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Encounters With Difference: Exploring the Diversity of Everyday Life in Urban Public Squares

Widmer Hannah

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FACULTÉ DES GÉOSCIENCES ET DE L'ENVIRONNEMENT
INSTITUT DE GÉOGRAPHIE ET DURABILITÉ

Encounters With Difference: Exploring the Diversity
of Everyday Life in Urban Public Squares

THÈSE DE DOCTORAT

présentée à la

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Docteur en géographie

par

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La Faculté des géosciences et de l'environnement de l'Université de Lausanne,
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rédigée par

Hannah Alina WIDMER

intitulée

***ENCOUNTERS WITH DIFFERENCE: EXPLORING THE
DIVERSITY OF EVERYDAY LIFE IN URBAN PUBLIC SQUARES.***

sans se prononcer sur les opinions exprimées dans cette thèse.

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Lausanne, le 03.07.2024



Professeur Niklas Linde, Doyen





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Summary

City dwellers experience diversity in public space every day. In urban spaces, we encounter countless strangers in our everyday lives. As cities are characterized by a diversity of cultural and socio-economic ways of life, these strangers are unknown, on the one hand, and on the other, they are 'strange' because they often have a completely different background to us.

In cities, public space plays an important role as a place for leisure, physical activities, mobility, and recreation. It also serves as a space where cultural identity and feelings of belonging to a neighbourhood or another community are created and experienced, for example in the context of celebrations. What should be emphasized specifically is the function of public space as a place of encounter. However, the fact that people are mobile can mean that certain population groups never encounter each other in public space, although they live in a socially mixed neighbourhood. Moreover, encounters with strangers, even if they are only fleeting, are ambivalent: they can be scary or uncanny, on the one hand, but also exciting and inspiring on the other.

This thesis therefore set out to explore the extent of diversity in public squares on the neighbourhood scale, the perception and experience of diversity by users, and the role that the design plays in this. It proposes a conceptual toolkit and an innovative methodology for analysing the use of public squares. Using a mixed-methods approach, the squares Lindenplatz, Hallwylplatz and Idaplatz in Zurich (Switzerland) were analysed. Counting, observations and a survey (n=1,474) were combined with qualitative interviews (n=63) with people who use these three squares in different ways.

The results show that users of the three neighbourhood squares are fairly diverse in terms of cultural backgrounds, social class, ages, level of educational and employment status. The gender balance is even. The design of the squares plays a crucial role for optional activities (meeting family and friends, relaxing, eating, drinking, etc.; as opposed to 'necessary activities' such as passing through or shopping): the more seating there is in the squares the higher the proportion of people who stay and do not merely cross the squares.

If the diversity of square users is compared to that of the neighbourhood population, it is evident that there is a diversity gap. Diversity in the squares is lower than in the neighbourhood when country of origin, income and education are considered. The mainstream society, i.e. people without migrant background, with an average income, and a tertiary degree are overrepresented in the squares.

People who use the three squares perceive that in the squares, they are surrounded by people who differ from themselves in many respects. However, this is usually experienced as unproblematic and rarely causes them to change their behaviour. If people or certain behaviours are perceived as objectionable, design elements that facilitate freely choosing one's distance from others (e.g. movable chairs or benches that are positioned in different places and with different orientations) make it easier to live together in the squares.

To encourage encounters between strangers and across difference, the planning of public squares could provide affordances that work for different population groups, e.g. through a variety of ground floor uses, and elements such as water features that are universally appealing. Through appropriate design, these spaces could also offer possibilities to flexibly adapt the distance to other square users and thus promote coexistence in public spaces – regardless of the distance at which it occurs.

Résumé

Chaque jour, dans l'espace public, les citoyen·e·s d'une ville font l'expérience de la diversité. Dans un environnement urbain, nous rencontrons au quotidien d'innombrables « étranger·ère·s » dans notre vie quotidienne. Du fait que les villes sont caractérisées par une diversité de modes de vie culturels et socio-économiques, ces étranger·ère·s sont, d'une part, inconnus, et d'autre part étranges parce qu'ils proviennent de milieux très différents des nôtres.

Dans un contexte urbain, l'espace public joue un rôle important en tant que lieu de loisirs, d'activités sportives, de mobilité et de détente. Il sert également de lieu où une identité culturelle et l'appartenance à un quartier ou à une autre communauté se créent et s'expérimentent, par exemple dans le cadre de célébrations. Il convient de souligner tout particulièrement la fonction de l'espace public en tant que lieu de rencontre. Cependant, la mobilité des personnes fait que certains groupes ne se rencontrent jamais dans les espaces publics, même s'ils habitent dans un quartier mixte. En outre, les rencontres avec des étranger·ère·s, même si elles ne sont que fugaces, sont ambivalentes : elles peuvent être effrayantes ou inquiétantes d'une part, mais aussi inspirantes et passionnantes d'autre part.

Cette thèse a donc pour objectif d'explorer la mesure de la diversité sur les places publiques à l'échelle du quartier, la perception et l'expérience de la diversité par les usager·ère·s, et le rôle de l'aménagement à ces égards. Elle propose un outillage conceptuel et une méthodologie innovante pour étudier l'utilisation des places publiques. Les places Lindenplatz, Hallwylplatz, et Idaplatz à Zurich (Suisse) ont été analysées à l'aide d'une approche mixte. Des comptages, des observations et une enquête (n=1 474) ont été combinés à des entretiens qualitatifs (n=63) avec des personnes qui utilisent les trois places de différentes manières.

Les résultats montrent que les usager·ère·s des trois places de quartier sont assez diversifié·e·s en termes d'origines culturelles, de classes sociales, d'âges, de niveaux d'éducation et de statuts professionnels. La répartition entre hommes et femmes est équilibrée. L'aménagement des places joue un rôle important pour les activités optionnelles (rencontrer la famille ou des amis, se détendre, manger, boire, etc.; par opposition aux « activités nécessaires » telles que le passage ou les achats): plus il y a de places pour s'asseoir, plus la proportion de personnes qui restent, et ne se contentent pas de traverser les places, est élevée.

Si l'on compare la diversité des usager·ère·s des places à celle de la population du quartier, il est évident qu'il existe un écart de diversité. La diversité sur les places est plus faible que dans le quartier si l'on tient compte de l'origine nationale, du revenu et de l'éducation. La « société mainstream », c'est-à-dire les personnes non issues de l'immigration, disposant d'un revenu moyen et d'un diplôme de l'enseignement supérieur, est surreprésentée sur les places.

Les personnes qui fréquentent les trois places perçoivent être entourées de personnes qui diffèrent d'elles-mêmes à bien des égards. Toutefois, cette situation ne pose généralement pas de problème pour les personnes s'y trouvant confrontées et ne les incite que rarement à modifier leur comportement. Si des personnes ou certains comportements sont perçus comme gênants, des éléments d'aménagement permettant de choisir librement sa distance par rapport aux autres (par exemple des chaises mobiles ou des bancs placés à différents endroits et orientés différemment) facilitent la cohabitation sur les places.

Pour encourager les rencontres entre inconnus et au-delà des différences, la conception des places publiques pourrait offrir des possibilités qui conviennent à différents groupes de population, par exemple à travers une variété d'utilisations des rez-de-chaussées ou des

éléments tels que des jeux d'eau, universellement attrayants. Ces espaces pourraient également offrir des adaptations flexibles de la distance entre les usager·ère·s de la place par un aménagement approprié, tout en promouvant la coexistence dans les espaces publics – quelle que soit la distance à laquelle elle se produit.

Zusammenfassung

Stadtbewohner:innen erleben Diversität im öffentlichen Raum jeden Tag. In urbanen Räumen begegnen wir im Alltag unzähligen Fremden. Da Städte von einer Diversität an kulturellen und sozioökonomischen Lebensweisen geprägt sind, sind diese Fremden einerseits unbekannt, andererseits auch deshalb "fremd", weil sie oft einen ganz anderen Hintergrund haben als wir.

Dem öffentlichen Raum kommt in Städten eine wichtige Rolle als Ort für Freizeit, sportliche Aktivitäten, Mobilität und Erholung zu. Er dient auch als Anknüpfungspunkt für die Schaffung und das Erleben kultureller Identität und Zugehörigkeit zu einem Quartier oder einer anderen Gemeinschaft, z.B. im Rahmen von Feiern. Besonders hervorzuheben ist die Funktion des öffentlichen Raums als Ort der Begegnung. Die Tatsache, dass Menschen mobil sind, kann jedoch dazu führen, dass sich bestimmte Bevölkerungsgruppen im öffentlichen Raum nie begegnen, obwohl sie in einem durchmischten Quartier wohnen. Begegnungen mit Fremden, und sei es nur ein flüchtiges Passieren, sind zudem ambivalent: Sie können einerseits bedrohlich oder unheimlich, andererseits auch inspirierend und horizontweiternd sein.

Diese Dissertation hat deshalb zum Ziel, das Ausmass der Diversität auf öffentlichen Quartiersplätzen, die Wahrnehmung und das Erleben der Diversität durch die Nutzer:innen, und die Rolle, welche die Platzgestaltung dabei spielt, zu untersuchen. Sie präsentiert ein konzeptuelles Instrumentarium und eine innovative Methodik, um die Nutzung öffentlicher Plätze zu untersuchen. Mittels eines Mixed-Methods-Ansatzes wurden die Plätze Lindenplatz, Hallwylplatz und Idaplatz in Zürich (Schweiz) unter die Lupe genommen. Zählungen, Beobachtungen und eine Befragung (n=1'474) wurden mit qualitativen Interviews (n=63) mit Menschen, die einer dieser drei Plätze unterschiedlich nutzen, kombiniert.

Die Resultate zeigen, dass die Nutzer:innen der drei Quartiersplätze hinsichtlich des kulturellen Hintergrunds, der sozialen Schichten, des Alters, des Bildungsstand und des Erwerbsstatus durchaus divers sind. Die Geschlechterbalance ist ausgeglichen. Die Gestaltung der Plätze spielt eine zentrale Rolle bei den optionalen Aktivitäten (Familie und Freunde treffen, sich ausruhen, essen, trinken, etc.; im Gegensatz zu "notwendigen Aktivitäten" wie den Platz passieren oder einkaufen): Je mehr Sitzgelegenheiten zu finden sind, desto höher ist der Anteil der Personen, die auf dem Platz verweilen und ihn nicht bloss überqueren.

Wird die Diversität der Platznutzer:innen mit derjenigen der Bevölkerung in der Nachbarschaft verglichen, zeigt sich, dass es eine Diversitätslücke gibt. Die Diversität auf den Plätzen ist kleiner als in der Nachbarschaft, wenn Herkunftsland, Einkommen und Bildungsstand betrachtet werden. Die Mehrheitsgesellschaft, also Personen ohne Migrationshintergrund, mit einem mittleren Einkommen und einem Bildungsabschluss auf Tertiärstufe sind auf den Plätzen übervertreten.

Personen, welche einen der drei Plätze nutzen, nehmen wahr, dass sie an diesen Orten Menschen sehen, die in vielerlei Hinsicht anders sind als sie. Das wird jedoch meist als unproblematisch erlebt und gibt selten Anlass dazu, das eigene Verhalten zu ändern. Wenn Menschen oder gewisse Verhaltensweisen als störend empfunden werden, erleichtern Gestaltungselemente, die es erlauben, die Distanz zu anderen flexibel zu wählen (z.B. bewegliche Stühle oder Bänke, die an verschiedenen Orten und mit unterschiedlicher Ausrichtung platziert sind), das Zusammenleben auf dem Platz.

Um Begegnungen zwischen Fremden und trotz Differenzen zu begünstigen, könnte die Planung öffentlicher Plätze Angebote machen, die für verschiedene Bevölkerungsgruppen

funktionieren, z.B. ein Mix an Erdgeschossnutzungen und Elemente wie Wasserspiele, die universell anziehend sind. Solche Räume könnten durch eine entsprechende Gestaltung auch Spielraum bieten, die Distanz zu anderen Platznutzer:innen flexibel anzupassen, und so das Zusammenleben im öffentlichen Raum fördern – egal auf welche Distanz.

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1. Introduction

In an urban context, most people experience diversity day by day in public space. We live in cities with myriads of others who are different from ourselves. We share park benches with strangers. We do not know the people who are waiting for the same bus, but maybe we recognize a familiar face. We walk in the streets to do errands and pass others with whom we share only the fact that we live in the same neighbourhood, but who may have lifestyles, practices and beliefs that are very different from ours. Stated somewhat differently: in the city, we constantly see unknown others and share space with them regardless of the fact that they are different from us in many aspects (Lofland, 1998).

These encounters between strangers are a fundamental aspect of urban life (Sennett, 1977/2002). Against the backdrop of cities that are getting increasingly diverse with regard to ethnicity, language, religious beliefs, cultural practices, lifestyles, values, and activities (Tasan-Kok et al., 2014; Vertovec, 2007)¹, of increasing income inequality² (Chancel et al., 2022), growing residential segregation between low-income and high-income groups in cities around the world (van Ham et al., 2021), and the rise of ‘portable shields for encounter’ such as cars, mobile phones, and headphones (Goffman, 1963/1969; Hatuka & Toch, 2016) the question arises as to whether these encounters between strangers actually do take place – and if yes, where, and between whom?

With regard to public space, encounters between strangers presuppose that the strangers share public space at least temporally. But do public spaces in our cities serve everyone (Madanipour, 2019, p. 45)? Or are they designed for certain groups only? Whom do they belong to, and who actually uses them? These questions are even more important if we factor in the increasing pressure privatization of public space, gentrification, surveillance and the like is posing on public space (Carmona, 2010a; Rigolon & Collins, 2023; Thörn, 2011). They are also highly relevant considering that in many contexts, also in Switzerland, cities are densifying. In dense cities, high-quality public space that is evenly distributed and inviting to everyone is also a matter of social justice (Bibri et al., 2020; Low & Iveson, 2016; Madanipour, 2019).

¹ The dimensions of diversity here – ethnicity, religion, lifestyle, etc. – all refer to horizontal social differentiation. In contrast to vertical differentiation, i.e. ranking people based on hierarchical criteria such as income, status, or education, horizontal differentiation is based on a non-hierarchical segmentation of society. The two types of differentiation can intersect with each other, e.g. when certain lifestyles are associated with (or only available to) people with high incomes (van Eijck, 2011).

² Even though the increase in income inequality is less marked in Switzerland than in the US and Western European countries like the UK and France, there is a growing polarisation of incomes (and of wealth; Hümbelin & Farys, 2016).

Going back to the issue of diverse cities and residential segregation, it has long become a common response to pursue a housing policy that encourages social mix on a neighbourhood level, mostly aiming at mixed-income and mixed-ethnicity neighbourhoods (Galster & Friedrichs, 2015; Hyra, 2015). However, there is mixed empirical evidence regarding the effectiveness of these policies, with critics arguing that they overlook broader structural processes contributing to urban disadvantage (Casarin et al., 2023; DeFilippis & Fraser, 2010). Moreover, because of the focus on housing in debates on social mix, there is a lack of research that explores how social mix on a neighbourhood level plays out in social networks and public spaces which is a crucial issue considering a) that people are mobile and may spend their day in places that are quite remote from where they live (Hausser et al., 2020), and b) that much of the promise of social mix resides in the potential for encountering each other.

Looking at diversity in public space is also relevant in light of the nature of the discourse on diversity. It is well documented that diversity discourse in urban planning refers to a wide range of 'types' of diversity, such as spatial, functional, cultural, and economic diversity, that the benefits of diversity are often under-theorized, and that policies are often ambiguous and inconsistent (Lees, 2003; E. van Eck et al., 2020). Research shows that diversity can be a powerful rhetoric connecting very different ideas that need not necessarily be compatible (Lees, 2003), and that, since diversity has many different interpretations, it can also serve to implicitly push for a very specific version of diversity that is not as inclusive as the word suggests (E. van Eck et al., 2020).

Moreover, with regard to encounters in public space, diversity is also fundamentally ambivalent. It can be exciting, enriching, or simply interesting to watch or interact with people who are different from us, but because encounters with strangers always contain an element of unpredictability (Wilson, 2017), they are also experienced as objectionable, disturbing, or even as threatening one's safety (Brands et al., 2015). This observation is particularly evident when looking at control and surveillance: they jeopardise the publicness of public space, but at the same time, they are also a prerequisite for safe, inclusive public space (Piñeiro et al., 2023). The experience of diversity in neighbourhoods indeed varies widely, as we know from research (Nielsen & Winther, 2020).

This thesis therefore contributes to literature on diversity in public space by critically asking how diversity is perceived and experienced by people who use public spaces, and paying close attention to what they mean (and who) when they talk of diversity, social mix, or heterogeneity, and who is not included in these narratives.

The aim of this thesis is threefold. It is an attempt, theoretically and empirically grounded, to unpack the extent and dimensions of diversity in public space, to critically challenge

commonplace discourses on diversity by asking how diversity is assessed ‘on the ground’, i.e. by users of public space, and to look at the role public space design has in shaping atmospheres and affordances that support or impede diversity.

The approach taken here focuses on everyday life (de Certeau, 1988), and on very mundane, everyday spaces, namely small public squares in Zurich (Switzerland), assuming that seeing others and occasionally interacting with them in these spaces matters (Aelbrecht et al., 2019; Blokland et al., 2022). It does not concentrate on extraordinary events, special places, certain differences and experiences (e.g. cultural differences, or experiences of older people) or specific types of encounters. In so doing, this research tries to shed light on the unglamorous, mundane aspects of urban life that often receive less attention compared to more sensational, extreme, or politically charged events. In this sense, this thesis is well aligned with the research strands of geographies of encounter and social infrastructure (Latham & Layton, 2022; Wilson, 2017).

1.1. Research Questions

This research sets out to gain further understanding of the following research questions:

- Q1: What is the extent of diversity in public squares?
- Q2: How does a neighbourhood’s diversity compare to square users’ diversity?
- Q3: How is diversity in public squares perceived and experienced?
- Q4: How does public space design shape diversity in public squares?

This thesis consists of a collection of articles and one book chapter, and each of the publications puts the focus on one or two of these basic research questions and defines a narrower scope. The next section (1.2) will outline the more specific research questions of each article.

These basic research questions guide the whole project and therefore also influence decisions regarding the research design. Why squares, and why squares in Zurich?

