstrates, the rooftop pools satisfy many of these criteria, which helps explain their high quality of stay and thus their success in attracting people to spend time there.

Table 5: Spatial Qualities of Rooftop Pools (adapted from Gehl 2010: 239)

<b>Protection</b> against	traffic	- mostly not applicable but: clearly protected from car traffic - no running and jumping: fewer accidents	++	/	
	crime & violence	<ul> <li>chip-restricted access</li> <li>video surveillance</li> <li>security on patrol &amp; available on standby</li> <li>mutual visual control, familiarity</li> <li>sufficient lighting after sunset</li> <li>temporally &amp; functionally overlapping use</li> </ul>	+ + + + +		
	unpleasant sensory experiences	<ul> <li>rooftop location protects from street-level dust, fume, noise and similar disturbances</li> <li>playing children might be noisy</li> <li>little to no protection from rain (or, less relevant, from snow)</li> <li>protection from wind through glass panes</li> </ul>	+	/	-
Comfort: opportunities	to walk	<ul> <li>enough space to walk, with almost no obstruction through furniture</li> <li>mostly not barrier-free! (one exception)</li> <li>little reason to walk; no interesting facades</li> </ul>	+		-
	to stand/stay	- balustrades provide both edge effect and physical support for standing	+		
	to sit	- only few pre-installed benches but: ample space to relax on the floor - culture of bringing own sun loungers	+		-
	to see	<ul><li>enjoyable and interesting panoramic views</li><li>possibility to see other residents and their activities within reasonable distances</li></ul>	++		
	to talk and listen	<ul> <li>interesting soundscape (chatter, water, laughter, breezes of wind)</li> <li>'talkscapes' not pre-given, but easily created with towels or in the pool nooks</li> <li>possibilities for privacy (downstairs) as well as conviviality (upstairs)</li> </ul>	+	/	
	for play and exercise	- provided by pools & surrounding space but: policed by rules & vigilant neighbors - access limited in winter, closed at night	+	/	-
Delight	scale	- buildings: massive, colossal but: pools itself is human scale, modest	+		-
	positive climate aspects	<ul> <li>warm sun and pleasant, light breeze</li> <li>some lack of shade (and ban on umbrellas)</li> <li>but: always one side in the shade</li> <li>stones can overheat</li> <li>but: pool allows to cool down</li> </ul>	+	/	-
	positive sensory aspects	<ul> <li>interesting, characteristic green carpet</li> <li>satisfactory cleanliness</li> <li>some elements seem old, 'outdated'</li> <li>blue water, unrestricted view of the sky</li> <li>views of parks and mountains</li> <li>but: lack of (immediate) greenery</li> </ul>	+ + + +	/	-

### Satisfaction, Pride, Suggestions

Residents thoroughly appreciate their pools, with multiple informants even reporting them as a main motivation to move to Alt-Erlaa. Informants chiefly attributed their satisfaction to those characteristics described earlier: ease of access and the ability to exercise, mingle, and cool down. When mentioned, cleanliness and maintenance were also highlighted as satisfactory – staff member S\_8 reports how four employees are indeed on full-time duty to tend to the pools.

Pursuant to varying degrees of usage of the swimming pools, their relevance and role for residential satisfaction differs. Some see them as nice, but ultimately expendable amenities, others feel more strongly about them, like Respondent 2, who stresses it would be "an incredible pity" if they were to close or disappear. Respondent 11 even reported pools to be a "central point" of Alt-Erlaa - central here not as a geographical characteristic, but implying it as a defining and significant part of the estate. Multiple times, respondents stressed how the rooftop pools play a central role in how they present Alt-Erlaa to others, for example, R\_10 shared that when her children bring school friends as guests, they feel honoured to be granted access. In one amusing incident, I overheard two young men setting up a tripod to record a video where they would present their visit to an online public, illustrating conversations I had outside of interviews where residents identified the pools as a crucial part of the image of Alt-Erlaa not just in the imagination of outsiders, but also of residents. Collectively, these findings illustrate how the pools are viewed as a privilege, a desirable amenity that residents are proud to show off to outsiders, thus contributing to local pride and attachment. Rarely, informants voiced some suggestions that they think would enhance the quality of stay: an extension of opening hours, some background music, the addition of plants and other beautifying features. Interestingly, R\_4 and R\_5 complement their suggestions with an immediate dismissal of the possibility of any change, raising questions about the level of pool-related resident participation.

Finally, one related dynamic that was alluded to by informants but can only be fully understood by referring to Pizato (2015) is how threats of closure lead residents to unite for a common good. S\_8, for example, told me that ideas to decommission one of the indoor pools were scrapped swiftly as they wouldn't have been communicable to residents, who would much prefer the comfort of proximity to cost savings within a few cents. Similarly, plans were discussed in the past to adapt the opening times of the downstairs area to the rest of the pools, which would have seen both closed throughout winter. However, Pizato quotes one of her informants that

[property management] wanted to close it [...] and then there was a petition, there were letters to the editor en masse, and that didn't happen. There is indeed quite a... community, which can also become active. (Pizato 2015: 116f, author's translation)

Together, these findings point to both the relevance of the pools and their potential to constitute a nexus for residents to band together.

### Comparative Notes: Alt-Erlaa vs. elsewhere

Interviewees were acutely aware of their pools' virtues as compared to other facilities, commonly stressing these differences and emphasizing their distinctiveness. Most prominent in distinction from public baths is the often-cited convenience, which residents connect to the ability to visit frequently and spontaneously without the need to "make it worth" or pack large amounts of food and drink. Secondly, limited opening hours as well as a sense of overcrowding are mentioned by some respondents as distinctive negative features of public facilities. Finally, one resident commented on entry costs, remarking that high ticket prices pose significant difficulties especially for families whereas Alt-Erlaa's pools are free of charge and consumption; another on the need to keep an eye out for kids, hinting at the trust and social control present at Alt-Erlaa's pools. Consequently, those interviewees who mentioned public baths all claimed to usually no longer (see the need to) visit them:

But since I've been living here, I don't go to any other pool. I don't need to, everything is so practical, really.  $(R_{-}9)$ 

Private pools as grounds for comparison came up on two occasions: once to illustrate the much-appreciated comfort of being relieved of maintenance work; once in an anecdote that fittingly illustrates how shared spaces necessitate daily negotiation processes:

I noticed that a man was swimming, like, in the middle of the pool, preventing someone else from swimming. Then, a woman said, "Couldn't you make a little room?" He snapped back, "If you don't have enough room, buy your own swimming pool." (R\_1)

# 5.3 In Context: Between Autonomy and Integration

As posited for example by Reinprecht & Dlabaja, monumental high-rise estates might pose the risk of isolation in terms of social relations and in broader urban contexts, appearing as insular elements in the townscape, unapproachable from the outside and all-encompassing from the inside (2014: 83). These concerns mirror Sennett's (2020) ideas on urban edges as impenetrable boundaries or interactive borders, with this section exploring pertaining informants' statements along topics like social relations, movement patterns, or architectural barriers.

### Impervious Boundaries

One prominent impression suggesting self-containment is that of (especially elderly or mobility-limited) residents not venturing beyond the estate, as all their commercial, social and leisurely needs are locally fulfilled, aided by a broad and conveniently accessible offer: "That's right. You wouldn't need to leave Alt-Erlaa" (R\_7).<sup>23</sup> For some residents like R\_11, their entire social networks are concentrated locally; and many describe how existing groups of strongly bonded residents impede the ability not just of outsiders to enter, but even of newcomers or younger neighbors to fully integrate into community structures. Furthermore, it is reported how the theoretical opportunity for non-residents to participate in clubs is rarely seized:

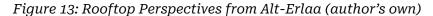
Some friends of mine from back in the day [...] still live [in the Osramgründe estate], and some childhood friends of mine also have flats there. But even they hardly ever show up here. So, there are very few people. I don't know of anyone from *Osramgründe* who goes to clubs here. (R\_11)

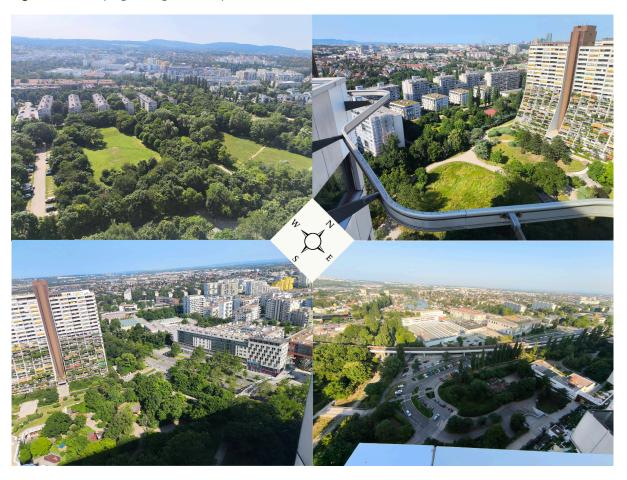
These social aspects relate to issues discussed earlier: Strong internal cohesion producing external alienation. Such notions manifest physically in spatial contestations: Respondent 1 told me how groups of children from outside Alt-Erlaa occasionally use the estate's playgrounds, but face conflicts with residents who insist on the fact that they are financing these playgrounds with their rents. As local kindergartens are well-equipped with play opportunities, not needing to resort to the public playgrounds, the presence of children in accompanied (i.e. kindergarten) groups implies them as foreign, similar to clothing as the poolside marker of otherness.

Another spatial aspect is the complex's design, which creates physical and architectural barriers; with the monumental buildings themselves already possessing a somewhat deterring outward appearance. Outwardly, massive streets, transit rails and parking lots towards the south and east as well as an undeveloped parksite westwards separate Alt-Erlaa from its surroundings (see

<sup>&</sup>lt;sup>23</sup> Notably, respondents overwhelmingly reported this as a positive phenomenon and a proof of the estate's age-friendliness, and less as a dynamic detrimental to city integration.

Figure 13). Only northwards, the neighboring *Osramgründe* appear somewhat physically adjacent, yet a dense treeline clearly demarcates the boundaries between the two estates. Together with signs signalling vehicular or pedestrian entry to the property (and thus implying distinction and differentiation), these elements form what Resident 11 poignantly described as a "virtual fence" around Alt-Erlaa. In conjunction, these aspects lead some residents to believe that the estate appears almost as an inaccessible, gated community.<sup>24</sup>





### Permeable Borders

These findings are contrasted by evidence of integration, perceptible even in many of those dimensions exhibiting alienation. First and foremost, the estate's public spaces, schools, churches, and clubs are open to and used by both residents and non-residents, displaying porosity that fosters a sense of community beyond just the immediate neighborhood. Commercial offers see clients from in and around the estate alike – indeed, as some respondents claimed, many even depend on outside clientele and would not be able to

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<sup>&</sup>lt;sup>24</sup> Lastly, respondents mentioned the capacities for 48 hours of emergency power supply, as well as ongoing plans of adapting local geothermal energy. These aspects denote energy-related autonomy that is noteworthy but arguably less relevant in terms of urban integration.

financially sustain themselves with exclusively local customers. Especially in the context of Alt-Erlaa's changing demographics, educational facilities in particular were said to increasingly bring in children and families from surrounding areas. Respondents 2 and 11 – one only a recent resident, one born and raised in Alt-Erlaa – both went to schools in the estate, which they confirmed as integrative. Asked if his school seemed like an exclusionary space to him as an (at that time) non-resident, R\_2 asserted:

No, no. No, for goodness' sake, no. It's a very, perfectly normal primary school, it just happens to be in Alt-Erlaa. But it's open to everyone in the surrounding area.  $(R_2)$ 

Regarding associations, residents as well as staff member S\_8 emphasized that outsider access is not just technically possible, but explicitly encouraged and not met with raised eyebrows by many clubs. Non-resident informant N\_3 illustrated and expanded on these possibilities in his reports of frequent visits related to leisure and errands, manifold club participation, and the maintenance of close friendships within the estate. While this process of integration certainly took time, it resulted in receiving his own "guest" access chip and developing local attachment as previously described. Although the exception (and to my initial surprise), I did myself encounter various non-residents in club settings, and the fact that I was able to join various such events illustrates the same finding. Similarly, I frequently noticed or was told about residents showing friends or even interested strangers around the estate; and chatting to a local church worker furthermore revealed how their faith group, too, extends explicitly into neighboring residential areas.