The same topic could be studied in other types of public space, but squares have the advantage of being both part of the pedestrian network (more so than, e.g., parks) and inviting for longer stays (more so than, e.g., streets). Still, they are very open to different kinds of uses (more so than, e.g., playgrounds), and potentially accessible to a wide range of people. Diversity is thus presumably higher than in other places. Squares are therefore expected to generate a more conservative estimate of differences between the neighbourhood’s diversity and the square users’ diversity (Q2) than more closely defined or programmed spaces. Moreover, squares have clearly defined edges (Lee, 2019) which makes them suitable for fieldwork (see Chapter 3).

This thesis adopts a ‘place-based approach’ instead of more ‘process-oriented approach’. Process-oriented approaches have been proposed as an alternative by van Melik and Spierings as they provide a more in-depth view of ‘how people use and experience the variety of public spaces they relate with and combine during their daily lives while moving through them, back and forth, in both time and space’ (van Melik & Spierings, 2020, p. 25).

There are two reasons I nevertheless opted for a place-based approach. The first is related to the second research question, i.e. the comparison between square users’ diversity and the neighbourhood population’s diversity. There might be other units of analysis than the neighbourhood and the square that could be more suitable to explore differences in diversity between residents and public space users, and to analyze the perception and experience of diversity in everyday life such as individual activity spaces³ or the whole set of open public space within a neighbourhood. However, there are two issues that would come with a more process-oriented approach: 1) It would require tremendous amounts of fieldwork to identify who is present in these spaces because participants’ activity spaces might be extremely widespread, or there might be numerous open public spaces in one single neighbourhood. 2) Defining and measuring the diversity of the ‘population of reference’ would be complicated in the case of activity spaces. The population of reference in my approach (resident population in the neighbourhood) is arguably also not the perfect reference for comparison because it overlooks, for example, people who are employed in the area. But there is at least a clear inclusion criterion to distinguish the population of reference. In a process-oriented approach, the population of reference would be different for each individual which would complicate the analysis.⁴

The second reason for choosing a place-based approach is connected to the fourth research question, i.e. the role of public space design. The place-based approach allowed me to delve into the design and the planning history of the selected squares and become familiar with the spaces in a way that would not have been possible with a process-oriented approach. A process-oriented approach would need investigation of all the different spaces that people relate to in their everyday life. Even if people from the same neighbourhood were chosen, it would multiply the spaces whose design was to be studied beyond the limits of this thesis.

³ An activity space can be defined as those areas of the environment that individuals frequent in their daily routines (Wang & Li, 2016, p. 149)

⁴ Such an approach would lend itself to other research questions, however. One could, for example, calculate the ‘diversity gap’ for each individual and look at factors that might influence the size of this gap and hence the exposure to diversity in one’s activity space (e.g. type of hobbies, type of work, socio-economic status, general attitude towards diversity, etc.).

The topic of this thesis could also be studied in other cities than Zurich. However, Zurich is the largest city in Switzerland, it has a higher number of distinct neighbourhoods and a more differentiated housing market than other Swiss cities, a prerequisite when studying and comparing the relationship between the composition of a neighbourhood's population and the users of a public square within it.⁵ Zurich is also an attractive place to work and study for foreigners (Rérat, 2019; Statistik Stadt Zürich, 2023d) providing a backdrop of cultural diversity that is found in only few other Swiss cities.

Importantly, because of its size, there is a lot of data available on the residents of Zurich, including sufficiently large samples in national surveys that provide additional information to the demographic information that is usually found in register data.

1.2. Structure of the Thesis

This introduction is followed by Chapter 2 which presents the theoretical framework that underlies the whole research project. The articles and the book chapter take up the concepts presented here according to their empirical focus. In Chapter 3, I present the research design, the methodology and the data that resulted from data collection. Chapter 4 then sets the scene: I introduce the context of this study, Zurich, the three squares that have been selected for fieldwork, and their respective neighbourhoods. This chapter also comprises additional empirical material that has informed the analysis from which the articles and the book chapter resulted, but which could not be integrated into them.

Chapters 5 – 8 are dedicated to the articles and the book chapter which form the core of this thesis.

- In the article 'Conviviality in Public Squares: How Affordances and Individual Factors Shape Optional Activities' (Chapter 5), with regard to the first research question, I explore diversity in the three squares by examining which individual characteristics and which features of the environment contribute to a convivial use of the public squares.
- The article 'Operationalizing Affordances for Public Space: Artefacts and Their Various Uses' (Chapter 6), co-authored with Patrick Rérat, focuses on the role of the built environment, artefacts within it, and how their affordances shape the uses (and therefore also the diversity of users) of the public squares (research questions Q1 and Q4). We

⁵ This was also the reason why Zurich was chosen for my master's thesis on residential segregation (Widmer, 2018). This previous research, as well as the experience I gained during 1.5 years of professional activity in Zurich before my PhD are the reason for valuable previous knowledge already at the outset.

provide a typology of affordances that considers who produces affordances and for whom.

- The book chapter 'Mixed Neighbourhoods, Mixed Squares? Exploring the Diversity Gap in Public Squares' (Chapter 7) addresses the second research question. It explores to what extent squares are inviting to everyone and asks how the diversity of square users relates to the diversity of the neighbourhoods' resident population. The analysis draws on data from fieldwork and secondary data on the neighbourhoods' residents.
- The article 'Desirable or Unremarkable? Perceiving and Living with Diversity in Public Squares' (Chapter 8) deals with the third research question and asks how people perceive and experience diversity. Two sub-questions are asked: 1) what categories (e.g. ethnic, linguistic, socio-economic, etc.) do people draw on when describing other people copresent in the square, and 2) in what ways do they respond to diversity in the squares?

I conclude by discussing the main findings, the theoretical and empirical contributions of this thesis, limitations and suggestions for further research, as well as policy implications in Chapter 9.

2. Theoretical Framework

This research is based on a large body of literature on public space, public life, and encounters with unknown others in the context of urban diversity. In this chapter I provide the theoretical backdrop to the articles (Chapters 5 – 8). I discuss the theoretical concepts used in the articles and present empirical literature on the topic.

In the first section (2.1), I explain this thesis's approach to space. Following Lefebvre (1974/1991) and Löw (2008, 2016), I show how space can be understood as socially produced in a way that links the built environment, human beings, and their spatial practices. The section also links the social production of space to the concepts of affordances and atmospheres, which are crucial to the second article (Chapter 6).

The next section (2.2) is dedicated to debates on public space. It gives an overview of how public space has been theorized, how scholars view its roles in society, and how privatization, commodification, gentrification and other phenomena put pressure on it. I also discuss how social justice and social cohesion relate to public space, and how public space can be conceived as social infrastructure providing opportunities for various social connections, a key concept in the third article (Chapter 7).

Section 2.3 places the topic of diversity in public space within the literature on planning and designing public space, putting the focus on the built environment of public space. It situates public squares – the specific public space chosen for this research – within different typologies. In this section, I also cover the concept of responsive environments and the idea of open versus closed programming of public spaces, traces of which can be found in all of the publications of this thesis.

I then turn to the life taking place in public space (Section 2.4). I give an overview of the most important literature on public life, and define different types of activities that are crucial for the first article (Chapter 5). These are linked with the concept of conviviality, also a key concept in the first article, and with the literature on geographies of encounter. This strand of research, to which the fourth article contributes (Chapter 8), focuses on encounters in an urban context which are characterised by an unpredictability that is multiplied by diversity.

Diversity is the focus of the last section (2.5). I explain different definitions and types of diversity, and how they relate to contemporary cities. These aspects are essential in all the publications (Chapters 5 – 8). The section also gives an overview of literature on socially mixed or segregated neighbourhoods, and segregation in activity spaces, both of which are important in the third publication (Chapter 7) where the relationship between the social mix in the neighbourhood and the social mix in the public squares is examined. I conclude the theoretical

chapter by reviewing empirical literature concerned with diversity in public space and encounters between strangers, and through this I expose a research gap which this thesis tries to fill.

2.1. Production of Space

2.1.1. Henri Lefebvre and the Production of Space

Space can and has historically been construed in numerous ways: it has been equated with a specific place in place-based conceptualizations, and others have seen spaces as territories, or as a structure that precedes any experience (Löw, 2016, p. 25). To overcome a conception of space as a mere container for social action and of space in a ‘socializing role’ (Lefebvre, 1974/1991, p. 191), the Marxist theorist Henri Lefebvre developed a theory of the production of space that foregrounds the constructivist and relational character of space. Lefebvre seeks to analyse space through a ‘three-dimensional dialectical figure’ (Schmid, 2008, p. 33). Each of the three elements of this figure is intertwined and connected with the others in a dialectical way. They are not to be understood as separate dimensions constituting space. Rather, space should be viewed as being produced by the interactions between the three elements ‘spatial practice/perceived space’, ‘representations of space/conceived space’, and ‘spaces of representation/lived spaces’ (Lefebvre, 1974/1991, p. 38; Figure 1), revealing the complex relations between society, the individual, and space.

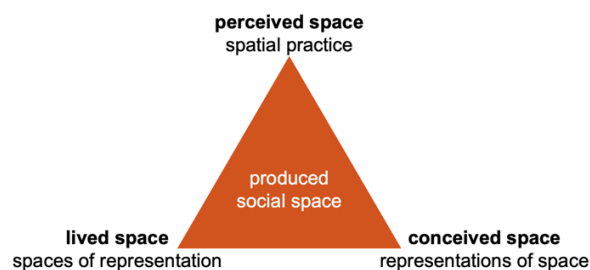


Figure 1: Lefebvre's triad of elements involved in the production of space. Source: author's own.

To grasp Lefebvre's understanding of social space, it is crucial to see that his thinking is based on a relational concept of space and time (Schmid, 2008, p. 29). The starting point for Lefebvre's theory of the production of space is the human being in its corporeality and its openness towards the world given by the body's senses and sensitivity. Any relationship of a subject to space is based on the relationship of its body to space, since space is practised via the body (Lefebvre, 1974/1991, p. 40).

With his triadic figure, Lefebvre is not depicting a linear process of the production of space, but rather an emergent structuring of space based on different elements that are simultaneously

involved. Lacking a 'natural' starting point in the production process, however, I pick 'representations of space' as an arbitrary starting point to explain the triad.

With the term 'representations of space', Lefebvre denotes plans, concepts or designs of space that convey abstract ideas or notions of space. It is space as it is imagined, pictured, thought of, or in Lefebvre's terms, 'conceived' by experts of space. Representations of space are 'conceptualized space, the space of scientists, planners, urbanists, technocratic subdividers and social engineers, as of a certain type of artist with a scientific bent – all of whom identify what is lived and what is perceived with what is conceived' (Lefebvre, 1974/1991, p. 38). Representations of space are abstract, yet they can have very concrete effects on space as it is perceived and lived.

The next element, 'spatial practice', is 'perceived' space. It stands for physical space, for its materiality that can be perceived by the body's senses. It includes everyday routines, i.e. the corporeality of human beings navigating space in the course of their daily life. Spatial practice embodies the close relation of the urban fabric with everyday practices and daily routines. The 'simultaneity of activities' is central to this concept as it designates not the mere sum of all activities, but their interconnectedness and interdependencies, for example 'the daily connection of residence or workplace' (Schmid, 2008, p. 36) or the 'place ballet' (Seamon 1979) of individuals whose routines regularly bring them together in time and space.

The third element in Lefebvre's spatial triad is the 'spaces of representation' (or 'representational spaces'). This designates 'lived' space. Lived space 'overlays physical space' insofar as objects are used as symbols (Lefebvre, 1974/1991, p. 39). By referring to symbolic aspects of space, Lefebvre addresses space as it is experienced both bodily and emotionally, and as being further processed through the creation of social meaning, values and norms by the people who live in (a particular) space and use space (Schmid, 2008, p. 37).

Lefebvre insists that his triad conceptualizes space as whole, but 'whether they [the three elements] constitute a *coherent* whole is another matter' (Lefebvre, 1974/1991, p. 40, emphasis added). Even though he concedes that one element might dominate another⁶, he emphasizes the dialectical relationships within the spatial triad and the analytical balance between the three elements. Despite Lefebvre's explicitness in this regard, scholars have been tempted to operationalize the elements separately in order to render them accessible for empirical work (Pierce & Martin, 2015, p. 1285). Pierce and Martin suggest that this 'misapplication' of Lefebvrian concepts in empirical research has its roots in the fact that Lefebvre presents an ontology of space and provides no links to epistemology (Pierce & Martin, 2015, p. 1286).

⁶ According to Lefebvre, such domination can for example be found in the abstract space of contemporary capitalism, where representations of space (or conceived space) dominate over lived space (Lefebvre, 1974/1991, p. 34; Stanek, 2011).

Yet, the idea of ‘representations of space’ has been useful in designing this research, without attempting a truly Lefebvrian analysis. Part I of the empirical research is dedicated to representations of space by planners and designers (see Section 3.1), without, however, claiming to fully understand the spaces thereby.

Given the difficulties of applying Lefebvrian theory in empirical research, it is useful to complement Lefebvre’s theory with Martina Löw’s theory of the constitution of space to make the production of space more easily empirically graspable (Löw, 2016).

2.1.2. Martina Löw and the Constitution of Space

Löw, like Lefebvre, has a relational, processual understanding of space. She, too, takes the corporeality of human beings as the starting point for developing her action-theoretic approach to space (Löw, 2016, p. 102). Space is the relational arrangement and the constant re-arranging of bodies, or in Löw’s words: ‘of living beings and social goods’ (Löw, 2016, p. 131). People are arranged and arrange themselves in space in relation to other people or groups of people, and, crucially, also in relation to social goods.

In Löw’s definition, social goods can be either material (stones, park benches, rubbish bins, etc.), or symbolic (traffic signs, statues, demarcations of parking lots, etc.), or both. Symbolic social goods can only be placed because they also have a material dimension, but they are only comprehensible when their symbolic meaning is considered. Even though social goods are arranged by human beings and do not move themselves, they are not simply passive objects in the constitution of space. Social goods have an ‘external effectuality’ (Löw, 2016, p. 132): a fountain might give off sound, a flowering bush has an odour, a wooden surface perhaps feels warm to the touch, and a surface might reflect the sunlight in a way that is enjoyable in winter but unpleasant in summer.

Let us turn back to the human beings and their role in the constitution of space. On the one hand, they are building blocks of the relational arrangement. However, they also take part in the constitution of space via their actions and everyday practices. In the context of this research, planning is perhaps the most salient example of how people link human beings and social goods into ensembles of elements (e.g. a neighbourhood), and how they connect these ensembles with other elements (e.g. a transport network connecting different neighbourhoods) and how space emerges thereby. Löw considers the constitution of space to consist of two (simultaneous) processes: spacing and the operation of synthesis (Löw, 2016, p. 134).

Spacing is defined as the procedure of physically placing, removing, and (re-)assembling social goods and living beings. Constructing a building, spraying graffiti on a wall, sitting down at a table, or pigeons pecking at breadcrumbs in the street are all acts of spacing. The operation

of synthesis, on the other hand, describes the way these elements are linked, i.e. how ‘goods and people are amalgamated to spaces by way of processes of perception, imagination, and memory’ (Löw, 2016, p. 135). Only through synthesis is space conceived as one unit (on whatever scale – a flat, a public square, a whole city or region). The operation of synthesis can also happen on a purely abstract level, i.e. with no actual spacing that is connected to it, but linking elements into a space by, e.g. drawing, narrating, or by a computer simulation (Löw, 2016, p. 135).

At this point, it is possible to point out four important connections to other parts of this thesis. First, the operation of synthesis on an abstract level is reminiscent of Lefebvre’s ‘representations of space’ that are conceptions of space that exist primarily in the heads of planners, architects, and designers (Section 2.1.1). Second, the relational approach and the focus on corporeality combined pave the way to understanding affordances. Affordances will be briefly discussed in the next section (2.1.3), and more in-depth in the second article (Chapter 6). Likewise for atmospheres, the third point: atmospheres are rooted in the external effectuality of social goods and in people’s operation of synthesis. They may be more or less inviting to different people, thus shaping co-presence in public space. Fourth, regarding the overall topic of this thesis, diversity in public space, spacing and synthesis make it easy to see inequalities in the production of space that might influence who uses public space in what ways. I will develop this idea in the next paragraph.

The constitution of space can be subject to inequality. The inequality lies in the fact that access to social goods and to ‘positioning power’ is not evenly distributed. The ability to place social goods and living entities depends on resources that are asymmetrically distributed in society and thus gives some people more agency in the process of spacing than others. These resources are wealth, knowledge, rank, and association (Löw, 2016, pp. 179–180). People may not possess or have access to social goods to be positioned or to position themselves, e.g. they might not have enough money to sit in a street café. Knowledge (or certificates) about spacing may also be distributed asymmetrically – here we might think of the design profession versus untrained people. The same applies for social rank. People might have the knowledge, but if they do not have the rank that gives them the power and the freedom to carry out the spacing as they wish, their chances in the constitution of space are limited. As a last resource, also association is not equally distributed. In some cases, it might be relevant if one belongs to a certain group, e.g. being a citizen and thus having democratic means at one’s disposal. Making oneself heard might be easier for members of local associations (e.g. a neighbourhood association), for members of the mainstream society and more difficult for minorities and less established individuals.

2.1.3. Affordances and Atmospheres

Löw's (2016) approach to analysing space is based on relationality, i.e. the relations between people, objects, and their arrangement, that constitute space. A similar idea is at the heart of ecological psychologist James Gibson's (1986) theory of affordances. Gibson states that it is neither the individual, nor the features of the physical space and objects within it that define what is possible or impossible for the individual to do in an environment. Instead, he coins the term affordances to describe what an environment or an artefact offers to the individual, but only *in relation* to the individual. Behaviours or activities that are possible or impossible to perform in an environment or with an artefact are not inherent physical characteristics thereof but lie in the relationship between environment/artefact and individuals.

As affordances are discussed in detail in the second article (Chapter 6), I only explain their most important characteristics with regard to diversity in public space in this section.

Affordances are a useful tool in planning, designing, studying and evaluating public space because they offer a coherent way of asking what a public space affords to whom, and who produces the affordances and therefore structures the way in which public space is used (Daly, 2020; Gu, 2021; Jensen, 2023; Lanng & Jensen, 2022; Maier et al., 2009; Mottaghi et al., 2020).