Respondent 10 also challenged the idea that everything is available in the estate, emphasising that leaving Alt-Erlaa is often necessary due to some needs remaining locally unfulfilled, but for her also a represents a welcome change of scenery:

It was... quite a few shops have closed down. There were far more shops, and now many of them are empty. So, you still have to go out, yes. And at some point you need to. [...] At least, for me, I need to get out. Because it's like a village here, I want to have a bit of city character too and say, I'll go to the Danube Canal or somewhere else, yes. [...] I can't get everything I need here anyways, so I have to go out. (R\_10)

Furthermore, limited social networks that only span Alt-Erlaa remained the exception in my sample, with the grand majority of respondents indicating persisting degrees of outside connectedness through work, friends and family. Finally, some respondents challenged the notion of geographical alienation – at least regarding the northward Osramgründe, that are claimed to be separated

only by a row of bushes and indeed connected through multiple pathways, or by stressing the general accessibility to the public.<sup>25</sup>

The park isn't closed off. Anyone can walk through the shopping centre. You can walk through all the outdoor corridors, so no one is stopping you. There are countless playgrounds and football pitches that are used by other apartment blocks or other multi-family houses. And so... I wouldn't say that Alt-Erlaa residents are self-contained, per se. (R\_2).

Finally, analyzing Alt-Erlaa by placing specific locations as relational settings on Blokland's dimension of accessibility reveals a gradient between fully public and private (see Figure 14): On one end of the spectrum, the Alt-Erlaa metro and bus station is a public space, unquestioningly transgressed by anyone who needs to. Spatially adjacent, commercial and green spaces are publicly accessible and do attract outsiders, but already necessitate a certain sense of familiarity, purpose and orientation to visit. The same principle is amplified in educational and sports facilities, which are clearly locally embedded, but not exclusive, and once more in club rooms - technically open to outsiders, but rarely perceived or used as such. Rooftops and pools are intimate spaces even harder for outsiders to access, but still attainable when accompanied by residents. Second to last on the gradient, balconies and loggias are almost fully private, but contain an element of perceptibility from (and towards) the outside. Finally, on the private end of the spectrum, residents' apartments can be considered the most intimate spaces, the privacy of which is explicitly appreciated by residents in their mass housing context. Taken together, these elements challenge the idea of Alt-Erlaa as a monolithic, closed system: In Sennett's terms, the estate comprises spaces with greatly varying levels of outside accessibility, constituting the porosity typical for urban borders.

Figure 14: Alt-Erlaa's Relational Settings from Private to Public (author's own)



<sup>&</sup>lt;sup>25</sup> It remains an open and intriguing question how these elements are perceived not by Alt-Erlaa residents, but those of adjacent residential areas.

### **Outside Perceptions**

Discussing neighborhood permeability also points towards a final theme, one that is inextricably linked with the research process itself: What do "outsiders" think of Alt-Erlaa, and how do residents subsequently react to these perspectives? Broadly, two strands of outside perceptions were identifiable in resident conversations. On one hand, many residents report (initially) *negative* reactions to the idea or plans of moving to Alt-Erlaa – not just by others, but frequently even sharing poignant impressions of their own scepticism:

You know, when I look over there, I wouldn't even want to be buried in something like that.  $(R_1)$ 

I said, no. The railway runs over there. Not me. (R\_7)

For me, it was a nuclear reactor. Lots of concrete, lots of people. (R\_9)

Comparable sentiments are discussed as expressed by friends and family. Additionally, residents report to have faced outside impressions of Alt-Erlaa as an impoverished "ghetto" or an anachronistic retirement home, which they partly attributed to inaccurate media coverage. For instance, the recent documentary was not received well by some residents, who were disappointed with its message and claim that it shows a warped image of life in Alt-Erlaa. Such findings point towards discrepancies between external and insider perceptions, suggesting an element of detachment from the outside world.

On the other hand, and more pertinent to this study, are interviewee's attitudes towards recent *positive* interest in the estate. Not without a hint of indignation, one resident I introduced myself to during early fieldwork exclaimed: "How many master's theses more will be written about this place!?" This statement points towards an ongoing trend that this study undoubtedly operates within: A growing prominence of and fascination with Alt-Erlaa, even internationally, perhaps epitomised by a 2023 New York Times article (see Figure 15) praising the Viennese model of affordable housing, illustrated with photographs from Alt-Erlaa and thus putting the estate into international spotlight (Mari & Locatelli 2023).

The New York Times Magazine

GIVE THE TIMES

# **Imagine a Renters' Utopia.**



# It Might Look Like Vienna.

In a similar vein, residents have recounted numerous instances of students and tourists from Austria and abroad flocking to Alt-Erlaa to marvel at its idiosyncratic architecture, its supposedly crotchety population, or its undeniably alluring rooftop pools. In these ways, the distinctive character of Alt-Erlaa does not seem to prohibit, but perhaps even facilitate outwards connectedness.

Reactions to this trend differ: motivated by a mix of local pride and openness, all residents in my sample were willing to share insights into their lived realities. Staff member S\_8 added an interesting perspective to this, as giving tours to interested visitors is one of his occupational pastimes – one he enjoys to undertake. Other residents, however, are irritated by the influx of fascinated outsiders by their doorsteps, with moments of annoyance or dismissal having both occurred during fieldwork and alluded to by respondents. Again, S\_8 gives valuable insights; claiming that outside demand for guided tours has recently sometimes surpassed the team's abilities, and reporting sentiments among concerned residents along the lines of "we're not a museum!". Concludingly, recent surges in attention towards Alt-Erlaa constitute a dynamic and multifaceted element of estate embeddedness that future research could explore in more detail.

<sup>&</sup>lt;sup>26</sup> This is unsurprising, given that my fieldwork relied on participants who were receptive to outside interest; with some explicitly expressing their joy to show guests like me around.