Because of their relationality, affordances afford different things to different people, and to varying degrees (S. K. Evans et al., 2017; Heft, 2010). The way in which they afford depends on the mechanisms and conditions of affordance (Davis, 2020; Davis & Chouinard, 2016). The mechanism of affordance can be negative (i.e. repelling action) or positive (i.e. inviting action). For example, a lawn 'refuses' (one of the mechanisms identified by Davis, 2020) to be skated-upon with roller skates, but seems very inviting to people who want to have a picnic. It is easy to see that the mechanism of affordance may also depend on the individual in question – children might be attracted to a water feature on the ground that is not particularly appealing to adults.

Three conditions shape the way in which affordances offer possibilities of action to different people: perception, dexterity, and cultural and institutional legitimacy. Affordances in public space are recognized differently depending on how individuals perceive their environment or specific artefacts, depending on their physical and cognitive abilities, and on what rules and social norms apply to them, or that they feel apply to them (see Section 6.4.3 for more details).

Important in the context of this research is that not only physical artefacts or the material base of space have affordances, but that also a space's atmosphere can influence what actions seem possible or impossible for individuals. To define atmospheres, we go back to Löw's processes of the constitution of space: spacing and the operation of synthesis. Space does not

disappear after the activity of spacing has subsided or the spacing subject has left. The arrangement of social goods and human beings retains an atmosphere. Atmospheres are the combined effect of social goods, people and their spatial organization as it is perceived by individuals through the operation of synthesis (Löw, 2016, p. 181). Löw points out that there is not 'one' atmosphere per space: it depends on the external effectuality of the social goods, on the habitus of the spacing subject, but also on the active synthesis of these two elements by subsequent users of space. Nevertheless, atmospheres are often experienced intersubjectively (Griffero, 2020). According to Löw, spaces 'develop their own potentiality, which can influence feelings' through atmospheres (Löw, 2016, p. 172). These might be feelings of well-being, comfort, and protection, but also of fear, insecurity, strangeness or even alienation. They may contribute to a sense of belonging or being 'out of place' (Cresswell, 1996), and thus shape the set of possible actions of an individual (i.e. they have affordances, see Section 6.4.4 for more details), and thus ultimately who uses a space and who does not.

In a seminal article on affective atmospheres, Anderson states that atmospheres are inherently spatial, and ambiguous in the sense that they are 'reducible to bodies affecting other bodies and yet exceeding the bodies they emerge from' (Anderson, 2009, p. 79). An intuitive example for this is spaces that seem sinister or dangerous. Even in the absence of an aggressor they convey feelings of fear. It is therefore often primarily fear of crime, not actual crime, that leads to people avoiding public spaces (Navarrete-Hernandez et al., 2023; F. Zhang et al., 2021).

Low (2023) further points out that by 'programming public space through lighting, design, images, and signs with integrated mobile technologies, social media, and internet websites' can influence feelings and experiences in these spaces. Atmosphere, or the purposive manipulation of atmospheres can be dangerous if abused by corporate or governmental institutions as a way of reducing the set of possible experiences in public space (Low, 2023, pp. 254–255).

Atmospheres, affordances, Löw's and Lefebvre's relational approaches to the way in which space comes about are useful tools in thinking about the research questions of this thesis as they link the built environment – the public squares – with spatial practices. The built environment and spatial practices constitute and structure each other, and these theoretical tools help us understand why some people feel more attracted to or more welcome in certain spaces than others.

Moving on from thinking about space in general, the next section concentrates on public space, its sometimes idealized role in society and the everyday practices that characterize public space as social infrastructure.

2.2. Debates on Public Space

2.2.1. Public Space and the Public Sphere

Zooming in from the social production of space in general to that of public space, the first question that arises is: what is 'public'? In light of some scholarly debates on public space, it is worth starting to look at Habermas's book *The Structural Transformation of the Public Sphere* (Habermas, 1962/1990) for an answer to this question. In this publication, Habermas provides a historical outline of the genesis of the public sphere. He shows that 'the public' emerged in the bourgeois circles of France and Britain in the mid-19th century. At this time, coffee houses (see also Laurier & Philo, 2007), public houses (pubs) and literary salons became the location for the discussion of public matters among members of the public. The bourgeois public Habermas writes about consisted only of men, and only of men belonging to a rather small elite within the bourgeoisie. It is interesting to note (and has been a point of criticism; Fraser, 1990) that issues of representation do not call into question the publicness of the public sphere for Habermas. Even though the bourgeois men forming the public sphere debate matters of their own interests, they treat them as public because they are shared. This already hints at the different meanings of the word 'public' – here meaning 'pertaining to a common good or shared interest' (Fraser, 1990, p. 71) – which I will discuss below. Another critique relates to the places where the public sphere meets: coffee houses, pubs, and literary salons were far from public in the sense of the word it often has in common parlance, i.e. they were neither accessible to all, nor publicly owned.

Habermas's model of 'the public' is based on communication. 'The public' is first and foremost a discursive public sphere and even though co-presence, i.e. being in the same place at the same time, and interaction are important for discursive practices, Habermas was less concerned with the places in which the public formed and sustained itself.

In what ways is Habermas's work still relevant for the debate on public space? One of the greatest merits of his work is to point out that the public is not a 'natural' feature of society, and that therefore also its composition is not in any way predetermined, but subject to the norms and values of a particular place and time. It also becomes apparent that the public sphere can be public and exclusive at the same time. Habermas stated that 'the public' in his work is an ideal type. His aim was not to provide an ideal model for reality that we should aim for, but to pursue an ideology-critical approach (Habermas, 1962/1990, pp. 33–34).

Nevertheless, this idea of ‘the public’ has been influential in the public space debate as public space was sometimes treated as the ‘spatial equivalent’ of the public sphere in the ‘liberal model’⁷ of public space (Iveson, 1998, p. 26). This conflation of the public sphere and public space is problematic for a number of reasons, not least because it proves to be less inclusionary than it may seem at first glance (Fraser, 1990), and because it neglects the movement between the (not always clear-cut) public and private domains (Sheller & Urry, 2003).

Apart from the liberal model, Iveson (1998) identified three other models of public space that serve as ideal types of ‘good’ public space – the ceremonial model, the community model, and the multi-public model (see below). The reason for this ambiguity in defining public space lies in the numerous meanings the word ‘public’ can take. Fraser (1990, p. 71) distinguishes six different meanings: public can mean ‘state-related’, ‘accessible to everyone’, ‘of concern to everyone’, ‘pertaining to a common good or shared interest’, and it is also used as opposed to private in the sense of ‘pertaining to private property in a market economy’, and ‘pertaining to intimate domestic or personal life’. Others have identified different dimensions of meaning of the word public, to which I will turn later (e.g. Latham & Layton, 2019; see Section 2.2.4).

In the ceremonial model (Iveson, 1998, p. 22), public space is closely connected to state ownership (i.e. to the meanings ‘state-related’ and ‘of concern to everyone’). It is the site of formal gatherings and celebrations of victory or traditions, but also the site of protest. In this model, public space is mainly defined by its representative, civic purposes that ensure the functionality of democracy.

The community model (Iveson, 1998, p. 23), on the other hand, puts less weight on the legal status of a space and concentrates on the meaning of public as pertaining to the common good and the flip side of private, domestic life. In this model, public space is defined by ‘its ability to foster or house community’. ‘Good’ public space enables a thriving public life for the (local) community and is sometimes even qualified by its capacity to induce a vibrant public life.

Lastly, the multi-public model of public space has originally been put forward by Young (1990). It connects to Habermas’s idea of the public, but replaces ‘the public’ with several publics within the same public sphere, also consisting of counter-publics that contest the hegemony of the dominant public. This model accounts for the differences between the publics, even though Iveson insists on there being ‘different kinds of difference’, e.g. inequalities in the distribution of economic resources to which mere recognition is not an adequate response (Iveson, 1998, p. 29). Furthermore, he criticizes the model for its container perspective: it suggests that the

⁷ The liberal model of public space regards those spaces that are accessible to all, and in which people come together to take part in public life regardless of their different backgrounds as desirable (Iveson, 1998, pp. 25–26).

various publics exist independently from public space, neglecting the role public space might have in the formation of the public by which Iveson hints at a more relational view of space (see Section 2.1) and the complex interactions between space and its public(s) (Iveson, 1998, p. 30).

Even though the debate has moved on, the ideas and models presented above are crucial in understanding the tensions and the sources of pressure on public space as discussed in the next section (2.2.2), because they (and other urban theorists not discussed here) have contributed to the idealization of public space and to the romanticization of encounters taking place in them. To summarize with Amin (2008, p. 6), they claim ‘that the free and unfettered mingling of humans in open and well-managed public space encourages forbearance towards others, pleasure in the urban experience, respect for the shared commons, and an interest in civic and political life’. While in reality, the democratic function of public space is supposedly ‘modest’ (Amin, 2008, p. 8), other lines of thought emphasizing the importance of public space for contemporary societies have been developed. This will be discussed in the next sections (2.2.3 and 2.2.4).

2.2.2. Sources of Pressure on Public Space

In the last fifty years or so, numerous authors have pointed out that public space is under pressure from various phenomena and processes. While there are too many to discuss them all here, I will concentrate on the most important ones in light of the research question of this thesis (for an exhaustive review, see Carmona, 2010a).

Privatization

Perhaps the most famous call for attention is Sennett’s *The Fall of Public Man* (1977/2002). Roughly speaking, the central thesis of his book states that, due to the rise of capitalism and the secularization of society, modern societies have shifted towards intimate societies, which he defines as follows:

‘In an intimate society, all social phenomena, no matter how impersonal in structure, are converted into matters of personality in order to have a meaning. Political conflicts are interpreted in terms of the play of political personalities; leadership is interpreted in terms of "credibility" rather than accomplishment. One's "class" seems to be a product of personal drive and ability rather than of a systematic social determination.’ (Sennett, 1977/2002, p. 219)

Because of this shift to intimate society, contemporary cities lack an impersonal culture of encountering unknown others in public, a process whereby no less than the ‘essence of urbanity’ is at stake, namely ‘that men can act together, without the compulsion to be the same’ (Sennett,

1977/2002, p. 255). While Sennett treats the spatial dimension of the public sphere more in-depth than Habermas, his argumentation is still aimed at the public sphere in general, not public space.

Nevertheless, his hypothesis of the erosion of public man points to one category of processes that endanger the functioning of public space regardless of which model of public space (see Section.2.2.1) is used: the privatization of public space. Sennett (1977/2002) is perhaps the best-known author who discusses the changes in behaviour in public that essentially lead to a privatization of behaviour, but more recent literature discusses the role of mobile phones and other means of communication in shifting and perhaps eroding the boundaries between the public, the private, and even the intimate (Hatuka & Toch, 2016; Koch & Miles, 2021; Sheller, 2004). This kind of privatization is complemented by a (supposed) fear of people's increased retreat into 'domestic, third⁸, and virtual space' (Carmona, 2010a).

Other forms of privatization in public space are 1) the commodification of public space, and 2) urban development activities that are increasingly carried out by private actors instead of the public sector (Carmona, 2010a; Selle, 2004).

The commodification of public space, i.e. the selling or renting of public space for commercial purposes, has many faces. Outdoor seating areas of cafés and restaurants are commodified public space, and may be problematic because they are exclusionary consumption spaces (nevertheless, they also have their benefits, see Section 2.3), and the same goes for space that is rented out for sales or advertising (Carmona, 2010a), or for events, a phenomenon that is discussed under the term 'eventification' (A. Smith, 2015).

Fears of the second form of privatization, privately managed urban development processes, have emerged in the United States, but also pertain to the context of Europe (De Magalhães & Freire Trigo, 2017; Gomes, 2020). It refers to the tendency of corporations to provide public space (even if not publicly owned), and to be involved in the maintenance and management of publicly owned public space, i.e. through the provision of private security services. Private companies also enter the domain of public space in public-private partnerships for urban regeneration, as for example in Business Improvement Districts which primarily serve the companies' own interests instead of the common good (Shaw, 2015; Valli & Hammami, 2021).

⁸ 'Third places' refer to spaces outside of home ('first place') and work ('second place'), such as cafes, parks, or community centers, where individuals come together for social interaction, relaxation, and community engagement (Oldenburg, 1999).

Disabling, Controlled, and Gentrified Public Space

There are other causes for concern in light of public space and diversity in public space more specifically. First, there is the fact that many spaces are disabling, i.e. physically not accessible for the disabled, older people, or those temporarily less mobile because of heavy bags or because they are pushing a pram (Carmona, 2010a; Kern, 2020). Second, there is a tendency to attribute different activities and uses – sometimes even different communities or sociodemographic groups – to different spaces, resulting in spaces that, speaking with Lofland (1998), are ‘parochial’⁹, not public. A third cause for concern is the trend towards more surveillance and control in public space, i.e. spaces that are more heavily monitored by CCTV, policing, private security (Klauser, 2007; Piñeiro et al., 2023), and stricter rules on what is possible and desirable in public space – and what is not. The latter is exemplified by ‘soft policies of exclusion’, i.e. attempts both from the state (Thörn, 2011) and the private sector (Allen, 2006) to control the atmosphere and pre-define practices and experiences people may have in these spaces. Fourth, public space is seen as threatened by gentrification. A ‘cleaning up’ of public space is often accompanying the upgrading of neighbourhoods, thereby displacing all those that do not fit into the brushed new image of the neighbourhood (Pennay et al., 2014). In a process that is called ‘green gentrification’ or ‘environmental gentrification’, the upgrading or creation of green public space might contribute to (housing-related) gentrification or be the result of increasing demand for green spaces by gentrifiers (Pearsall, 2018; Rigolon & Collins, 2023).

Unfortunately, literature dealing with the extent to which these fears about the state and the future of public space are relevant to the context of Switzerland is scarce (for a stock-taking of public space in London, see Carmona, 2015). Litscher (2013) shows that there is indeed a tendency for more control and policing in public space. For the other trends, it can only be assumed that they exist in Switzerland as well, at least as general mechanisms of exclusion (e.g. through physical barriers or compulsory consumption) that potentially influence the co-presence of different people in public space.

Densification

Densification, a source of pressure not discussed so far, undoubtedly pertains to Switzerland as well. Switzerland aims to densify its towns and cities to ensure a more sustainable development (ARE, 2016), and this will lead to more compact cities (Rérat, 2012). Compact cities have many ecological benefits, as for example reduced carbon emissions due to shorter trips and a more

⁹ The parochial realm is characterised by a ‘sense of commonality among acquaintances and neighbours’ (and co-workers, etc.), as opposed to the public (the domain of strangers), and the private (the domain of intimate or primary ties; Lofland, 1998, p. 10).

efficient land use, meaning there is more land for agriculture or the protection of natural environments (Bibri et al., 2020). In other aspects, compact urban environments are sometimes perceived less positively: they are occasionally thought to be linked to stressful high-density living and lower liveability – the so-called ‘compact city paradox’ (Neuman in Mouratidis, 2018, p. 2409). Empirical evidence is scarce, however; instead, shorter trips have been shown to contribute to liveability in compact cities (Mouratidis, 2018). In the words of Ray LaHood, US Secretary of Transportation, the definition of liveability almost reads as a description of a compact city: ‘Liveability means being able to take your kids to school, go to work, see a doctor, drop by the grocery or post office, go out to dinner and a movie, and play with your kids at the park – all without having to get in your car’ (Ray LaHood, quoted in Gehl & Svarre, 2013, p. 70).

As is evident from this quote, easy access to parks and other types of public open space is one of the factors that contribute to liveability in compact cities. There could be a trade-off in densifying cities, however, as increasing building density might occur at the expense of open public space. Creating and preserving existing green spaces are therefore at the core of compact city policies regarding public space (Bibri et al., 2020). If they exist, green spaces like parks, but also squares (which are not necessarily green) have been shown to raise the liveability of compact areas in the metropolitan area of Oslo (among other factors such as ‘safety, [...], limited noise, traffic and litter and limited social inequalities between and within neighbourhoods’, Mouratidis, 2018). Some authors, however, find that per capita green space is low in compact cities (Haaland and Konijnendijk van den Bosch in Tappert et al., 2018, p. 71).

Yet there is also evidence that besides availability, the quality of public space is decisive for liveability. Public space of high quality means it is physically accessible for all, functional, safe (sufficient lighting, prevention of crime, well-maintained, etc.), comfortable (seating, shade, water fountains, etc.), and aesthetically pleasant (Carmona, 2010a; Gehl, 2010). A study that compares determinants of neighbourhood happiness in Oslo and Thessaloniki finds local green amenities such as parks and trees are associated positively with neighbourhood happiness in Oslo, but no significant effect is found in Thessaloniki (Mouratidis & Yiannakou, 2022). The authors suspect that there is no positive effect in Thessaloniki because parks might be less well maintained and perceived as less safe than parks in Oslo.

On the level of spatial planning and urban design, there is evidence that decreasing public open space is not a logical consequence of increasing building density. Rather, urban renewal that aims to densify urban areas can also be an opportunity to create new public open spaces and to de-seal existing spaces (i.e. removing impermeable materials like concrete and asphalt in order to mitigate the effects of climate change; Wellmann et al., 2020). If infill development is cleverly combined with measures for de-sealing, densification may be accompanied by the

greening of urban areas. This has been shown to be the case in Berlin (Wellmann et al., 2020). Also in Denmark, roughly half of the neighbourhoods in the country saw an increasing or a stable population *and* increasing vegetation in the time period from 1995 to 2016 (Samuelsson et al., 2021).

Densification remains a source of pressure on public space even though the relationship between public space and the liveability of compact cities can be assumed to be positive (provided the former is of high quality), because governments face the challenge of densifying cities *and* enhancing public space *and* greening cities simultaneously. This is all the more challenging given that there is a growing call for public space to be not only abundant and ‘good’, but also ‘just’ and fostering social cohesion (Aelbrecht et al., 2019; Low & Iveson, 2016). As this aspect of public space is very closely connected to the topic of diversity in public space, it is discussed separately in the following section.

2.2.3. Justice and Social Cohesion in Public Space

Various aspects of public space touched upon so far already point to ways in which public space can be unjust. Disabling spaces are not accessible to a part of society (Section 2.2.2). Policing can drive out those fearing contact with the police: people of colour, homeless, youth, to name only a few (Section 2.2.2). On the other hand, it might reduce fear of crime, and thus make the space more accessible, in particular to women, who have been shown to avoid certain places (Kern, 2020; Valentine, 1989). People with no citizen rights might have no say in the design of public space and the affordances it provides and thus may find the spaces less appealing to their taste (Section 2.1.2). In underprivileged neighbourhoods, high-quality public space (i.e. safe, comfortable, etc.) might not even be available (2.2.2).