# 5.4 Summary and Key Findings

Main RQ

Table 6 summarizes the various ways in which the semi-public swimming pools of Alt-Erlaa serve as social infrastructure, contributing to social cohesion in its high-rise housing context. Their **proximity** enables **frequent and easy access** for various residents, while their specific setting and interaction-friendly design, combined with the generally appreciated assurance of maintenance and safety, allows for **casual, low-stakes encounters**.

Table 6: Dynamics of Alt-Erlaa's Swimming Pools as Social Infrastructure

Dimension of Social Cohesion	Underlying Dynamics	<b>Social Function:</b> Pools help to		
Social Relations	worthwhile meeting spot to visit with neighbors; arena for various acts of care	maintain existing local friendships		
Social Relations	shared activity in a casual setting, reduced social distinction through clothing	enable new connections		
Social Relations	encounters at the pool and during the journey around	establish comfort and public familiarity		
Attachment / Belonging	"strangers" entering and being policed by vigilant neighbors, adherence to the 'dresscode'	consolidate in-/outgroup affiliation		
Attachment / Belonging	evocative views; feelings of luxury and distinctiveness	increase estate identification and pride		
Common Good Orientation	navigating frequent irritations (noises, others in the way)	build mutual tolerance and permissiveness		
Common Good Orientation	neighbors banding together against the threat of closure <sup>27</sup>	(potentially) inspire neighborhood solidarity		

Importantly, not all of these dynamics will be equally relevant for individual residents or the estate as a whole; the last point, for example, only materializing in highly specific situations. Considering Glück's architectural vision, it can be assessed, however, that Alt-Erlaa's pools don't only work as social infrastructure incidentally, but were indeed **successfully conceptualized** as such. Nevertheless, **challenges persist**, among them declining use, accessibility limitations for elderly or immobile residents, and most crucially, the ostracization of younger people or those otherwise marked as outsiders, which limits their ability to comfortably visit the pools.

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<sup>&</sup>lt;sup>27</sup> As described earlier, this dynamic was alluded to in interviews, but mainly builds on Pizato (2015: 116f).

#### SRQ1

Measures of social cohesion in Alt-Erlaa are high. Respondents mostly have manifold social relations from loose acquaintances to close friends or family, they exhibit very high place attachment, indicated by strong local identification and a lack of plans to move out, and they display common good orientation through involvement in local clubs as well as adherence to unwritten rules and tolerance towards the occasional breach of written ones. Neighborhood cohesion is attributed to social infrastructure and manifold social actors – most importantly the clubs and associations – but also to the specific demographics of the estate, with high numbers of long-term residents who jointly moved in decades ago and were able to maintain continuous social networks. Cohesion manifests itself in mutual acts of care, gifts and gestures, and benefitted the neighborhood in moments of crisis like the Covid pandemic. Still, some differences are noted between younger and older residents, with practices of exclusion concerning not just (those marked as) outsiders, but at times even residents that are marked as non-belongers.

#### SRQ2

The fact that this cohesion leads to self-sufficiency points towards a **certain** level of alienation of the complex from the city through boundaries. This presents itself in spatialised conflicts between insiders and outsiders as well as mobility and social patterns of some residents rarely leaving the estate, a dynamic reported especially for older neighbors, although seen in a positive light. Additionally, the built environment sometimes constitutes boundaries, for example through massive, separating streets, a lack of physical accessways to the outside, and demarcating signage. Finally, alienation presents itself in diverging outside and inside perceptions, and a lack of presence of non-residents in clubs even though it is possible.

Simultaneously, Alt-Erlaa's physical and intangible edges have porous elements, with the estate **integrated in its environment** in multiple ways: social networks of many residents extend beyond Alt-Erlaa, and the extensive offer of services, shops and hospitality attracts outside visitors, just as greenspace, schools, church and sport halls can be and are used by non-residents. Similarly, associations extend outwards both through events and membership structures; and do accept "outsiders" to a point where those feel a sense of belonging to the estate. Lastly, recent media and academic fascination with the estate can be interpreted as an element of reconciliation of the (Viennese) public and Alt-Erlaa after initial scepticism.

Concludingly, fieldwork painted a nuanced picture, with notions of Alt-Erlaa as a closed system with impermeable boundaries broadly keeping the balance with statements indicating an open system with porous borders.

# 6. Discussion of Results

# 6.1 Theoretical Insights

#### Pools as Social Infrastructure

This study accentuates the conceptualisation of swimming pools as social infrastructure, adding to the emerging field of literature by describing various dynamics, some of which are highly specific to the pool setting. As the results show, pools in Alt-Erlaa fulfil most of the social functions typically identified for social infrastructure (Enneking, Custers & Engbersen 2025: 5): First and most prominently, they facilitate social relations, strengthening existing and forging new bonds. Second, moments of mutual care and enhanced wellbeing relate to the function of service provision. Through evocative views and feelings of luxury, they third facilitate identification and belonging. When closure threatens, the pools can be grounds for, fourth, collective action; a dynamic furthermore underscoring the infrastructural quality of the pools as a usually mundane feature of everyday life that becomes "visible upon breakdown" (Star 1999: 382). Fifth, pools are sites of social control; with ambiguous effects, as the process of safeguarding rule compliance and sanctioning deviant behaviour simultaneously maintains safety and tensions. Disaster response, sixth and finally, was not explicitly discussed as a theme; yet given the significance of opportunities to cool down in the face of the climate emergency, Alt-Erlaa's rooftop pools may arguably even graze this last social function. More broadly, the results confirm findings of water as a highly sociable medium (Watson 2019a, 2019b; Denton & Aranda 2020; Greenwood & Fletcher 2021; Moles 2021; Overbury, Conroy & Marks 2023; Bates & Moles 2024; Yeomans et al. 2024), with pools used more for chatter than for actual swimming (Gould 2010).

Furthermore, the thesis expands on social infrastructure literature by foregrounding understudied aspects of design and architecture, which were found to play a crucial role in some of the identified dynamics, such as in the pools' notches fostering interactions in and around the water. Second, Alt-Erlaa's pools are a well-suited illustration of the "tension between the accessibility and intimacy" (Enneking, Custers & Engbersen 2025: 10) of social infrastructure, as their semi-public character was said to explicitly foster intimacy and trust, whereas outsiders gaining unauthorized access can be seen as "contesting" (Horton & Penny 2023) the restrictions in place.

## Social Cohesion in Mass Housing

Initially, high social cohesion in Alt-Erlaa seems to contradict studies reporting high-rise dwelling as detrimental to social outcomes (Barros *et al.* 2019), yet this finding is not only consistent with popular knowledge about the estate; interview respondents crucially identified various factors that literature has

deemed crucial to counter adverse effects of density. Among them are the pools (and other sites) as widely accessible, well-used and appropriately designed social infrastructure (Nguyen et al. 2024b, 2025); club rooms and balconies allowing for the appropriation of space by residents (Gao, Lim & Yang 2025); high satisfaction leading to residential stability which strengthens local bonds attachment but also leads to scepticism towards newcomers (Toruńczyk-Ruiz & Martinović 2020); or "contact assets" (Blokland & Nast 2014) like children and dogs facilitating neighbor interactions. Together, these findings thus corroborate literature on mediators of social cohesion in mass housing. It remains an open question to what extent the estate's high average age, comparatively low share of residents, and investment into the estate through co-ownership play a role in these dynamics. In any case, Alt-Erlaa's social cohesion can be considered "a form of privilege" (Méndez et al. 2021), with multiple elements of the complex manifesting edge effects that, in Sennett's (2020) terms, work as impervious boundaries, prohibiting interaction with its environment. Although considerably less severe, the estate's pools thus call into mind the reproduction of social capital in Pine View Swim and Tennis Club (DeLuca 2013). Concludingly, the thesis also underlines critical arguments that challenge the conditions, contents, and consequences of social cohesion.

### Doing Community around Wohnpark Alt-Erlaa

Regarding the guiding framework of community as urban practice, the results present strong evidence that the relational setting of Alt-Erlaa's pools is particularly conducive for public familiarity. On Blokland's matrix of privacy and accessibility, they sit in an intriguing middle area in both regards; their restriction to residents and guests makes them not genuinely public, yet denotes a potential of almost 10.000 visitors and their guests; their atmosphere is on one hand highly intimate and personal, but the equalizing attire, on the other hand, conceals social differences, paradoxically increasing instead of reducing the control visitors have over what they reveal to others - "in swimsuits, we're all equals". Combined with the design and the high quality of stay, it follows that the pools create comfort zones (Blokland & Nast 2014) that facilitate positively experienced, fleeting encounters and a growing sense of belonging. Besides the pools, the accounts of interviewed residents point towards neighborly ties according to all four ideal types - Bonds, Attachments, Transactions and Interdependencies. Interestingly, it appears that due to comparatively low measures of diversity and high residential stability, Wohnpark Alt-Erlaa constitutes a site still shaped more by roots than by routes (Blokland et al. 2023). These results confirm that in the relational setting constituted by the pools and beyond, public familiarity in Alt-Erlaa indeed constitutes a crucial phenomenon that explains why residents feel safe and at home, even when they don't have any specific personal relationship with the neighbors they encounter. From putting on the bathing suit in the apartment to calling the security on assumed outsiders, the pools furthermore lead to manifold practices of social identification, simultaneously creating inclusion for some and exclusion for others. As Blokland writes, "community comes about as

a form of social imagination" (2017: 143), and Alt-Erlaa's pools are a particularly evocative canvas for such imagination – in manifold nuanced, sometimes contradictory, ways.

#### 6.2 Limitations and Future Research

Varying limitations concerning different stages of the research process need to be acknowledged. First, ambiguities and scope and definitions may obscure some of the results presented; for example given overlap between dimensions of social cohesion amongst themselves and with its causes and consequences; or due to difficulties to distinguish between residents' statements on indoor, rooftop, or all pools. Further constraints concern methodological questions. While the qualitative approach proved to be an appropriate medium for closer understandings of the case, its context, and local dynamics, such methods are necessarily shaped by researcher biases influencing "what is observed, how it is observed, and how it is recorded" (Dewalt & Dewalt 2011: 93). Accordingly, it remains likely that different research would have yielded nuanced or different results.

Within the case study, sample size and access can be questioned: First and foremost, the arbitrary sampling scheme, making self-selection and the lack of some perspectives - former residents, those feeling ostracized, pool non-visitors, etc. - may skew the results towards overreported cohesion, warranting some caution in interpretation. The qualitative methodology prohibits inference about cause and effect relationships, and the limited amount of observations and interviews over a short, specific period of time risks overlooking potentially significant experiences, dynamics, or sites. Furthermore, no claim on the comparative relevance or impact of poolside dynamics can be made - it is possible that they fulfil their bonding role only in mutual dependence of the estate's other social infrastructure and specific demographic characteristics; and that Alt-Erlaa would have developed in similarly ways, had its pools never been constructed. Still, the identified peculiarities give reason to believe that the pools have a distinct quality that differentiates them from other social infrastructures in the estate. Quantitative could be able to illuminate these aspects. Besides these constraints, the single-case study of one highly specific site limits generalizability to other sites. Hence, comparatively investigating similar and different cases would reveal interesting insights. Similarly, the study has highlighted that systematic reviews of municipal or, particularly, semi-public pools are severely lacking, necessitating further investigation and harmonization of existing data. Regarding Alt-Erlaa specifically, certain aspects the study touched upon briefly, such as racialized exclusion and the relevance of affluence, education, and homogeneity for cohesion in Alt-Erlaa remain largely obscure, warranting a critical remark and showing the need for more research. Finally, the results suggest that the estate's outside perceptions or the opportunities and challenges of intergenerational life in the complex would be fruitful avenues for further investigation.

# 7. Conclusion

This study has examined the ways in which semi-public swimming pools as part of high-rise housing estates can serve as social infrastructure that contributes to local social cohesion. Through semi-structured interviews and observations within a place-based single-case study of Wohnpark Alt-Erlaa, Vienna, it has found the local rooftop pools to contribute to social cohesion by fulfilling various social functions. These dynamics play a role for, and are embedded in, a context of high local cohesion, with estate residents exhibiting strong social relations, place attachment and common good orientation in attitudes and behaviours. Besides positive effects for residents, this high group cohesion, and the practices that sustain it, also constitute dynamics of exclusion, at times discomforting not just outsiders, but even residents.