Given these examples, it is clear that justice in terms of public space is not merely a question of an even distribution of a (potentially scarce) resource. Israel and Frenkel (2018) propose a framework in which justice can be applied to spatial contexts. They link socio-spatial structures and personal characteristics in the notion of ‘capabilities’. It is important to note that capabilities are not to be considered as purely individualistic, but as hinged on the opportunities and restrictions imposed by the built environment and social norms. This is reminiscent of the concept of affordances, linking the built environment with a person’s dexterity, one of the conditions of affordance (see Section 2.1.3). In Israel and Frenkel’s framework, the greater ‘a person’s capabilities and his liberties to be and to do’, the more just a spatial context is (Israel & Frenkel, 2018, p. 648).

This framework is helpful in understanding the five propositions for more just urban public spaces by Low and Iveson (2016). They suggest that five processes – all enhancing a person’s

capabilities 'to be and do' in public space – can serve in evaluating public space and in interventions aiming at more just public space. In their words, making public space more just can happen through 'processes that seek to redistribute resources, recognize difference, foster encounter/interaction, establish an ethic of care and ensure procedural fairness' (Low & Iveson, 2016, p. 12). I will discuss the five processes (or types of justice) only partly, namely in those aspects that are important with regard to diversity.

Firstly, distributional justice is, in terms of public space, a matter of accessibility on a larger urban scale – does a city provide access to public space to all people, regardless of their socio-economic status, i.e. even in less well-off neighbourhoods? Just public space should also be affordable to all. This might be restricted if access costs, or if the use of a public space is tied to consumption (e.g. shopping malls, or extensive occupation of space by sidewalk cafés; Low & Iveson, 2016, p. 17). People who cannot afford to consume are excluded from these spaces, and diversity is reduced.

Secondly, justice in terms of recognition is based on 'the norms of use and behaviour that are entrenched in the provision and regulation of public spaces' (Low & Iveson, 2016, p. 18). Some identities, lifestyles or behaviours are objects of intolerance (Bannister & Kearns, 2013), and people's reaction to them, or even formal regulations, may make them feel out of place. People experiencing homelessness (Popovski & Young, 2023), or certain practices of alcohol drinking (Townshend & Roberts, 2013) might come to mind immediately, but the same process is also at work in more subtle ways, e.g. by denigrating 'the sights, sounds, smells and practises associated with some migrant groups' (Low & Iveson, 2016, p. 18). When some people feel out of place and retreat from certain spaces, this decreases the user diversity.

Thirdly, interactional justice refers to the respectful, civil encounters and interactions between users in the case of public space. Only when this quality is given, 'urban inhabitants can establish new collective identifications with one another that are not premised on shared 'membership' of a group, but on shared activities and practices' (Low & Iveson, 2016, p. 19). This notion of a collective sense of sharing space directs the attention to attitudes and practices of using public space across differences. It is also essential for the concept of conviviality, which will be discussed later (Section 2.4.3).

Fourthly, an ethic of care means that the provision of 'carers', e.g. individuals who care for the space and attend to the needs of the people using it can contribute to social justice in public space in that they facilitate access to public space (thereby also increasing diversity, Low & Iveson, 2016, p. 20).

Fifthly, procedural fairness means that decisions regarding public space are made through fair, democratic processes that are as inclusive as possible. This relates to the social production

of space and the distribution of resources (wealth, knowledge, rank, and association) that can potentially give people more power in decisions about public space (Löw, 2016, pp. 179–180, see also Section 2.1.2).

The five propositions (redistribution, recognition, encounters, ethics of care, procedural fairness) identified by Low and Iveson (2016) all increase the capabilities of people using public space, or they increase the *number* of people who see themselves as having valuable options of using public space. The propositions therefore not only contribute to just public space, but also to diversity in public space.

Justice is not the only positive outcome connected to public space. There is growing awareness that public space can also contribute to social cohesion (Mehta, 2019; Peters et al., 2010). In light of ‘a series of structural changes caused by globalization, neoliberalism and rising social and cultural diversity’ (Aelbrecht et al., 2019), social cohesion is seen as eroding (Gijssberts et al., 2012; Laurence, 2011). Belonging is a key concept in this debate, as it refers to an understanding of what we belong to (a society, a city, a neighbourhood) and with whom we share these feelings (Blokland et al., 2022; Huizinga & van Hoven, 2018; Visser, 2020). Public space has an important role in providing a specific place to which these feelings of belonging can be tied to, and in offering spaces in which people can get a sense of the others with whom they share the spaces, and the feelings connected to them (Peterson, 2023).

It has long been recognized that the design of these spaces can foster sociality and connections between people (Gehl, 1971/2011; Whyte, 1980/2010). This strand of thought will be further developed in a separate section (2.3). Before that, however, the next section explores the characteristics of places that support sociality, shedding light on public space as social infrastructure.

2.2.4. Public Space as Social Infrastructure

Social infrastructure is a term that has been used as early as the 1960s but gained traction from 2010 and onwards (Joshi & Aldrich, 2022). The term lacks a standard definition: it is sometimes used to refer to social ties, and sometimes to physical places related to domains as diverse as healthcare, education, housing, and transport, or to ‘networking spaces’ (Joshi & Aldrich, 2022). In this thesis, social infrastructure is used in line with the latter category, i.e. as a term for physical spaces that facilitate civic life, different types of sociality, and connections between people (Klinenberg, 2018; Latham & Layton, 2022). Parks, libraries, sidewalks, swimming pools, the facilities of community organizations, public transport, schools, and many other types of shared or public spaces can be subsumed under social infrastructure because they ‘invite people

into the public realm' (Klinenberg, 2018, p. 16) and make life in cities more liveable (see the discussion on compact cities in Section 2.2.2).

In some way, all social infrastructure is public – to varying degrees, and in different dimensions of the word 'public'. Adding to the six meanings identified by Fraser (1990) and discussed in Section 2.2.1, 'public' can also refer 'to the idea of being out amongst other people' (Latham & Layton, 2019).¹⁰

The concept of social infrastructure therefore provides an approach to public space that focuses less on its contributions in developing civic virtues and democratic functions discussed above (Section 2.2.1), but more on the mundane, everyday aspects of public space. It is, at its heart, an approach to public life (see Section 2.4) connecting the material base of sociality and the practices of using places of social infrastructure (Latham & Layton, 2019, 2022). This by no means downplays the political function of public space, but it is a perspective that is sensitive to everyday life (de Certeau, 1988; Jones, 2018).

Important to note here is that social infrastructure not only refers to places that foster meaningful contact which may create respect for difference (e.g. cultural difference; Valentine, 2008), but also refers to places which support all kinds of sociality. In a study on Finsbury Park, in London, Layton and Latham (2022) identify six registers of sociality which social infrastructure provides opportunities for: co-presence, sociability¹¹ and friendship, care and kinship, kinaesthetic practices, carnivalesque and collective experience, and civic engagement. Without romanticizing encounters (a view that is shared by the concept of conviviality, see Section 2.4.3), social infrastructure can nevertheless provide fleeting encounters that turn into 'micro-connections' that can turn into 'a sense of familiarity with difference, a feeling of connectedness and shared emotionality with others and a notion of belonging across scales' (Peterson, 2023, p. 75) and that thus contribute to social cohesion (see Section 2.2.3). Attending to different kinds of sociality also provides a more nuanced picture of public space because even though most forms of sociality are generally fulfilling, some manifestations may also exclude people (Middleton & Samanani, 2022, p. 797).

For the research questions treated in this thesis, social infrastructure is a very useful concept for two reasons. First, it provides a way of seeing specific places – in this case, public squares – as settings that facilitate co-presence, i.e. the sharing of space over time by people from different

¹⁰ This meaning is related to what Fraser's (1990, p. 71) defines in opposition to 'private', i.e. 'pertaining to intimate domestic or personal life'.

¹¹ Although 'sociability' has a similar meaning to 'sociality', there is a subtle difference between the two terms. According to the Oxford English Dictionary, both can be used to denote the state or quality of being sociable. However, 'sociality' refers to the quality, nature, and organization of social interaction within a group or a society, while 'sociability' is defined as an individual's tendency to engage (and enjoy) social interactions.

social backgrounds or demographic groups. This is an important aspect of public life even if no political claims are made, simply because it provides the ‘thin sociality’ (Bodnar, 2015) that could develop into strong ties (Felder, 2020b) but that first and foremost serves as a way of getting a glimpse of the others who are part of the same neighbourhood.

The second reason for which social infrastructure is important to this research is that social infrastructures are important assets of a neighbourhood. Naturally, questions of distributional justice arise: is the provision of social infrastructure evenly distributed across all neighbourhoods of a city? And, crucial when studying diversity in public space: does everyone feel equally entitled to use social infrastructures, or are they in some ways exclusionary for certain people? These questions provide the point of departure for reflections made in the third article (Chapter 7) where the ‘diversity gap’ between neighbourhood populations and users of public squares is explored.

To do justice to the relational approach of the social production of space employed in this thesis, the next section (2.3) is dedicated to the built environment and how it relates to diversity, before turning to literature that explores public life in public spaces in the section that follows (2.4).

2.3. Public Squares as Built Environment

As explained earlier in the discussion of affordances (Section 2.1.3), the built environment of a public space and the possibilities it offers to users are closely connected. In this section, I will situate the specific type of public space studied here – public squares – within design literature. In view of the design analysis of the three selected squares (see Chapter 4), I then focus on the idea of responsive environments (Section 2.3.2), and of programming (2.3.3).

2.3.1. Squares and Typologies of Public Space

Let us consider public squares and how they fit into typologies of public space. Typologies try to create order among the different forms of public space. We all intuitively know the difference between a park, a square, and a street, but things quickly get messy when business parks, street corners, and promenades are considered. Typologies therefore usually deploy morphological criteria for classification, such as basic geometric shape, or building types surrounding public space, or they adopt a more functional approach that categorizes public space according to what people do in them. Other classifications use criteria such as ownership or accessibility, and in practice, most use more than one set of criteria, e.g. combining form and function (Carmona, 2010b; Lee, 2019). Typologies serve research purposes, but are also important tools for

management, maintenance, and planning. I will discuss the system of categorizing public space developed by the City of Zurich separately (Section 4.2).

Squares and plazas are one functional type of public space that is characterised by its rigid boundaries (or ‘enclosure’), and a public purpose (Lee, 2019). Similarly, in Carmona’s (2010b, p. 169) classification, squares count as civic spaces, i.e. ‘the traditional forms of urban space, open and available to all and catering for a wide variety of functions’. Wolfrum (2015) develops an extensive system of categorization for squares based on morphological qualities, functions and programmes, performative potential, etc. While it is too detailed for the scope of this thesis, its list of functions of public squares is very comprehensive and useful (Wolfrum, 2015, pp. 10–11). The most important functions of public squares are summarized here:

- Meeting: meeting friends or acquaintances, by chance or arranged
- Gathering: social and political activities, e.g. protest, demonstrations, ceremonies, celebrations, cultural events
- Relaxation: providing retreat from hectic streets and busy lives
- Scene: seeing and being seen, promenading
- Strolling: walking through/in the square
- Representation: the square itself, buildings or onuments in the square can have symbolic meaning and be representative of institutions, historical events, people, etc.
- Trade: in and on the edges of the square, commercial activities can take place (markets, shops, cafés, etc.)
- Movement: squares can be transport nodes, and/or important elements in a pedestrian network

2.3.2. Responsive Environments

In the design literature, considerable effort has gone into identifying the design characteristics that foster public life and sociality, e.g. in the seminal writings of authors like Gehl (1971/2011) and Whyte (1980/2010), but also in more recent works (Aelbrecht, 2016; Ganji & Rishbeth, 2020; Ridings & Chitrakar, 2021; Rishbeth & Rogaly, 2018). There is a broad consensus that good public space is designed in a way that responds to the needs of its users, thereby making it attractive to be, to see and meet others, and perhaps interact with them, all of which contributes to social cohesion (Aelbrecht et al., 2019; see also Section 2.2.3). Discussing all the elements and principles supporting sociality would go beyond the scope of this thesis. Nevertheless, I discuss the seven principles of responsive environments – permeability, variety, legibility, robustness, visual appropriateness, richness, and personalization (see Figure 2) – as identified by Bentley and

colleagues (1985). I use the same principles in the design analysis of the squares selected for empirical work (Chapter 4).

Addressing the responsiveness of environments means paying attention to ‘the choices people can make’ (Bentley et al., 1985, p. 9; note the similarities to the concept of spatial justice; Section 2.2.3). Employing the concept of affordances (Section 2.1.3), high responsiveness would correspond to a wide range of positive affordances in a place and the absence of negative affordances, and, conversely, low responsiveness would mean a narrower range of positive affordances and the presence of negative affordances. I will briefly discuss what the seven principles of responsive environments mean in relation to public squares, with a special focus on elements that relate to diversity.

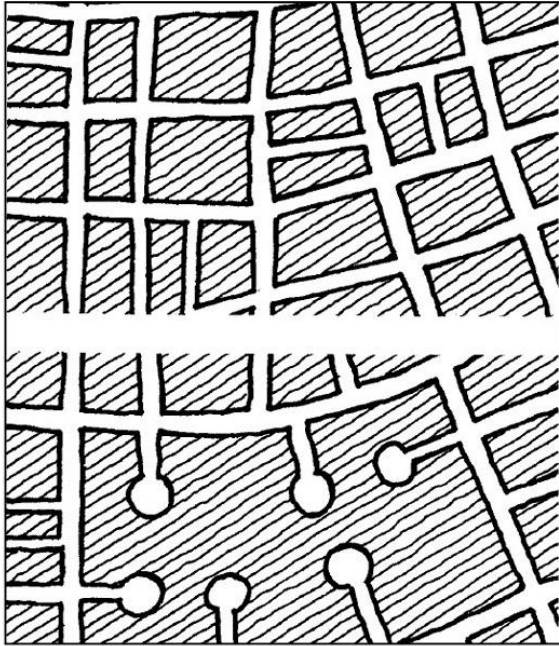
- Permeability: In order to offer choice, places need to be accessible. Permeability refers to the number of alternative ways through an environment. Physical permeability is not the same as visual permeability: some routes might not be easily discernible. Ideally, physical and visual permeability coincide. Permeability also relates to the interface of public and private spaces, and it is enhanced by locating numerous entrances to private buildings on the edges of public spaces (instead of only one, or instead of placing them at the rear side).
- Variety: Responsive environments should offer a wide range of experiences, and this is achieved through a variety of land uses, building types, building fronts, ground floor uses, activities, and people. The connection to diversity is obvious: while the variety of people is at the heart of the research questions of this thesis, the other elements, notably the variety of activities offered by a space, will influence the diversity of people.
- Legibility: Responsive means the environment should be easily graspable. The design should facilitate getting a sense of its form and the activities that take place within it. The key elements of legibility, nodes, edges, paths, districts, and landmarks have been identified by Lynch (1960/1971). In the case of squares, internal legibility is important, primarily given by edges, nodes, and landmarks.
- Robustness: This is a key principle when looking at diversity in public space. Robust environments are suitable for various purposes, and not just for one predetermined use. The more robust a space is, the more likely it is that it appeals to a wide range of people. For public open spaces, this primarily means activating the space with different activities. Animated edges contribute to robustness and can be achieved through

outdoor seating areas¹², display areas for shops, and seating along the edges (which offers prime spots for people watching). Animating the central parts of a space is also key. Therefore, Bentley and colleagues (1985, p. 73) suggest providing enough seating, at least 30 centimetres for each 3 square metres of open space. Other aspects of robustness relevant for public squares include an appropriate microclimate, and (not mentioned by Bentley et al.) public toilets that increase the number of people able to participate in public life for longer periods of time, notably women, older people, and children (Kern, 2020; Molotch, 2012).

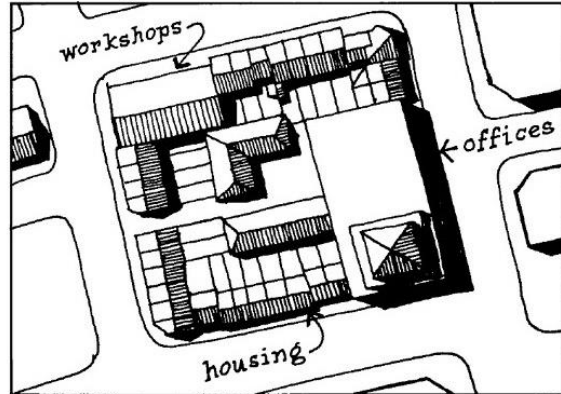
- Visual appropriateness: This principle refers to the appearance of spaces. When environments provide visual cues that support the legibility of form, function, and urban context, they are more responsive. In a square, for example, demarcations on the ground might signal that it is also used to hold markets.
- Richness: Responsive environments provide a wide variety of (pleasant) ‘sense-experiences’. In the case of public squares, this will most likely refer to the senses of vision, hearing, and touch. Their design may offer or contribute to visual contrast, a richness of surface textures, and a nice soundscape (for which usually water is a crucial factor mitigating traffic noises, Trudeau et al., 2020).
- Personalization: In general, responsive environments should offer possibilities to personalize them according to the tastes of the users. Acts of personalization can either practically improve a place or change its image. In public squares, personalization is not straightforward since users never own the squares. Also, most people do not stay very long in public squares and might therefore not feel like personalizing them. Nevertheless, personalization does happen (see Chapter 4), primarily by residents of the adjacent buildings whose stakes in the square are higher. It should be taken into consideration that in public settings, personalization can also be exclusionary (see Chapter 6).

¹² Sidewalk cafés have been mentioned as part of the problem of commodification of public space (Section 2.2.2). They are undoubtedly caught in the tension between animating a space and making it less affordable and accessible through privatisation and should thus not be regarded as a universal key to ‘good’ public space.

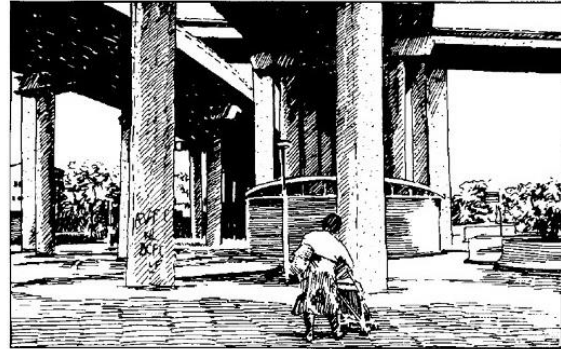
1) Permeability



2) Variety



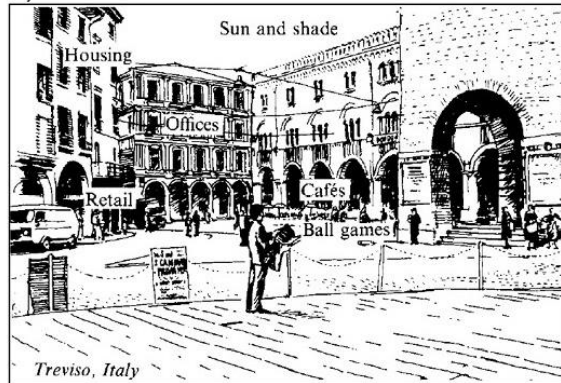
3) Legibility



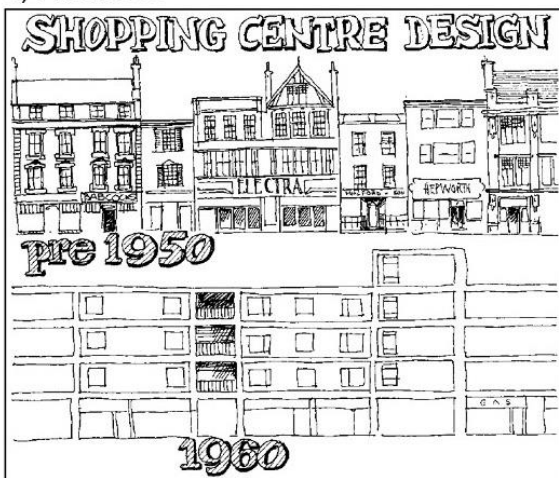
5) Visual appropriateness



4) Robustness



6) Richness



7) Personalization



Figure 2: Sketches illustrating the seven principles of responsive environments. Source: Bentley et al., 1985, pp. 10, 11, 43, 56, 76, 90.

2.3.3. Programming Spaces

Public space design can take different approaches in shaping the affordances of a space. In cases of public spaces that were designed specifically with the aim of fostering social cohesion in ethnically diverse, low-income neighbourhoods, Aelbrecht, Stevens and Kumar (2021) identify three different approaches: a symbolic, a programmatic and a minimalist approach. While the symbolic approach tries to create social cohesion through the use of spatial elements representing different cultures (as in Superkilen, Copenhagen; Aelbrecht et al., 2021; see also Daly, 2020), the programmatic approach uses a programme of activities designed to spark encounters and interactions between different groups and individuals (as in Afrikaanderplein, Rotterdam; Aelbrecht et al., 2021). The minimalist approach takes advantage of the fact that designs that are not predetermined for specific activities or users can be more easily appropriated by a wide range of users (as in Gillett Square, London; Aelbrecht et al., 2021).

Programming can refer to planned events and activities that take place within a space (concerts, street festivals, markets, funfairs, children's activities, etc.; A. Smith et al., 2023), but it can also be intended to mean the affordances of the spatial environment (e.g. Daly, 2020). What is common to both views is the idea that uses and activities can be prescribed, either via organizing animation or via inscription into the design of the space. The latter is reminiscent of the inscription-prescription perspective (Akrich, 1992), according to which designers embed their expectations of how users will or should use an environment into the design, which then 'prescribes' the designers' intentions to the users (Kim, 2017).

As programming can specifically attract minorities and vulnerable groups, it may be a useful tool to make public spaces more inclusive (D. A. Smith et al., 2020). There is, however, the danger of over-determined programming, sometimes also called closed programming, which can again reduce the diversity of users because it targets only some groups, or because it hinders 'the discovery of the unexpected' (Franck & Stevens, 2007, p. 4).

Its opposite, the minimalist approach, consists of less determined, more open programming. It can also contribute to diversity as it remains open (and responsive, see above) to many different uses and users. In an empirical study on intercultural encounters in the square Superkilen in Copenhagen, Daly (2020, p. 81) comes to the conclusion that spaces with the aim of fostering intercultural encounters are best planned with a mix of open and closed programming: '[...] closed or overdetermined programming proved more successful by focusing on the shared commonness of playing and eating. However, the findings also suggest that open programming limits territorialization, enabling specific groups, such as Muslim women, to occupy public space more easily.'

At its core, programming public space is the idea that the public life of public space (or any other space) can be stimulated, maintained, or steered in a certain direction (e.g. regarding its users or activities). Literature on how the design of public space affects the diversity of users and the experience of sharing space with others remains relatively scarce, however. With the fourth and transversal research question (How does public space design shape diversity in public squares?), this thesis contributes to filling this research gap.

The next section will delve into seminal literature on public life, and then go on to discuss two more recent approaches to public life that guided the empirical analysis, geographies of encounter and conviviality.

2.4. Public Life and Encounters

2.4.1. Public Life

Public life could be simply defined as the human activities for which public space is the container. However, we know from experience that in some cases, public space ‘does not work’ or feels ‘dead’, and we have also seen in Section 2.2.2 that changes in behaviour that Sennett (1977/2002) calls ‘the fall of public man’ threaten public life. Public life is therefore intertwined with public space and public behaviour. In this section, I review seminal works on public life that are fundamental to this thesis. Starting with Lofland and Goffman, I then turn to the works of Gehl.

Lofland’s work *A world of strangers* (1973) is essential for understanding diversity in public space and how people deal with it. Lofland observed that in modern cities, it is impossible for people to know the others they meet in the course of their day personally. They might know them ‘categorically’ if they can deduce some part of their identity based on the roles they have (e.g. a bus driver), or make a guess based on their appearance (Lofland, 1973, p. 15). However, knowledge about the other remains very limited. For this reason, most encounters in cities are encounters between strangers, i.e. ‘anyone personally unknown to the actor of reference, but visually available to him’ (Lofland, 1973, p. 18). Strangers can be biographical if we have no personal information about them, or they can be cultural, meaning they are not only unknown to us, but also belong to a different symbolic world (Lofland, 1998). These symbolic worlds may refer to different ethnic and cultural backgrounds, but also different classes or different lifestyles. In the section on diversity (2.5), we will look more closely at how these differences are increasingly important in modern cities.

Navigating a world of people who are unknown to us (and different from us) is no easy task, as early theorists of urban life have already pointed out (Simmel, 1903/2006; Wirth, 1938). It is

therefore important to ask how people live with diversity¹³, because people can retreat to more private spaces, or create home territories (see below) to mitigate the stress of encounters between strangers.

Home territories are those places where people develop a sense of connection and intimacy, and where they feel protected from the unexpected, e.g. a café where they are regulars. Public spaces are thus made into more parochial spaces, i.e. spaces that are characterised by communal relations (Lofland, 1998, p. 10/14). To shield themselves from interacting with strangers, people can also choose to be in groups ('travelling packs', Lofland, 1973, p. 118).

At this point, it is useful to look at the notion of the 'familiar stranger'. Familiar strangers are strangers, i.e. personally unknown, but people whose face we recognize (Felder, 2020b, 2021). They contribute to a sense of attachment to a place which can develop into neighbourhood belonging (Blokland et al., 2022; Blokland & Schultze, 2017), although this may depend on the affluence of a neighbourhood (Méndez et al., 2021).

Let us turn back to the truly public realm and look at behavioural patterns people develop to deal with their exposure to strangers. In a number of influential publications, Goffman studied the 'public order', i.e. the observable result of a set of social norms that guide people's behaviour in public (Goffman, 1963/1969, 1983, 1971/2017). This is an important argument to keep in mind throughout this thesis: our current understanding of public space is largely based on middle-class perceptions of appropriate behaviour and of activities deemed 'possible' (Bodnar, 2015). Literature on public space as it is studied here is slightly biased in this sense, too. A mostly recreational use of public space is usually implicitly regarded as the norm (and as desirable), while other perceptions of public space get less attention. For street vendors, public space can be a place to make one's living (more common in the Global South), for unhoused people it may be a home, and for undocumented migrants a place to avoid as much as possible.

There are two other arguments in Goffman's work that are key to this thesis: First, Goffman acknowledges that the interaction order in public not only pertains to verbal interactions between strangers, but also to the seemingly insignificant act of sharing space. He calls this co-presence and defines it like this: 'persons must sense that they are close enough to be perceived [...] and to be perceived in this sensing of being perceived' (Goffman, 1963/1969, p. 17). This awareness of the other regulates behaviour even if there is no focused interaction between two or more people. Focused interaction is characterised by a single and shared focus of interaction, and to be distinguished from unfocused interaction, i.e. the 'management of sheer and mere co-presence' (Goffman, 1963/1969, p. 24).

¹³ The fourth article addresses this research question (Chapter 8).

Here lies the second argument that is important to this thesis: Goffman convincingly shows that even co-presence requires an active management of one's behaviour. Nothing exemplifies this more than 'civil inattention', whereby one acknowledges the presence of the other without showing too much attention to the other (e.g. by averting the gaze) to express that the other is not 'a target of special curiosity' (Goffman, 1963/1969, p. 84). This may seem trivial, but civil inattention is a courtesy that is not extended to all persons (e.g. to beggars, Hansson, 2023).

Such 'low-intensity contacts' are important elements of public life because they might develop into more intense contact, because they can be stimulating and inspiring, and because they provide information on the outside world (Gehl, 1971/2011, p. 15). When opportunities to see and hear others lack due to badly designed public spaces (or due to the global pandemic; Kasinitz, 2020), public life loses quality.

In the writings of Gehl, we can find an indicator of the quality of public space to support public life. Gehl distinguishes between necessary activities and optional activities. Necessary activities such as going to work, waiting for the bus, or stopping to tie one's shoelace are more or less mandatory and therefore take place regardless of the quality of the environment and the weather. By contrast, optional activities do not have to take place at a certain place or time and are therefore more likely to occur in pleasant environments – or responsive environments, see Section 2.3.2 – and good weather. When a place feels inviting and has the appropriate affordances (Section 2.1.3), people not only walk by, but stop to eat, chat, enjoy the sun, play, etc. Social activities (consisting of focused or unfocused interaction) take place when the physical environment encourages optional activities and makes necessary activities more comfortable (Gehl, 1971/2011; Gehl & Svarre, 2013). It is therefore clear that as places that support sociality, social infrastructures (Section 2.2.4) also need to be responsive environments.

While other, more detailed classifications of activities exist (e.g. Bjerkeset & Aspen, 2020), the distinction of necessary and optional activities has been of adequate depth for the analysis of the relationship between activities and conviviality in the first article (Chapter 5).

Even though the works of Goffman, Lofland and Gehl mainly date from the 1960s and 1970s, their ideas are still influential in the field of public space research. Nevertheless, there are more modern takes on public life, two of which – geographies of encounters, and conviviality – are discussed in the next sections.

2.4.2. Geographies of Encounter

Geographies of encounter is a lens for studying the dynamics and the spaces of encounters, as well as the configurations of people encountering each other and the feelings and attitudes these encounters evoke (Valentine, 2008; Wilson, 2017). Encounters always happen between 'others',

and always contain an element of unpredictability, particularly so if the ‘others’ are biographical and cultural strangers. These encounters carry the potential (Wilson, 2017) to contribute to social cohesion (Aelbrecht & Stevens, 2023), to develop into more meaningful contact (Valentine, 2008), or to foster a sense of belonging (Peterson, 2023). Wilson (2017) notes that encounters are ‘fundamentally about difference’ in that difference not only precedes encounters, but also emerges from them since without encounters, difference would not be noticed.

At its core, the approach of geographies of encounter is based on the contact hypothesis of Allport (1954; see also Landry & Wood, 2007; Piekut & Valentine, 2017). The hypothesis states that (positive) encounters between individuals from different groups can reduce prejudice and stereotypes, promote mutual understanding and foster more positive attitudes. However, Valentine (2008) warns against romanticizing encounters. She remains cautious about the potential of encounters for developing into ‘meaningful contact’, i.e. ‘contact that actually changes values and translates beyond the specifics of the individual moment into a more general positive respect for – rather than merely tolerance of – others’ and points to the possible discrepancy between people’s values and actions (Valentine, 2008, p. 325).

This ambiguity of encounters also emerges in many of the empirical studies on geographies of encounters and is also one of the reasons geographies of encounters have provided a fruitful frame of reference for the fourth article (Chapter 8). Since this strand of research is closely linked to difference and diversity, empirical literature will be discussed in Section 2.5.

2.4.3. Conviviality

Conviviality is situated within the context of geographies of encounter. The concept is about encounters across social difference (Horgan & Liinamaa, 2023) and is thus directly connected to the topic of this thesis. Etymologically, the term conviviality stems from the Latin word ‘convivialis’ for ‘pertaining to a feast’. In common parlance, it denotes ‘the enjoyment of festive society’, festivities, or merry social gatherings (Oxford English Dictionary, 2023). In its usage in urban geography, sociology, and anthropology, however, conviviality is fundamentally about cultural differences, even more so than geographies of encounter: conviviality refers to ‘the processes of cohabitation and interaction that have made multiculturalism an ordinary feature of urban life in Britain’ (Gilroy, 2005, p. xv). The concept has developed further since and has also been applied to contexts other than Britain, and to issues related to public space specifically. Common to all the authors who use conviviality in their work is its strong connection to the everyday, mundane life in contrast to research on more ‘extraordinary’ issues in public space like protests or events (Horgan & Liinamaa, 2023; Nowicka & Vertovec, 2014).

At its core (and in contrast to its use in common parlance), conviviality as it is used in urban studies is ambivalent. It always encompasses harmonious forms of sociality as well as tension and conflict, emphasizing that even if 'affectively at ease relations of coexistence and accommodation' (Wise & Velayutham, 2014a, p. 407) result, they require effort and are the fruit of constant practice and negotiation (Wise & Noble, 2016).

Important for this research is that conviviality can be applied to places (Nowicka & Vertovec, 2014; Radice, 2016). Radice (2016) provides a framework for thinking about convivial places systematically, i.e. on four layers relating to spatial practices (norms of sociability, microplaces) and to discourse (perceptions of intergroup relations, reputation). Given the scope of this research, I am particularly interested in the layers of spatial practice. 'Norms of sociability' refer to the set of codes that guide behaviour in public and as a consequence, also convivial relations, much as we have encountered them in discussing Goffman and Lofland (Section 2.4.1). By 'microplaces', Radice focuses not on conviviality on a large scale, but on that of places 'on the pedestrian scale', i.e. squares, parks, or streets: '[...] Microplaces offer resources for convivial social relations when they are accessible, heterogeneous and flexible. This means that different kinds of people can use the place in different ways, enabling social interactions of variable purpose, intensity and duration' (Radice, 2016, p. 434). Accessibility, heterogeneity, and flexibility – qualities of convivial microplaces are remarkably similar to the principles of responsive environments (Section 2.3.2). This link, particularly the link between robustness and conviviality, is explored in-depth in the first article (Chapter 5).

By referring to research on the conviviality of relations across genders, classes, or urban-rural divisions, Radice (2016, p. 436) also points out that conviviality need not exclusively be concerned with cultural diversity. In the following section which focuses on diversity (in urban contexts, and in public spaces more specifically), I will show that the prevalence of research on cultural diversity overlooks other relevant sources of difference and inequality.

2.5. A Diversity Perspective on Public Space

I have shown in the previous sections that diversity is an inherent feature of urban public life and therefore intertwined with public space in many ways. First of all, urban public space can be seen as a 'world of strangers' (Lofland, 1973) in which we are constantly faced with diversity in the form of people that are unknown and different from us (Section 2.4). Diversity is also an important part of thinking about just public space, e.g. in having access to, being represented in, and being able to actively contribute to the production of social space (Section 2.2.1, 2.2.3). Physical space is important to diversity beyond merely being evenly distributed across a city and

accessible to all. As discussed in Section 2.3, environments can be purposefully designed to foster encounters and interactions across differences. All of these aspects of diversity in public space are relevant when exploring the research questions of this thesis (What is the extent of diversity in public squares? How does a neighbourhood's diversity compare to the square users' diversity? How is diversity in public squares perceived and experienced? How does public space design shape diversity in public squares?).

This research contributes to the literature on public space and geographies of encounter by regarding diversity in many different dimensions other than cultural diversity. In the following sections, I therefore define diversity and discuss critiques of the concept, explain the link between neighbourhood diversity and diversity in public space, and review literature with similar research objectives to this work.

2.5.1. Defining Diversity

It is important to note that there are many different types of diversity that could be studied in the realm of public space: the functional diversity of ground floor uses, the diversity of uses, of building fronts, of people. Even though the focus of this research is on the diversity of people in public space (more precisely, the people using public squares, and those not using it who still live or work in the neighbourhood, see also Section 2.5.4).

Various terms are used for the cohabitation of people with different characteristics in literature. *Diversity* is usually used with a positive connotation (E. van Eck et al., 2020), resonating with common parlance where it is often also associated with (equal) representativeness and inclusion of different groups, whereas *heterogeneity* is a somewhat more neutral term (Merkel & Weiffen, 2012). *Homogeneity* would be its flip side, but especially in housing literature, it is usually *segregation* that is used. Segregation denotes the process and outcome of spatial sorting based on differences in various domains of urban life (Musterd, 2020), often rooted in systematic racial and socio-economic inequalities (Massey, 1990). Segregation is often countered by policies of *social mix*, or socially mixed neighbourhoods (Casarin et al., 2023).

In this thesis, I use the term diversity to broadly describe the social mix of people, even if this mix is not an accurate representation of society. Technically, and this is relevant when measuring and comparing diversities of different populations (as done in Chapter 7), I adopt a definition of diversity based on evenness¹⁴ (Massey & Denton, 1988). Diversity is greater the

¹⁴ Evenness is one of five dimensions of segregation, the other four being exposure, concentration, centralization and clustering (Massey & Denton, 1988). Minorities can be overrepresented or underrepresented in different parts of the city, i.e. unevenly distributed. They can also differ in their exposure to the majority. Minorities can be concentrated, i.e. having less space at their disposition than the majority, or centralized if they are predominantly found in the city centre. Lastly, areas where minorities are overrepresented may cluster together or be more scattered around a city.

larger the number of different groups and the more evenly individuals are distributed among these groups (see also Section 3.3.6).

Diversity, of course, occurs and can be analysed on any scale – whole nations, cities, neighbourhoods, or as in this research, in small squares. Especially when it comes to how people live with diversity, the scale of diversity is relevant as the acceptance, tolerance and respect for diversity might depend on it. One's social and physical detachment from diversity plays an important role in the perception of urban diversity (Nielsen & Winther, 2020), and Hall's (1966/1990) work has shown the pivotal role of distance in interacting with others (for the role of distance, see also Section 8.7). Diversity might thus be tolerable on one spatial scale, but objectionable at another (Omer et al., 2014).