Acknowledging that the success of Alt-Erlaa in providing high-quality dwelling at affordable prices is shaped by political, geographical, and historical conditions, the study nonetheless challenges assumptions that mass housing necessarily produces standardization or social isolation, illustrating how it can instead ensure individuality and collective benefits simultaneously. Reflecting on the aspirations of architect Harry Glück, the results highlight how well-executed architecture that ventures beyond fulfilling basic residential needs and ambitiously insists on the provision of seemingly luxurious amenities to its residents can provide highly enjoyable living environments at affordable costs. Given the tremendous impact of the built environment on lived realities, it appears worthwhile to imagine the potentials of architecture to not only shape everyday life, but play an active role in furthering societal progress – perhaps even bringing forward new forms of living together.

While the empirical focus of this study was narrow, its practical implications relate to broader urban debates. Both literature and empirical findings raise questions about how access and exclusivity are negotiated in urban contexts, whose responsibility it is to provide leisure and relaxation, and how proximity-centered concepts like 15-minute cities can be implemented in ways that alleviate instead of deepen socio-spatial injustices. Against this backdrop, the thesis concludes that it may be fruitful to attempt to reframe, or reclaim, rooftop pools from their image as luxury amenities toward a vision of democratized and socially valuable leisure spaces for all urban dwellers.

Nevertheless, even the context of Alt-Erlaa is still a privileged one. Its success is dependent on highly specific conditions, and the strong social bonds forged in the estate, by the pools or elsewhere, necessarily imply some outward differentiation. This echoes critical scholarship emphasizing the role of social infrastructure, including swimming pools, in the reproduction of privileges. Given these considerations, the study's conclusion thus remains ambiguous: In swimsuits, we might indeed all be equals. It ought to be considered, however, what that implies for those still in their everyday wear.

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# Appendix

# I: Resident Interview Guide

[vor der Aufnahme sicherstellen: Klärungen zu Datenschutz, Freiwilligkeit, Möglichkeit der erneuten Kontaktaufnahme, unterschriebenes Consent Sheet]

Ich habe jetzt die Aufnahme gestartet. Noch einmal vielen Dank, dass Sie sich die Zeit genommen haben!

#### **BLOCK 1: VORSTELLUNG**

- Können Sie sich einmal vorstellen? Ich mache gerne einmal den Anfang: Ich bin Luis... [...]

[Notfalls nachfassen: "Können Sie mir noch kurz verraten..."]

- ihr Alter?
- Wohnblock
- Wohnform [alleine, Familie, Wohnungsgröße...]
- Wie lange schon wohnhaft in Alt-Erlaa?

# **BLOCK 2: SCHWIMMBÄDER ALS BEGEGNUNGSORTE**

Super, jetzt bin ich gespannt, mehr dazu zu hören, wie Sie den Alltag in Alt-Erlaa erleben. Es gibt da einen Aspekt, der mich besonders fasziniert, und das sind die Schwimmbäder. Sagen sie einmal –

- Nutzen Sie selbst die Dachbäder und die Indoor-Swimmingpools?
  - Warum (nicht)?
- Wenn Sie das Schwimmbad besuchen, machen Sie das eher so für sich, oder ist das für Sie auch eine Aktivität mit anderen zusammen?
  - [wenn ja:] Mit wem?
- Was tun andere Leute, wenn sie die Schwimmbäder besuchen?
- Ich möchte Sie zu einem kleinen Gedankenexperiment einladen: Ich würde Sie bitten, einmal einen typischen Besuch des Schwimmbads zu beschreiben. Dabei geht es mir nicht nur um die Zeit am Pool selbst, sondern auch um den Weg hin und zurück oder was Sie tun, wenn Sie nicht gerade am Schwimmen sind. Sie können gerne die Augen schließen oder offen lassen, wie Sie möchten. Bereit?

[...]

- [je nach Antworten]
  - Sie haben erwähnt, dass Sie [xxx]. Können Sie das einmal weiter ausführen?
  - Wem begegnen Sie am Pool?
    - Eher Nachbarn, die Sie schon kennen, oder eher unbekannten Gesichtern?
    - Wer benutzt die Pools sonst so? Wem begegnen Sie dort nicht?
  - Haben Sie in den Bädern schon einmal jemanden neu kennengelernt, eine neue Freundschaft geschlossen?
  - Erleben Sie dort auch Konflikte? [Wenn ja:] Warum?
- Was würde Ihnen fehlen, wenn es die Schwimmbäder nicht mehr gäbe?

#### **BLOCK 3: GEMEINSCHAFT ALLGEMEIN**

- Haben Sie selbst viel mit Ihren Nachbarinnen und Nachbarn zu tun? [social relations]
  - Kennen Sie sie persönlich?
  - Haben Sie ein gutes Verhältnis mit Ihren Nachbarinnen und Nachbarn?
- Wie sehr identifizieren Sie sich mit dem Wohnpark in Alt-Erlaa? [place attachment]
  - Sind sie stolz darauf, hier zu wohnen?
- Haben Sie den Eindruck, dass man sich an die Regeln hält, die es geschrieben oder ungeschrieben gibt? [common good orientation]
  - Ziehen hier alle am selben Strang?
  - Inwiefern spielt die Gemeinschaft eine Rolle für Sie?/ Inwiefern bringen Sie sich selbst in die Gemeinschaft ein?
  - Gibt es Personen oder Institutionen, die eine zentrale Rolle spielen? So richtige "Macher" oder "Macherinnen", die die Leute zusammenbringen?
- Wir haben vorher ja schon viel über die Pools gesprochen. Was wären dann andere Orte, wo man sich begegnen kann?
  - Wo verabreden Sie sich mit Leuten, die Sie kennen?
  - Wo treffen Sie häufig auf neue Gesichter?

[bei hohem berichteten Zusammenhalt]

- Erleben Sie selbst Vorteile durch den nachbarschaftlichen Zusammenhalt?
- Oder gibt es negative Seiten daran, dass es so eine starke Gemeinschaft gibt?
- Gibt es auch Personen oder Gruppen, die Ihrer Wahrnehmung nach nicht so richtig "dazu gehören"?