2.5.2. Diversity – A Fuzzy, Ineffective Concept?

Diversity is often considered a vague term used in everyday language, research, and policy-making. It has been criticized for being a buzzword that lacks clear definition and reflection on its meaning (Ahmed, 2007; Fainstein, 2005; Lees, 2003; Vertovec, 2012). It is often associated with the promotion of diversity in organizations (private companies, administrations, universities, associations, etc.), i.e. diversity management. Its core idea is that more diverse teams perform better in terms of productivity, innovation or creativity and thus lead to higher profits or generally better outcomes (in teaching, research, sport, etc.; Salzbrunn, 2014). However, diversity has been accused of perpetuating existing inequalities and relying on essentialist categorizations rather than fighting discrimination and acknowledging intersecting and fluid identities (Lorbiecki & Jack, 2000).

One example of the debates on the use and limits of the concept of diversity is related to the work of Florida (2005). In 'Cities and the creative class', he argues that the creative class – artists, scientists, journalists, and many other professions from industries characterized by high knowledge intensity – stimulates economic growth and prefers to settle in areas of high quality of life and where a tolerant atmosphere prevails. Tolerance is defined as 'openness, inclusiveness, and diversity to all ethnicities, races, and walks of life' (Florida, 2005, p. 37). Florida connects diversity to economic growth, but he does not state that thereby diversity also promotes social equity (Fainstein, 2005, p. 12). Nevertheless, his writings on the creative class have been criticized for being little more than a marketing strategy for urban areas and implicitly focusing narrowly on higher-skilled and higher-income populations for whom diversity is merely a backdrop (Syrett & Sepulveda, 2011).

In planning, diversity is also widely used and applies not only to diverse populations, but also to functional, economic, and spatial diversification. As Lees (2003) has pointed out, diversity

often serves as an intermediary that superficially connects very different and sometimes opposing objectives. This seems to work because ‘like motherhood and apple pie, diversity is difficult to disagree with’ (Lees, 2003, p. 622). Instead of using diversity as a planning principle, Fainstein (2005) argues, cities should plan for the just city (see also Fainstein, 2014).

This ‘covering up’ of inherent contradictions by using the language of diversity is only one example of what the term diversity ‘does’. Feminist and postcolonialist theorist Ahmed (2007) provides a comprehensive discussion of other shortcomings of diversity discourses. For one, diversity fails to effectively connect to social justice (Bell & Hartmann, 2007; Fainstein, 2005) and it does not automatically involve taking action or pursuing distributive justice¹⁵. In fact, Bell and Hartmann (2007, p. 906) found that regardless of what dimension of diversity people have in mind, most people have trouble talking about diversity and at the same time addressing questions of social inequality. Moreover, Ahmed (2007) shows that the use of the term ‘diversity’ can perpetuate the view that differences are something that ‘others’ bring and ‘we’ can have, leading to a normalization of the host culture (or heterosexuality, or other ‘norms’). Connected to this argument is the critique that in the commodity cultures of the Global North, ethnicity is seen as little more than a ‘seasoning’ which spices up everyday life (see also Bell & Hartmann, 2007). Diversity language is also accused of acting as an empty phrase that allows people to feel more comfortable when talking about inconvenient issues without effectively working towards social change (Ahmed, 2007), and as a concept that is simply recording the number of individuals who are, in some regard, ‘different’ (i.e. other than the norm) which the people in question might deem offensive (Vertovec, 2012).

I am aware of the deficiencies of the concept of diversity. Nevertheless, I use the term ‘diversity’, but only in the sense of a demographic fact of a certain population, i.e. the population of square users or the neighbourhood population in the context of this research. While this in itself does not contribute to social change, it contributes to an awareness and a capacity of perceiving the issue of using and sharing public space among different people and provides a basis for reflecting not only on diversity, but on equity, diversity, and inclusion (EDI), e.g. on questions of more just public space (equity) and of making everyone’s voice be heard equally in the production of space and its affordances (inclusion).

As Vertovec (2012) acknowledges, diversity as a concept might not have a profound effect,

[h]owever, through the “diversity” corpus, even if nothing more enters the social imaginary than the prosaic perspective that “everyone is different in different

¹⁵ Distributive justice refers to a fair allocation of resources, rights, responsibilities, and discomforts among the members of a group or a society. See also Section 2.2.3 where five ‘types’ of justice are discussed.

ways, and that's OK," this will still be quite an achievement, marking the age of diversity.' (Vertovec, 2012, p. 309)

Being co-present and aware of others is a precondition of developing this 'prosaic perspective'. Studying diversity in public space, like in this thesis, may thus contribute to a better understanding of where, how, and between whom this perspective may develop.

2.5.3. Super-diversity, Hyper-diversity, and Intersectionality

The topic of diversity dates back to the beginnings of urban studies when authors like Wirth (1938) explored the residential patterns of different groups, particularly those of foreign-born urban dwellers. Migration, internal and international, is and has always been vital for cities. It is therefore not surprising that migration and the resulting cultural diversity of cities is a key topic among policymakers and researchers in the 21st century as well. In their book *The Intercultural City*, Landry and Wood (2007, p. 11) argue that there is a 'diversity advantage', 'available from the creative power of heterogeneity and dissonance' which cities could and should exploit – an argument that is less intuitive in Europe than in nations based on immigration like the United States and Canada. In their view, too, the openness of public space is one of the indicators of the general openness of a city (Landry & Wood, 2007, p. 303).

It has been pointed out, however, that looking at ethnicity or country of origin only is insufficient in capturing migration in Britain (and this is true for other contexts as well, (Schneider & Heath, 2020). Vertovec (2007, p. 1025) coined the term 'super-diversity', with a specific aim in mind, namely

'[...] to underscore the fact that in addition to more people now migrating from more places, significant new conjunctions and interactions of variables have arisen through patterns of immigration to the UK over the past decade; their outcomes surpass the ways in public discourse, policy debates and academic literature that we usually understand diversity in Britain.'

Super-diversity recognises that contemporary migration patterns result in a variety of intersecting characteristics (ethnicity, language, religious tradition, regional and local identities, cultural values and practices, as well as immigration status, human capital, access to employment, etc.) that are important factors in shaping inequality, prejudice, segregation, encounters, and integration (Vertovec, 2007, pp. 1045–1049). Intersectionality is an important feature of the concept, since it addresses the way in which discriminatory processes are at work at the interaction of two or more characteristics (Großmann et al., 2019).

In an effort to take the concept of super-diversity a step further while retaining the intersectional approach, Tasan-Kok and colleagues (2014) propose the term ‘hyper-diversity’. They underline that even though immigration is an important source of diversity, it is not the only one (Tasan-Kok et al., 2014, p. 12). They suggest adding the dimensions of ‘lifestyles, attitudes and activities and relationships between individuals and diverse groups’ to the toolbox of diversity research and policy (Tasan-Kok et al., 2014, p. 19). This further reinforces the idea that the dichotomy of natives/foreigners does not sufficiently capture horizontal differentiation existing within both groups (and within any other population groups; van Eijck, 2011). Horizontal differentiations are important dimensions when it comes to the question of how diversity manifests itself in urban space (see next section).

Hyper-diversity is a key concept of this research insofar as it takes into account various other dimensions of diversity that go beyond dimensions that could be subsumed under cultural diversity. The approach of this thesis is very open – in principle, any characteristic can be of relevance if it is perceived as being a noticeable difference (see Chapter 8 in particular). This is also motivated by the attempt to lessen issues of ‘social markedness’ (Brekhus, 1998). According to Brekhus, there is a tendency to socially ‘mark’ one side of a social contrast or a categorization in everyday life as well as in research. The ‘marked’ is usually above or below the norm, the extreme, the problematic, whereas the unmarked ‘represents the vast expanse of social reality that is passively defined as unremarkable, socially generic, and profane’ (Brekhus, 1998, p. 35). Because the ‘marked’ attracts disproportionate attention also in research, researchers may perpetuate markedness despite the best intentions to counteract prejudices and stereotypes. This thesis therefore also attends to differences less marked than culture (e.g. age) and allows for the possibility that diversity altogether is unremarkable. I discuss this further in Chapter 8.

2.5.4. Diversity in Space: Between Social Mix and Segregation

Usually, a city’s population is not dispersed evenly across its districts and neighbourhoods in terms of wealth, ethnicity, or other categories. The combination of the diversity of a city’s population, an economically differentiated housing market, and distinct neighbourhoods with different reputations often leads to residential segregation, i.e. the process and outcome of a spatial sorting of people’s places of residence (Musterd, 2020). This can occur on multiple geographical scales (Owens, 2020), and based on different categories (typically ethnicity and socio-economic status, but also age, household composition and others, and intersections

thereof; Buch et al., 2021; Manley, 2021; Marcińczak et al., 2016), and may to some extent be based on preferences (and not just budgetary limits) and thus voluntary.¹⁶

Generally, dimensions of horizontal differentiation like lifestyle and sociocultural differences have been shown to be important factors in residential choice (Blasius & Friedrichs, 2011; Ostendorf & Musterd, 2012; Rérat, 2020). They are also crucial with regard to the way space is appropriated and inhabited, and social inequalities related to it. Here, Bourdieu's distinction between different forms of capital (economic, cultural and social) is fundamental. It opens up a 'social space' of different fields, each with its own combination of different amounts and types of capital. Each field also has its distinct set of norms and rules, internalized by individuals in processes of socialization in the form of a 'habitus' (Rössel, 2009). The concept of habitus also relates to space, because as Bourdieu writes: 'One can physically occupy a locale without inhabiting it properly if one does not dispose of the means tacitly required for that, beginning with the proper habitus' (Bourdieu, 2018, p. 111). This means that exclusion from spaces does not have to be formally organized. Often, it happens through self-exclusion because of habitus preferences (Israel & Frenkel, 2018; Löw, 2016). This idea applies both to residential choices and the use (or non-use) of public spaces.

Even though residential patterns are not the focus of this thesis, they are still important to the topic of diversity in public space for two reasons: firstly, the composition of a neighbourhood population is relevant to the second research question where a neighbourhood's diversity is compared to the square's diversity (see Chapter 7). Secondly, the ethnic or socio-economic characteristics of a neighbourhood population are linked to how people feel about their neighbourhood. Indirectly, they thus also shape how people move within their neighbourhood and which spaces they frequent. In gentrifying neighbourhoods, for example, people can feel symbolically or indirectly displaced even if they continue to live in the neighbourhood, simply by the changing character of the neighbourhood introduced by the inflowing population (Atkinson, 2015; Elliott-Cooper et al., 2020).

In the US-American and European context, housing policy has often focused on social mix, i.e. fostering the proximity of mixed-income and mixed-ethnicity households, to counter residential segregation and its possible weakening of social cohesion (Galster & Friedrichs, 2015; Hyra, 2015). These policies are based on the assumption that mixed neighbourhoods provide improved services, opportunities for networks, and bridging social capital especially for individuals with lower incomes. However, there is mixed empirical evidence of the impact of such policies, and the concept is criticized for having become a catchword that disregards 'wider

¹⁶ In the Swiss case, however, at least ethnic segregation does not seem to be voluntary (Ibraimovic & Masiero, 2014).

structural processes that lead to the concentration of urban disadvantage' (Bricocoli & Cucca, 2016; Casarin et al., 2023, p. 3177; DeFilippis & Fraser, 2010).

Much of this critique focuses on the missing link between places of residence and opportunities for contact and network. Since places of work, leisure activities and mobility behaviours differ considerably depending on socio-economic status, gender, age, and lifestyles (Hausser et al., 2020), certain population groups may not encounter or interact with each other despite living in proximity (resulting in 'social tectonics', Jackson & Butler, 2015; or 'parallel lives', Valentine, 2008).

Recent research has therefore shifted its focus from a static concept of residential segregation towards more fluid and interaction-based forms such as workplace or school segregation, activity-space segregation, or mobility-based segregation. It has been shown that there is considerable segregation, for example in activity-spaces in Los Angeles between the socially disadvantaged and the affluent, and between ethnic minorities and Whites (Lu & Giuliano, 2023). Candipan (2021) finds racial segregation in mobility patterns in fifty US cities. The activity-spaces of residents of different types of housing in Beijing (X. Zhang et al., 2019) and in Hong Kong (Wang & Li, 2016) were also shown to be segregated, as well as public space use between religious communities in Belfast (Dixon et al., 2020). In the Netherlands, individuals of Dutch origin and with high incomes have been shown to move around in relatively homogeneous workplaces and mobility spaces (Boterman & Musterd, 2016). In Jerusalem, Rokem and Vaughan (2017) demonstrate the important role public transport infrastructure can have in providing opportunities for encounter in a city with high residential segregation. For Stockholm, however, they find that it can also reinforce ethnic segregation (Rokem & Vaughan, 2019).

To my knowledge, there is no recent scholarly literature on residential segregation (or activity-space segregation) in Switzerland. For Zurich, my master's thesis has shown low segregation based on income, education, and nationality in the period from 2000 to 2015. It is individuals with high incomes that are more segregated than any other of the groups studied, i.e. they tend to cluster in affluent neighbourhoods (Widmer, 2018).

It is clear from this short literature review on different types of segregation other than residential that public space has an important role in structuring opportunities for encounter (see also Section 2.4). It also emerged that even though residential segregation may not be the most important type of segregation in people's lives, it is presumably linked to diversity in public space through sheer proximity. The actual relationship between neighbourhood diversity and public space diversity needs further research, however. This research gap is addressed by the second research question of this thesis (How does a neighbourhood's diversity compare to

square users' diversity?). I also take into account that there might not only be an effect of outward mobility (i.e. diversity in a neighbourhood's public spaces does not necessarily equate to the neighbourhood's residential diversity because people spend their daily lives elsewhere), but also a visitor's effect (people from outside the neighbourhood visiting for work, education, or leisure).

The next section focuses on diversity in public space. I will explore the ways in which different types of public space shape, and are shaped by, the diversity of their users and by the absence of some people.

2.5.5. What We Already Know about Living With Diversity in Public Space

As the previous discussion of the literature has shown, public space is often seen as having the potential to mitigate the effects of residential and other types of segregation (Sandström, 2020). It is not seen as a panacea for urban structural issues. Rather, public space can foster the co-presence of people who would otherwise not meet, and give them a sense of whom 'the public' is constituted by (DeFilippis & Fraser, 2010, p. 143) – or in the words of Madanipour (2020, p. 182):

'Accessible spaces that would offer the possibility of non-commodified social encounters, inclusive expressive presence and active participation can play a noticeable role in democratic social development, not as determinants of social behaviour, nor for the creation of an imagined homogeneous totality, but for helping the different parts of society being in continuous interaction with each other.'

Being connected to others in public space, if only loosely as suggested by Madanipour, requires people of different backgrounds to use the same spaces at the same time and ideally interactions between them. In the existing literature on diversity in public space, three main themes relating to these prerequisites can be discerned: differences in use patterns, non-belonging and exclusion, and engaging with difference (or not). The three are often intertwined, but they will be reviewed under these three headings according to the focus of the publications.

Differences in Use Patterns

In a mixed-methods study in streets in Auckland and Wellington, New Zealand's largest cities, Lesan and Gjerde (2020) find that people with a European cultural background are involved in smaller groups than people with a Maori/Pacific Islanders or Asian background. They also find cultural differences in the preferences of seating arrangements. There is consistent evidence that people of Western or even Western European ethnicity use green spaces in a more solitary way

than other ethnicities who, supposedly due to a more family-oriented culture, tend to use parks in larger groups (Ganji, 2018, pp. 31–32). Differentiated use patterns may also occur due to religious practices and beliefs. They may, for example, lead Muslim people to avoid places where people sunbathe or children play only partially clothed (Daly, 2020).

Different cultural use patterns may also intersect with a gendered use of public space. In a square in the Chinatown district of San Francisco, for example, use patterns reflect the way in which legitimate activities are attributed to men or women, so there is gender segregation based on where these activities may take place in a square (Huang & Napawan, 2021). In general, men have been found to be more likely than women to be attracted by areas dedicated to physical activities in public space (e.g. outdoor gyms, basketball courts), particularly adolescents (Baran et al., 2014; Ostermann, 2009). The fact that sports facilities are often territorialised by young men can prevent women from appropriating these spaces (Shaikly & Mella Lira, 2022). Gender also mediates how visually open spaces are perceived. In a park in Zurich (Wahlenpark), women, on the one hand feel safe because the surrounding apartments have an overview of the square. On the other hand, this also exposes one to other people's gazes and makes women in particular feel uncomfortable (Kaspar & Bühler, 2009).

Age and gender also matter in other regards: young children (and their caretakers – often female) are more attracted to play spaces (Ganji & Rishbeth, 2020), and older people have been found to visit public spaces more often than other population groups, supposedly because they have more time at hand and because seeing and meeting others in public space may provide important social ties (public space use has been shown to reduce loneliness; Bergefurt et al., 2019). For youth, public space is a place outside the home and the school where they are not under direct adult supervision. It is thus an important site of peer socialization where new behaviours are tried out in the freedom and anonymity public space provides. This can also be regarded as problematic, e.g. in the case of street drinking, and as creating a nuisance for other public space users (Spierings et al., 2016; Townshend & Roberts, 2013).

Education also seems to play a role, as people with higher education use public space more often than people with lower education (Bergefurt et al., 2019; Schipperijn et al., 2010). There is some evidence that this may also apply to income. In a study on how students use public spaces on campus, Trawalter et al. (2021) find that students with lower socio-economic status (SES) use public spaces less compared to high-SES students. They hypothesize that campus rules banning loud music, barbecuing and team sports may disproportionately prevent low-SES students using public space – 'not because high-SES patrons do not like [these activities], but because high-SES patrons can privatize those leisure activities. They can have parties at their houses, and they can play sports at their members-only gyms' (Trawalter et al., 2021, p. 132).

Culture, ethnicity, religion, age, gender, and other characteristics play an important role in how people use public space, what type of public space they use, and when. This can partly be explained by preferences for certain activities, but feelings of non-belonging or exclusion also contribute to differentiated use patterns, as the literature in the next section explores.

Non-Belonging and Exclusion

Several studies have shown that some population groups may be underrepresented or overrepresented with regard to the city's or neighbourhood's population. In the High Line Park in New York, there is a significant under-representation of non-Whites. This is all the more striking as users of other parks were found to be more ethnically diverse than the neighbourhood population (Reichl, 2016). Ethnic minorities are also found to be underrepresented in two squares in Montréal (Paré & Mounier, 2021), and in the use of urban waterways in Leicester (Zaidi & Pitt, 2022). The Montréal study also reported an under-representation of women (Paré & Mounier, 2021), concurring with the result on the use of parks in Zurich where women and older people have been found to be visiting less frequently than men and younger people (Bühler et al., 2010).

More qualitative approaches show that 'feelings of being neglected and of insecurity together with a feeling of being disturbed or excluded by other sociodemographic groups' may create barriers to use (Haase et al., 2021, p. 16). It is easily conceivable that feelings of non-belonging may not always be as extreme as to lead to a complete absence of one group. Presumably, such feelings work more subtly and result in less frequent use rather than absence. This relation also works the other way round: public space use can also increase a sense of belonging to the community within which the space is situated (Peterson, 2023). A study on students' use of public space on campus showed that despite visual cues that cause feelings of non-belonging in students with lower socio-economic status, increasing public space use experimentally heightens their sense of belonging (Trawalter et al., 2021).

Feelings of non-belonging and exclusion can occur without anyone consciously planning to exclude others (see also Chapter 6 and 8), but they can also be fabricated on purpose. Thörn (2011) carefully dismantles the strategies the local government in Gothenburg applied in order to create clean and safe spaces in the city centre. In practice, this meant for example removing vegetation for easier surveillance, and getting rid of public toilets to create the impression of cleanliness. Overall, it resulted in the 'sanitization' of public space and the city sending a clear visual message to homeless people that they are not wanted. Popovski and Young (2023) also show how affordances in public space (see Section 2.1.3), and the way in which they are modified by local governments, deter certain people and uses of public space by design.

The role of affordances in affecting belonging and feelings of being out of place in public space is still under-researched. This thesis aims to address this issue by attending to how affordances influence diversity in public space.

Engaging with diversity?

Previous studies on diversity in urban neighbourhoods have shown that people value their neighbour's diversity and the choice in amenities (restaurants, shops, etc.) it brings to their neighbourhoods, but do not necessarily engage with people who are different from themselves (Blokland & Eijk, 2010; Nielsen & Winther, 2020; Plüss et al., 2017). The same has also been shown for the use of public space: while it is appreciated that people from multiple ethnic backgrounds use public space, intercultural interactions are limited to small talk (Peters, 2010).

Recent studies have shown that despite there being different (ethnic or racial) groups using a public space, users segregate within that space either geographically or temporally (Barker et al., 2019; Harris et al., 2020; Tuttle, 2020). This phenomenon has been termed 'intimate segregation' (Mumm, 2008) or 'integrated segregation' (May as cited in Tuttle, 2020).

Yet, some studies, in particular research on geographies of encounter and conviviality, show that indeed there can be contact across differences, that it can be meaningful, and that public space design can support these encounters. Existing literature emphasizes the importance of fleeting encounters that – despite their limited contribution to creating respect for difference (Valentine, 2008) – can be meaningful and convivial (Peterson, 2017 (for libraries); Radice, 2016; Vodicka & Rishbeth, 2022). Fleeting encounters have been shown to produce feelings of 'micro connection' which are important because 'it is then and there that people connect to the world in often profound ways', also contributing to a sense of belonging (Peterson, 2023).

Besides these positive accounts of encounters, this strand of literature also emphasizes their ambivalence. Older people have been shown to have a mixed experience of diversity in public space. On the one hand, they seek diversity as a contrast to 'homogenized spaces of care', and on the other hand encounters with strangers can also be accompanied by anxiety (van Melik & Pijpers, 2017, p. 299). Zuijderwijk and Burgers (2015) provide another example: they show that ethnic categorizations are relevant in using public space and perceiving its users, in particular when users describe conflicts or other situations in which they had negative experiences.

The role of design in supporting conviviality has also been explored. Aelbrecht (2016) coined the term 'fourth places' – with a nod to Oldenburg's (1989/1999) third places – to denote places that are characterised by in-betweenness and are therefore more mixed in terms of users and social relations and more conducive to unplanned encounters between strangers (Aelbrecht, 2019b; Ganji & Rishbeth, 2020). Fourth places can be in-between on a spatial level, e.g. thresholds

or edge spaces. In-betweenness can also occur temporally, when events happen or when there is congestion, e.g. in waiting or queuing. This also relates to the concept of ‘time in-between’ (Blokland & Nast, 2014) during which people are transferring to or waiting for another activity (a concept used in Chapter 5). On a third level, places can be in-between different modes of management that require negotiations of control and access which encourages ‘creative appropriation’ (Aelbrecht, 2016, p. 135). Taken together, and if considered in urban design practice, these principles can promote ‘loose’ public spaces where encounters between strangers happen more easily.

In contrast, the research of Daly (2020) on Superkilen in Copenhagen suggests that more closely programmed (see also Section 2.3.3) spaces such as areas for playing (e.g. a playground or a basketball court) or for eating attract a wide range of users (concurring with the result concerning playgrounds by Ganji & Rishbeth, 2020) and are places where intercultural encounters were often observed. Paradoxically, since closely programmed spaces are sometimes predominantly occupied by Muslim men, the more underdetermined areas of Superkilen allow Muslim women to gather in open public space, supporting the idea of finding a balance between open and closed programming to foster encounters between strangers (Daly, 2020, pp. 80–81).

Overall, the studies reviewed here indicate that in general, people appreciate diversity in public spaces and that there is, at least to some degree, conviviality to be found in them. However, encounters, in particular intercultural encounters, rarely go beyond intimate segregation, civil inattention, or small talk. There is evidence that public space design can foster encounters by being responsive to people’s needs, providing affordances that bring people together and by mixing elements of open and closed programming.

However, there are important research gaps that require further attention. Many studies focus on cultural diversity, and it is therefore unclear to what extent the previously mentioned findings also apply to other dimensions of diversity (e.g. differences in social status). Moreover, there is a lack of research that asks how diversity – cultural, socio-economic, or any other type – is experienced in public space specifically (for the experience of diversity in the neighbourhood, see Nielsen & Winther, 2020). This gap is addressed by the third research question (How is diversity in public squares perceived and experienced?). Before exploring the experience of diversity in a specific place, however, it is necessary to know the extent of diversity that can be found there (first research question). This is particularly relevant for the context of Switzerland where no recent academic research on the users of public spaces is available (for older research, see Bassand et al., 2001; Bühler et al., 2010; Seeland et al., 2009).

In the next chapter, I explain how these research gaps, specifically the research questions presented in the introduction, are addressed methodologically.

3. Data & Methods

In this chapter, I present the study's methodology. I first outline the research design of the case study by explaining the mixed methods approach and the case selection process (Section 3.1). Sections 3.2 to 3.4 are dedicated to the methods used for data collection in the different empirical parts of the project.¹⁷ They also cover the methods of analysis used in the respective parts. In Section 3.5 I reflect on the shortcomings of the methods used and my own position as a researcher.

3.1. Research Design

The research design was originally developed in 2019 in view of the grant application, and then detailed during the first months of the project in 2020. Some adjustments were necessary due to the COVID-19 pandemic which hit Europe in early spring 2020, leading to lockdowns with serious restrictions on gatherings in private and public, rules to keep at a 1.5- or 2-meter distance from others (called 'social distancing', or 'physical distancing'), the obligation to work from home, and the temporary closing of many day-to-day facilities and social infrastructure. In contrast to other countries, however, in Switzerland there had been no restrictions on movement (but a recommendation to 'stay at home') at any time. Still, the mean distances and radii of people's movements decreased during the lockdowns, so people spent more time in their home towns or neighbourhoods (intervista AG, 2020, 2021). Some cities, including Zurich, have chosen to close parks or waterfronts during the first weeks of the first wave in spring 2020 (Stadt Zürich, 2020d).

During the lockdown phases, the fundamental urban quality of meeting strangers was lost (Felder, 2020a), and many drew back into the more segregated spaces of the home because places of social infrastructure like high streets, parks, public transport, and wherever possible also the workplace had to be avoided due to the risk of infection when meeting others (Kasinitz, 2020). The constraints imposed by social distancing, on the one hand, and the urge to nonetheless be social on the other, result, however, also in a new 'sociable space': people were observed to expand Hall's (1966/1990) 'social distance'. This new sociable space was defined by the rules of social distancing and characterised by a more relaxed socializing because many people had more time at hand (Mehta, 2020). Despite the omnipresence of digital communication, the relevance of physical places seemed firmly anchored even during

¹⁷ Data collected in this project will be made available at <https://doi.org/10.48573/b6cq-kp35> (quantitative data), and <https://doi.org/10.48573/r3fy-h520> (qualitative data).

lockdowns, as places for leisure and recharging, but also as a 'stage for collective practices of negotiating appropriate risk levels by public visibility of individual behaviour' (Stadlmeier et al., 2022).

There seemed to be two opposing tendencies at work in public space: on the one hand, people avoided contact with others, especially with strangers, making public space less attractive. On the other hand, because of many restrictions in other parts of life, going for a walk or spending time in a public space became one of the only possible activities of 'being in public'. Additionally, and especially during the colder months, some activities took place outdoors that would normally be carried out in closed spaces. The net effect of the two tendencies remains an empirical question. It is probable, however, that regardless of the effect's size and direction, people have adjusted their behaviour differently depending on their subjective health risk and their situation regarding housing, work, and family.

Without doubt, the protection measures had immediate and very visible effects on mobility practices and life in public space (Gehl, 2020). However, it is impossible to assess the relevance of these changes to my research because 'pre-covid' data is lacking. Given the focus of this research – encounters in public space – it was clear that at least the research design should factor in the possibility of a worsening epidemiological situation affecting public space use during the time of fieldwork.

3.1.1. Mixed-methods Approach and Empirical Parts

The four research questions¹⁸ call for very different methods. Because quantitative methods allow quantifying empirical phenomena and uncovering relationships between two or more variables, they are well suited to measure the extent of diversity in the public squares. They also allow to statistically assess with which probability a certain result can be generalized and thus not only applies to the sample (usually only a subset of the whole population due to limited resources). Quantitative methods, however, cannot provide appropriate data to study the question of why the extent of diversity is the way it is, how people feel about the squares or how people experience diversity. For questions like these, qualitative methods are better suited. The research therefore has a sequential mixed-methods design (Creswell & Plano Clark, 2018; see Table 1).

Empirical research is divided into three parts (Table 1). Part I is dedicated to making sense of the squares, their designs, and the history of how they came about. 'Representations of space'

¹⁸ Q1: What is the extent of diversity in public squares?, Q2: How does a neighbourhood's diversity compare to square users' diversity?, Q3: How is diversity in public squares perceived and experienced?, Q4: How does public space design shape diversity in public squares?

(Lefebvre, 1974/1991), i.e. the conception of the selected squares by architects, planners and the public administration, are analysed through semi-structured interviews with planners and city officials, archival analysis, and a design analysis of the squares (Section 3.2). The planning history and the design of the squares was studied as a preparation for answering the transversal fourth research question (How does public space design shape diversity in public squares?), thereby integrating an urban design perspective with an approach that is more geared towards exploring behaviour, use patterns, and the lived experience of public space use.

Part II is designed to investigate the dimensions and extent of the square users’ diversity, using an embedded mixed-method design where mostly quantitative methods (screening, behavioural mapping, intercept survey) are complemented with a qualitative method (unstructured observation, see Section 3.3; Creswell & Plano Clark, 2018). In many ways, Part II resembles a post-occupancy evaluation, i.e. a study aimed at examining the qualities and functionalities of a built environment – a building, an open space, etc. – in actual use, and how it measures up to the intended outcomes of the design (Aelbrecht & Stevens, 2023; Gu, 2021). The objective of Part II is to answer the first and the second research question, i.e. shedding light on the extent of diversity in the squares and how it is related to the neighbourhood’s diversity.

Lastly, the aim of Part III was to better understand the results of Part II and to delve into the perception and experience of diversity by conducting semi-structured interviews (Section 3.4), thereby addressing the third research question.

Table 1: Sequence of empirical parts, their research questions and the methods used. Quantitative methods are italicised, qualitative methods are set in bold.

Part I: Representations of space	Methods
Questions in preparation of Q4 (How does public space design shape diversity in public squares?): <ul style="list-style-type: none"> - How were the public squares planned and designed in their present form? - What characteristics and qualities does the design have? 	<ul style="list-style-type: none"> - Archival analysis - Semi-structured interviews - Design analysis
Part II: Extent of diversity	Methods
<ul style="list-style-type: none"> - Q1: What is the extent of diversity in public squares? - Q2: How does a neighbourhood’s diversity compare to square users’ diversity? 	<ul style="list-style-type: none"> - Screening - Behavioural mapping - Unstructured observations - Intercept survey - Analysis of secondary data
Part III: Experience	Method
<ul style="list-style-type: none"> - Q3: How is diversity in public squares perceived and experienced? 	<ul style="list-style-type: none"> - Semi-structured interviews

3.1.2. Cases and Case Selection

As this research is interested in the relationship between the square users' and the neighbourhood's demographics, I decided to conduct a multiple-case study (Simons, 2014; Yin, 2009), with three cases consisting of a public square as the unit of analysis, each square being located in a different neighbourhood (in German: '*Quartier*'). While the uniqueness of each of the squares and neighbourhoods would not allow a one-to-one comparison, the specificities of each case contribute to the results' validity and to a broader understanding of the processes that shape the diversity and the experience of diversity in the squares.

I selected the cases in two steps. I aimed for choosing public squares in contrasting neighbourhoods, assuming that the use of a public square and the demographics of its users depend on the urban fabric and the demographics of residents in the neighbourhood. Contrasting neighbourhoods would therefore lead to insights in this regard. Therefore, neighbourhoods¹⁹ were first grouped into contrasting clusters based on five criteria (see below). In a second step, I identified suitable squares and selected three squares in contrasting neighbourhoods. In this step, too, I used a set of operational criteria to assess whether squares could qualify as cases (Yin, 2009, p. 91). I looked for squares that were similar in size, function, vegetation, and urban furniture. Because of a lack of previous research on public space use in Switzerland (see Section 2.5.5), homogeneity in the squares was important in order not to introduce too much variety and instead be able to compare results across the three contrasting neighbourhoods. Both steps of the case selection are outlined below.

As a preparation for the case selection, the set of eligible neighbourhoods was restricted. I excluded low-density neighbourhoods, as most people in these neighbourhoods will presumably have fairly easy access to private or semi-private green and open spaces, and therefore public spaces will be used differently. Neighbourhoods in the centre of Zurich (district 1), where the residential population is small compared to the number of jobs in the area, have also been excluded, because one of the objectives of this study, exploring the relationship between the residents and the square users, requires a substantial residential population and not too many visitors.²⁰

¹⁹ At this stage of the research, I used the officially defined neighbourhoods in Zurich of which there are 34. In Part II, when secondary data on residents is compared to my primary data, I define 'neighbourhood' by a 500m-radius around the squares (see Section 3.3.6).

²⁰ Neighbourhoods excluded due to lower density: Wollishofen, Leimbach, Friesenberg, Hottingen, Witikon, Höngg, Affoltern, Schwamendingen-Mitte, Hirzenbach. Threshold for exclusion: below 250 inhabitants and employees per hectare.

Excluded neighbourhoods in district 1: Rathaus, Hochschulen, Lindenhof, City.

A cluster analysis was then carried out to identify clusters of similar neighbourhoods based on five criteria. They were thought to ensure that the cases were located in contexts of different urban structure (criteria 1 and 2), and in neighbourhoods with different demographics in terms of income, family households, and ethnicity (criteria 3 to 5).

1. Density (measured by dividing the number of employees and inhabitants of a neighbourhood by its surface area, paved ground only)
2. Jobs-housing balance (ratio between employees and inhabitants)
3. Income heterogeneity (measured by the difference between 75- and 25-percentile of taxable income, non-married tariff; the higher this difference, the more dispersed the income distribution)
4. Percentage of family households (i.e. households with children)
5. Percentage of people without Swiss nationality²¹

The cluster analysis resulted in three clusters of neighbourhoods.²² They were then compared with a shortlist of squares. This shortlist was established by extensive desk research and field visits. It was decided that squares as ‘civic spaces’ (Carmona, 2010b) would be best suited to answer the research questions. Civic spaces are ‘traditional forms of urban space, open and available to all and catering for a wide variety of functions’ (Carmona, 2010b, p. 169). They are ‘positive’ spaces (as opposed to ‘negative spaces’ such as space dominated by movement needs, or space left over after planning (SLOAP)), and to be distinguished from natural or semi-natural spaces such as riverbanks or seafronts, and public open spaces that are typically green (parks, gardens, etc.).

Besides being civic spaces, the potential case studies had to fulfil five criteria to make it onto the shortlist. These criteria were thought indispensable characteristics needed to carry out fieldwork with the available resources (criteria 1 and 2), and to be able to study the research

²¹ In Zurich, 32.2 percent of the population are foreign nationals. Out of this population, 69.7 percent are nationals of EU/EFTA countries (Stadt Zürich, 2020a), and therefore it can be argued that Zurich is not as hyper-diverse in terms of ethnicity than many of the contexts where diversity in public space has been studied recently, e.g. cities in the United Kingdom or the Netherlands (Barker et al., 2019; Peterson, 2023; Zijderwijk & Burgers, 2015), where the majority of the foreign population originates from outside the EU, or in the USA (Reichl, 2016), an immigration nation. However, 46.9 percent of Zurich’s population were born outside Switzerland, and over 60 percent have a migrant background, i.e. they were born abroad, or at least one parent was born abroad (Stadt Zürich, 2012, 2020a). Therefore, even though the countries of origin of the foreign population might culturally not be too far from Switzerland, Zurich is a highly diverse city in terms of ethnicity in a country that is strongly characterised by immigration (Piguet, 2013).

²² Cluster 1: Enge, Escher Wyss, Oberstrass, Fluntern, Hirslanden, Seefeld, Mühlebach, Weinegg

Cluster 2: Alt-Wiedikon, Sihlfeld, Werd, Langstrasse, Hard, Gewerbeschule

Cluster 3: Unterstrass, Albisrieden, Altstetten, Wipkingen, Oerlikon, Seebach, Saatlen

questions at hand, i.e. having squares that are accessible to all, open to many activities, and being a square with no particular attraction to people outside the city (criteria 3 to 5).