[bei Befragten, die schon mindestens ein Jahrzehnt hier wohnen]

- Wie war es früher? Was hat sich unter dem Stichwort "Gemeinschaft" verändert?

#### **BLOCK 4: VERABSCHIEDUNG UND SCHLUSS**

Vielen Dank für Ihre spannenden Einblicke, wir nähern uns jetzt schon dem Ende des Gesprächs. Daher möchte ich an dieser Stelle noch einmal wissen, ob es irgendeinen Aspekt gibt, der für Sie wichtig ist und den Sie gerne noch erwähnt hätten – egal ob es um die Pools geht, um die Nachbarschaft, oder um unser Gespräch!

[...]

Dann bedanke ich mich herzlich und würde nun die Aufnahme beenden.

# II: Interview Consent Form

**Zusammenleben in Alt-Erlaa: Schwimmbäder und Nachbarschaft** Luis Ullmann – 4CITIES Erasmus Mundus Joint Master Degree in Urban Studies

# Informationsblatt für Teilnehmende

Vielen Dank, dass Sie in Erwägung ziehen, an dieser Studie teilzunehmen. Dieses Informationsblatt erläutert den Zweck der Studie und gibt eine Beschreibung Ihrer Mitwirkung sowie Ihrer Rechte als Teilnehmer oder Teilnehmerin, falls Sie sich zur Teilnahme bereit erklären.

#### In welchem Kontext findet diese Studie statt?

Diese Studie ist Grundlage einer Abschlussarbeit im Fach Urban Studies (auf Deutsch: Urbanistik/Stadtwissenschaften) im Erasmus-Mundus-Masterstudiengang 4CITIES, der gemeinsam von sechs europäischen Universitäten angeboten wird. Zu diesem Konsortium gehört auch die Universität Wien.

# Worum geht es in dieser Studie?

In der Befragung geht es um das nachbarschaftliche Zusammenleben in Alt-Erlaa und die Nutzung der Schwimmbäder sowohl auf den Dächern als auch in den Innenräumen des Wohnparks. Mit dieser Arbeit soll zur Beantwortung der Frage beigetragen werden, inwiefern sich in Wohnhochhäusern durch die Bereitstellung von gemeinsam genutzten Räumen und Orten ein gutes nachbarschaftliches Zusammenleben ermöglichen lässt.

#### Muss ich an der Studie teilnehmen?

Es steht Ihnen frei, ob Sie an der Befragung teilnehmen wollen. Sie müssen nicht teilnehmen, wenn Sie dies nicht wünschen. Wenn Sie gerne teilnehmen würden, werden Sie im nächsten Schritt um die Unterzeichnung einer Einverständniserklärung gebeten.

# Wie sieht meine Beteiligung aus?

Sie werden darum gebeten, in Form eines Interviews von Ihren Alltagserfahrungen in der Nachbarschaft im Wohnpark Alt-Erlaa zu berichten. Dieses Interview soll aufgenommen und später inhaltlich analysiert werden. Das Gespräch wird voraussichtlich etwa 60 Minuten dauern.

# Wie kann ich meine Zustimmung zur Teilnahme widerrufen?

Während der Befragung können Sie die Beantwortung einzelner Fragen verweigern sowie das Interview jederzeit und ohne Angabe von Gründen abbrechen. Wenn Sie Ihre Teilnahme am Interview abbrechen, werden die bis dahin von Ihnen angegebenen Informationen gelöscht und fließen nicht in die spätere Auswertung ein, es sei denn, Sie erlauben die Nutzung Ihrer Antworten explizit. Nach dem Gespräch können Sie Ihre Bereitschaft zur Teilnahme bis zum 1. Mai 2025 jederzeit und ohne Angabe eines Grundes zurückziehen.

# Werden meine Teilnahme und meine personenbezogenen Daten vertraulich behandelt?

Die Aufzeichnungen zu dieser Studie werden so vertraulich wie möglich behandelt. Ausschließlich der Forscher und die Betreuer haben Zugang zu den Akten und den Tonaufnahmen und werden diese niemals an Dritte weitergeben. Außerdem werden Ihre Daten anonymisiert: Ihr Name sowie alle weiteren personenbezogenen Daten werden in den Berichten oder Veröffentlichungen, die aus der Studie hervorgehen, niemals verwendet.

#### Wie werden meine Antworten verwendet?

Die gesammelten Informationen werden ausschließlich zu Forschungszwecken im Rahmen einer Masterarbeit verwendet. Diese Arbeit kann gegebenenfalls auf der Internetseite des Studiengangs oder in anderweitiger Form veröffentlicht werden.

# Was, wenn ich eine Frage oder Beschwerde habe?

Melden Sie sich gerne jederzeit beim Forscher, Luis Ullmann, unter [...]

# Ihre Rechte als Teilnehmerin oder Teilnehmer

- Sie haben das Recht, eine Kopie Ihrer erhobenen personenbezogenen Daten zu erhalten.
- Sie haben das Recht, dass Ihre Angaben im Falle von Ungenauigkeit korrigiert werden.
- Sie haben das Recht, dass Ihre Angaben gelöscht werden.
- Sie haben das Recht, der Verarbeitung Ihrer Daten zu widersprechen.
- Sie haben das Recht, Ihre Zustimmung zur Verarbeitung der personenbezogenen Daten nachträglich zu widerrufen. Analysen, die bis zu diesem Zeitpunkt mit den betreffenden Antworten durchgeführt wurden, werden weiterhin für die Forschung verwendet.

Sie können diese Rechte durch Kontaktaufnahme mit dem Forschenden wahrnehmen.

Wenn Sie an der Studie teilnehmen möchten, unterschreiben Sie bitte die Einverständniserklärung.

# **EINVERSTÄNDNISERKLÄRUNG**

Thema: Zusammenleben in Alt-Erlaa: Schwimmbäder und Nachbarschaft Interviewer/Ansprechperson: Luis Ullmann Datum: Die Teilnahme an dieser Befragung findet freiwillig statt. Bitte markieren Sie Ihre Antworten in der rechten Spalte. Ich habe das Informationsblatt vom [\_\_/\_\_] selbst gelesen oder vorgelesen bekommen. Eventuelle Rückfragen wurden zu meiner JA / NEIN Zufriedenheit beantwortet. Ich stimme der Teilnahme an der Befragung zu und habe verstanden, dass ich die Antworten verweigern sowie meine JA / NEIN Teilnahme zu jedem Zeitpunkt ohne Angabe von Gründen beenden kann. Ich willige darin ein, dass das Gespräch zur weiteren Auswertung und ausschließlich für den Forscher und die Betreuer zugänglich JA / NEIN aufgezeichnet wird. habe verstanden, dass die von mir bereitgestellten Informationen zum Zweck einer Masterarbeit genutzt und dabei umfassend anonymisiert werden. Jegliche personenbezogenen Informationen, die mich eindeutig identifizieren könnten - etwa JA / NEIN Namen oder Kontaktangaben – werden streng vertraulich behandelt und mit keiner Person außer dem Forscher und den Betreuungspersonen geteilt. Ich willige darin ein, dass direkte Zitate von mir in anonymisierter JA / NEIN Form im Abdruck der Abschlussarbeit verwendet werden. Name des Teilnehmers/der Teilnehmerin: Unterschrift: Name des Interviewers: Luis Ullmann Unterschrift: Bitte behalten Sie eine Kopie dieser Einverständniserklärung in Ihren Unterlagen.

Bei Rückfragen melden Sie sich bitte jederzeit unter [...].

# III: Participant Observation Guide

# Forschungsfokus & Zielsetzung

Ziel der Beobachtung ist es, soziale Praktiken, Interaktionen und Nutzungen im Kontext eines semi-öffentlichen Schwimmbads zu erfassen. Besonderes Augenmerk liegt auf Fragen der Begegnung und sozialen Interaktion.

# Allgemeine Leitfragen zur Beobachtung

Diese Fragen dienen als Orientierung für die ethnographische Beobachtung:

#### A. Soziale Akteur\*innen

- Wer ist anwesend? Welche Gruppen lassen sich unterscheiden (Alter, Geschlecht, Nachbarinnen oder Gäste, sozialer Hintergrund)?
- Welche Rollen gibt es bzw. nehmen Personen ein (z. B. Personal, Besucher\*innen?)
- Wie interagieren sie miteinander? Gibt es Gruppenbildung?

# B. Räumliche Struktur & Nutzung

- Wie ist der Raum gestaltet und gegliedert? (siehe nächste Seite)
- Wer hält sich wo auf?
- Wie wird der Raum genutzt? Gibt es formelle oder informelle Regeln?

#### C. Zeitliche Abläufe

- Gibt es Routinen oder wiederkehrende Abläufe?
- Wie lange sind Besucher:innen vor Ort?
- Wann erscheinen welche Gruppen? Gibt es Stoßzeiten?

#### D. Körper & Affekt

- Welche körperlichen Praktiken sind sichtbar (z. B. Sport, Ruhe, Spiel, Austausch)?
- Welche Stimmungen lassen sich beobachten, welcher "Vibe" herrscht vor?

# E. Sprache & Kommunikation

- Was wird gesprochen? Welche Sprachen sind hörbar?
- Ist es laut oder leise, konstant oder wechselhaft?
- Wie wird nonverbal kommuniziert?

# F. Ausschlüsse & Zugänge

- Wer scheint ausgeschlossen, zurückhaltend, oder ist gar nicht erst anzutreffen?
- Sind Konflikte erkennbar?
- Gibt es sichtbare oder unsichtbare Barrieren?

#### G. Weiteres...

...?

N	Jr D	oatum	Location grob _	Loc	ation eng	
V	Vetter _	Hos	tUh	rzeit Start	Uhrzeit Ende	_
		Into	eraktionen und	Beobachtunge	en	
Interakt	ionen	Beobachtunge	n			
Würdigung						
Begrüßung						
Tratschen						
Streit/Konflikt						
Spiel/Spaß						
		W	eitere Notizen ı	ınd Ereignisse		
wann	wer		was			

wann	wer	was

# Public Space Design Beurteilungsbogen (Gehl 2010)

# BEHAGLICHKEIT SCHUTZ

Schutz vor motorisiertem Verkehr

- Schutz vor Verkehrsunfällen
- Verminderung der Angst vor Verkehr
- Übersichtlichkeit

Schutz vor Verbrechen und Gewalt

- gute Beleuchtung
- lebendige Umgebung
- passive Überwachung
- zeitlich und funktional überschneidende Nutzungen

Schutz vor unangenehmen Sinneseindrücken

- Schutz vor Regen, Schnee, Kälte, Hitze und Wind
- Verminderung vor Staub,
   Abgasen, blendendem
   Licht Lärm

#### Gehen

- Platz zum Gehen
- Barrierefreiheit
- qualitative Oberflächen
- interessante Gebäudefassaden

#### Aufenthalt

- attraktive und funktionale Randzonen
   Orte zum stehen bleiben
- Objekte zum anlehnen oder daneben stehen

#### Sitzen

- Sitzgelegenheiten - Ausnutzung der örtlichen Vorzüge: Ausblicke, Sonne, Geschehen beobachten
  - Möglichkeit zum Ausruhen

#### Sehen

- Angemessene, überblickbare Distanzen
  - Freie, unverstellte Sichtachsen
- Interessante Ausblicke
  - Beleuchtung im Dunkeln

Sprechen und Hören

- tiefer Geräuschpegel
- kommunikative Anordnung der Sitzgelegenheiten

Spielen und Bewegen

- Möglichkeit für Spiel, Sport und Unterhaltung
- bei Tag und Nacht -im Sommer und Winter

#### menschlicher Massstab

- Dimensionen von Gebäuden und Räume unter Beachtung des menschlichen Massstabs angenehme Umwelteinflüsse

- Abwechslung zwischen Sonne und Schatten
- optimale Nutzung von Wärme und leichtem Wind

#### positives Sinneserlebnis

- qualitatives Design, Material, Details
- Ausblicke, Anblicke
- Wasser, Vegetation