1. Feasibly sized for fieldwork
2. Sufficiently clear borders
3. Publicly owned
4. Not dominated by one function (e.g. traffic or playground)
5. Being of district-wide or neighbourhood-wide relevance according to the categorization by the City of Zurich (see also Section 4.2)²³

The shortlist contained thirteen squares.²⁴ As for cluster 1, no suitable square could be found in any of the neighbourhoods, it was decided to choose two squares within cluster 2. From the remaining shortlisted squares, the three squares Lindenplatz (Altstetten), Hallwylplatz (Werd), and Idaplatz (Sihlfeld) were chosen because they present a set of squares that are – judging from the preliminary field visits – similar in their spatial layout, the surrounding amenities, and the intensity of use, while still being in different neighbourhoods and thus serving as contrasting cases. The selected squares and their neighbourhoods are presented in detail in Chapter 4.

3.2. Part I: Methods

In order to ‘get to know’ the squares, and as a preparation for fieldwork in Part II, I conducted a thorough analysis of the squares’ context, their design, and their planning history. This was done using three methods: archival analysis (3.2.1), semi-structured interviews (3.2.2), and design analysis (3.2.3). Data collection started with archival analysis, then moving on to qualitative interviews and design analysis, one providing clues for the next. Besides their practical use in Part II, the results of these analyses informed the subsequent analyses of Part II and III. They are reported in detail in Chapter 4, because no article was written with a focus on this material.

3.2.1. Archival Analysis

To understand how the squares were conceived (i.e. Lefebvre’s (1974/1991) ‘representations of space’) and how they ended up looking as they do today, I searched grey literature online, but

²³ For the square selection, I used the categorization dating from 2006. The categorization was updated in 2019 but made available only after my selection process. Squares with a city-wide or even national or international relevance were excluded. They presumably attract more visitors from outside the neighbourhood and the district, including tourists. As the objective of the project is studying the relationship between the neighbourhood and the squares, this influx of people would complicate getting at this relationship.

²⁴ Shortlisted squares (and the neighbourhood they are located in): Idaplatz (Sihlfeld), Brupbacherplatz (Sihlfeld), Anny-Klawe-Platz (Hard), Bullingerplatz (Hard), Hallwylplatz (Werd), Römerhofplatz (Hottingen), Steinwiesplatz (Hottingen), Hottingerplatz (Hottingen), Lindenplatz (Altstetten), Röschiachplatz (Wipkingen), Zehntenhausplatz (Affoltern), Max-Bill-Platz (Oerlikon), Schwamendingerplatz (Schwamendingen-Mitte).

also went to archives, carried out systematic queries in newspaper databases, and received documentation from the City’s administration unit in charge of documenting construction projects.

Table 2 gives an overview of the archives, additional information regarding the corresponding query, and the number of documents found with it. Documents include reports, plans, pictures, letters to/by the administration, newspaper articles, etc. Documents that simply announced events in the squares, or portrayed the squares as the site of, e.g., a crime, were not considered. The documents were analysed with the software *ATLAS.ti*, creating

- a. a list of stakeholders involved in the redevelopment of the squares (used for contacting possible interview partners for the semi-structured interviews, see 3.2.2),
- b. a collection of facts and figures relevant for the design analysis (see 3.2.3), paying particular attention to uses, activities, functions, and atmospheres that are intended and prescribed by planners and architects, and
- c. a timeline of the squares’ planning and design history.

Table 2: Archival analysis: sources, queries, and number of documents.

Archive / database	Query	Number of documents
E-newspaper-archives.ch (Online newspaper archive)	Searching for Lindenplatz, Hallwylplatz, Idaplatz, limiting search to the Canton of Zurich, excluding advertisements	15
Swissdox (Online newspaper archive)	Searching for Lindenplatz, Hallwylplatz, Idaplatz. For Lindenplatz, the search was limited to Zurich (several squares with the same name exist)	89
Dokumentationsstelle Bauprojekte (Administration unit documenting construction projects)	Asked for documents regarding the three squares	66
Baugeschichtliches Archiv Zürich (Archive for the history of architecture and construction in Zurich)	Asked to see documents regarding the three squares, consulted the online database of pictures	8 (and 68 pictures online)
Stadtarchiv Zürich (City Archive)	Asked to see folders containing documents on the squares, and specifically on the redevelopments	10 folders, each containing documentation in the form of letters, pictures, plans, city council resolutions, etc.
General web search	Searching for Lindenplatz, Hallwylplatz, Idaplatz	15
Schweizerisches Sozialarchiv (Swiss Social Archive)	Searched for Lindenplatz, Hallwylplatz, Idaplatz in the catalogue of the archive, no result	-
ETH-Bilderarchiv (Online image archive)	Searched for Lindenplatz, Hallwylplatz, Idaplatz, no results apart from the pictures already	-

	collected	
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3.2.2. Semi-structured Interviews

Archival analysis was followed by semi-structured interviews. For each square, the aim was to conduct three interviews with stakeholders involved in the latest redevelopment of the squares (or attempts to redevelop in the case of Hallwylplatz): one interview with the person responsible for the project in the City Administration, one with the landscape architect(s) who (re-)designed the square, and one with a representative of a neighbourhood organization involved during participation processes. This aim was reached in all cases. However, as one city official was responsible for two of the squares, only one interview was necessary. In one case, two landscape architects who had jointly developed the redesign were interviewed together. In the case of Lindenplatz, an additional interview was conducted with a person who closely follows what happens with and in Lindenplatz due to their place of work. Table 3 gives an overview of the nine interviews.

I developed a general interview guide. It was slightly adapted according to the different kinds of stakeholders. Participants were first asked to describe the square to a hypothetical person who does not know the square, and to explain the role the square plays in the neighbourhood in their view. This always paved the way to ask about the design of the square before and after the redevelopment, and uses and users of the square, if not mentioned in the first place. I then asked landscape architects and city officials how they were involved in the redevelopment, what was the rationale for the design, and what was the role of specific elements of the design for achieving the aims of the redevelopment project. Representatives of neighbourhood associations, on the other hand, were asked about the ideas or requests they brought to the participation process, to what extent their concerns had been taken into account in their view, what could still be improved, and what the strengths of the square were. The complete interview guide can be found in Appendix A.

Table 3: Interview participants and their respective roles (Part I).

Square	Participant number	Role/position of the participant
Lindenplatz	R9, R10	Landscape architects, private studio
	R5	Person working in building on Lindenplatz
	R7	Representative of the cooperative owning buildings on Lindenplatz
Lindenplatz & Hallwylplatz	R3	City official, responsible for Lindenplatz and Hallwylplatz
Hallwylplatz	R8	Landscape architect, private studio
	R4	Representative of a neighbourhood association
Idaplatz	R1	Landscape architect, private studio now, working for the City at the time of the redevelopment

	R6	Planner, city official at the time of the redevelopment
	R2	Representative of a neighbourhood association

The interviews were conducted online as video conferences due to the COVID-19 pandemic and the measures in force at the time of the interviews (January and February 2021). One interview took place in the square on request of the interview partner and at an adequate distance between the interview partners. At the beginning of the interview, the participants were asked for informed consent. The interviews lasted 50 minutes on average. I audiotaped and later transcribed them verbatim. Interviews that were conducted in Swiss German were translated to Standard German in the process. Just like the documents collected during the archival analysis, the interviews were analysed with *ATLAS.ti*, complementing the timeline of the planning and design history and adding information to the facts and figures relevant for the design analysis (see 3.2.3).

3.2.3. Design Analysis

The squares' design was analysed based on the information gathered during the archival analysis and the qualitative interviews. It was complemented by desk research and field visits to collect data on some key aspects of the design. Based on literature concerned with planning and evaluating public space and environments in general, previous research on public spaces in Zurich and grey literature on quality criteria of public space, a set of indicators was organized in an Excel sheet with a column for each square (Bentley et al., 1985; Erath et al., 2019; Flükiger & Leuba, 2015; Gehl & Svarre, 2013; Sutter, 2009; Wolfrum, 2015).

I filled the cells of this table as a preparation for the fieldwork. Some focused field visits in October 2021 were added to collect missing data. Data gathered in this table informed the subsequent analysis for the articles (Chapters 5 – 8). It is presented in more detail than in the articles in Chapter 4 of this thesis.

3.3. Part II: Methods

The primary objective of Part II is to explore the extent of diversity in the squares. For this reason, the main empirical work consisted in collecting data on the square users and their (socio-)demographic characteristics to later compare them to the neighbourhood residents. This data was collected via an intercept survey (3.3.4). However, to better understand the temporal dimensions of diversity and micro-geographical territories of groups it was also necessary to discern the rhythms and patterns of use of the squares. Fieldwork was therefore complemented by the methods of screening, behavioural mapping, and unstructured observations (3.3.1–3.3.3). As they also served the preparation of the intercept survey, they are described first.

The fieldwork of Part II was initially planned to happen square by square during summer 2021. However, due to the COVID-19 pandemic and the protection measures in force at the time of preparation of the fieldwork, it was decided that fieldwork had better be carried out in parallel in all the squares in two waves in summer 2021 (one before and one after the summer holidays), reserving also the possibility of a third wave in summer 2022 in case the epidemiological situation should impede or heavily affect one of the waves in 2021. Therefore, and because the pandemic could have an effect on who was present, and on the activities carried out in public space, I kept a track record of the epidemiological situation during the fieldwork (see Section 3.3.5). Because the two 2021 samples – before and after the summer holidays– were very similar in their distributions, and because in summer 2022, just like in summer 2021, there were no measures in force regarding behaviour in outdoor public spaces, it was estimated that a third wave would not substantially differ from the previous waves. It was therefore decided that no third wave would be carried out, and fieldwork for Part II was entirely carried out between 25th May and 13th September 2021. Because the fieldwork was laborious, particularly the intercept survey, and resources were limited, I also limited the times of day in which the squares would be studied to the period from 8 a.m. to 6 p.m.

To compare the square users to the neighbourhood population, secondary data was used. Section 3.3.6 describes this data and the statistical methods used to compare the two datasets.

3.3.1. Screening

What is here called ‘screening’ is essentially a more elaborate version of counting people at regular intervals throughout the day to get an idea of the intensity of use, and the square’s rhythm. The screening method has been adapted for my purposes from the screening method used in a study on public space mandated by the City of Zurich (Tiefbauamt Stadt Zürich, 2018) and by the method ‘counting’ as described by Gehl and Svarre (2013, p. 25).

Screening took place every full hour, from 8 a.m. to 6 p.m. I circled the square along a pre-defined path (Figure 3). Every person in my visual field was noted on a screening tally sheet (see Appendix B) with a special system of annotation, allowing to capture not only the number of people, but also documenting the apparent age and gender, a rough indication of their activity (sitting, standing, walking, biking) and whether they are on their own or in a group of people. The screening was carried out once on a Tuesday or Thursday, and once on a Saturday during both waves of fieldwork.

The paper forms were later digitized and brought into the form of a dataset consisting of individual data (e.g. one row per person, and variables indicating age, gender, activity, and group size, $n_{\text{Lindenplatz}} = 2,322$, $n_{\text{Hallwylplatz}} = 956$, $n_{\text{Idaplatz}} = 1,183$; see Appendix B for the code book). Results

of the screening in the first wave were used to plan the number of student assistants supporting the surveying (see 3.3.4). The combined data of both waves is reported in Section 4.6.



Figure 3: Screening routes in the three squares (blue arrows). Source: author's own.

3.3.2. Behavioural Mapping

Behavioural mapping was used in Part II a) to better understand the activities carried out in the squares, and b) to be able to map the appropriation of space by users and their activities and thus discern territorialisation, if there is any. Mapping as a method has a long history in research on public space (cf. Gehl & Svarre, 2013). After a review of the literature on the subject, I decided to follow Ostermann (2009; Ostermann & Timpf, 2009) in his approach to mapping and visualizing the appropriation of space, adapting his instrument to my research objectives by also drawing on the experiences of Ganji (2018).

Mapping was carried out in 2-hours-slots, where all the people involved in stationary activities were mapped. Their approximate geographic location as well as different characteristics were recorded via QField, an app that is built as an extension for the QGIS software (for screenshots of the app, see Appendix C). Originally, it was planned to carry out the mapping sessions in three timeslots (8 a.m. – 10 a.m., 12 p.m. – 2 p.m., 4 p.m. – 6 p.m.). However, due to very few stationary activities in the morning hours, the number of timeslots was reduced to two (12 p.m. – 2 p.m., 4 p.m. – 6 p.m.). Mapping was *not* carried out on Saturdays, due to a lack of resources and because the number of Saturdays was limited and rather used for the intercept surveys.

The activities included in the app's data input form had been collected by unstructured observations during a pre-test of the behavioural mapping, and during the first screening sessions. They were then sorted, checked against the Public Life Data Protocol Data Specification (Gehl Institute et al., 2017) and structured into a customized list of activities. The display of the entered data on the app was programmed in a way that made the single points (each representing one person) disappear when a departure time was entered. Thus, a clearer

layout and less confusion when entering the data was achieved. This method (one point per person) has a limitation in that I was not able to capture the dispersion that stationary activities often take ('activity footprint', Ostermann, 2009). Instead, for persons who moved in the course of their activity, I tried to record the point where they were located during most of their activity.

The output of this data collection method consists of shapefiles (geographical points plus attributes) which were analysed with GIS software. The attribute data are also stored in conventional data format, to allow for statistical analysis. The final datasets combined behavioural mapping data from both waves, ($n_{\text{Lindenplatz}} = 707$, $n_{\text{Hallwylplatz}} = 320$, $n_{\text{Idaplatz}} = 419$, from a total of 24 hours of behavioural mapping; see Appendix C for code book). The results were partly reported in an article (Chapter 5). Complementary material can be found in Section 4.6.

Method of Analysis: Kernel Density Estimation

Working with data that is similar to the data I collected by behavioural mapping, Ostermann (2009) proposes kernel density estimation (KDE; Waller, 2011) as an approximation to understanding the appropriation of space. It is based on the assumption that individuals not only occupy the space that is strictly necessarily to accommodate their bodies, but that appropriation also covers the personal space in a body's immediate surroundings which is usually only entered in certain circumstances or by individuals to which one has a close connection (Hall, 1966/1990).

For point data such as the data collected by behavioural mapping, KDE estimates a curved surface for each data point. The kernel surface resembles a mountain (the kernel) in an otherwise flat environment. The mountain's peak is at the location of the individual (where it has the 'highest density' in terms of appropriation) and its height decreases with a certain rate as the distance to the individual increases (appropriation is 'less dense' further away from the individual). The overall density is estimated by adding the kernel surfaces of all individual data points, i.e. 'adding up' the mountains. The result is a probability surface indicating the density of space occupation. A spot with higher density means that more people carry out activities in this place.

The method is particularly well suited for the scope of this research because a) individual data points can be attributed a weight, and b) KDE can be carried out separately for different groups, allowing to explore their patterns of space appropriation and how they differ from each other. Individual data points are weighted by the number of minutes people spent in the squares, resulting in a higher density ('stronger appropriation') the longer an activity took. The second advantage allows the comparison of patterns of space appropriation by men and women. The kernel density was estimated for the two gender groups separately, and a 'relative density of

gender' (Ostermann, 2009, p. 111) was calculated by subtracting the estimation of male density from that of female density. The result can be displayed in what I call gender heat maps, showing spots where men's appropriation of space is stronger than that of women, and vice versa.

KDE was carried out in QGIS, an open-source geographic information system (GIS) software, using the KDE tool provided. For the personal space, a radius (i.e. the spread of the kernel) of 10 metres was assumed based on Ostermann's specifications (2009, p. 97), and a Gaussian kernel estimation was employed. Raster size was set to 1 metre, and the variable 'minutes spent' was used as a weight for the individual data points.

The results of the KDE analysis are reported in Section 4.6.

3.3.3. Unstructured Observation

An essential part of the fieldwork consisted in spending time in the squares and observing what was going on. On the days dedicated to screening and behavioural mapping (see previous sections), I spent the time in the intervals between quantitative data collection sessions doing unstructured observation (Byrne, 2021). The method could also be called participant observation or ethnographic since my activities resembled the daily activities of everyone else (people-watching, drinking a coffee, eating lunch, etc.), thus participating in the everyday practice of public life in the square (Lüders, 2004). However, it was also non-participant in the sense that I did not interfere with what was happening and only occasionally engaged with people. I usually settled on a bench or an edge with a good view of the square and wrote down observations in a notebook. The main objective was to observe people, their use of public space, their engagement with other people and the material artefacts in the squares, and the atmospheres thus created. I also took pictures and recorded conversations I had. Sometimes I was approached by people asking what I was doing, and I also started conversations with shop owners, maintenance officers, waiters at cafés, police officers, etc.

The data collected were useful for me personally to better understand the squares, their rhythms, and how people appropriate the spaces. While the unstructured observations guided analysis of the squares' affordances (Chapter 6), some of the material that has not been used in the article is reported in Sections 4.3 – 4.5.

3.3.4. Intercept Survey

The most comprehensive set of data on users' characteristics were collected by surveying people while they spend time in the squares or pass by. The theoretical population consists of all the people using or crossing the square. For practical and ethical reasons, however, the study population was limited to people who look to be over the age of 18 and are present in the squares at the time of surveying (see below). The goal was to capture the co-presence of people and therefore survey as many people as possible. To this end, I carried out the survey with the help of up to five student assistants (i.e. a maximum of six interviewers in total), depending on the number of people expected in the square (cf. screening, Section 3.3.1). The survey consisted of a paper-and-pencil questionnaire administered by the researchers.

The interviewers were trained in a two-hour session. After a short introduction to the project and to the basic concepts of survey research, they familiarized themselves with the questionnaire. They first surveyed each other to get a feeling for the questionnaire, before testing it once under realistic circumstances in public space. Interviewers were also handed out a sheet with coding instructions. We also practised approaching people to maximize the response rate.

During the survey, the interviewers were not wearing a uniform but had a name tag with the logos of the University of Lausanne and the ETH Zurich. The questionnaire contained closed or semi-closed questions on the use of the square, the participant's relationship to the neighbourhood, and sociodemographic characteristics (see Appendix D for the full questionnaire). The questionnaire took about three to five minutes to answer (not including chatter and explanations). However, in practice, the questions sometimes stimulated comments going beyond the scope of the questions. In this case, the interviewers had been instructed to take notes of interesting comments and to ask for contact details in case the person might be available for interviews in Part III. The actual time the interviews took was not recorded. However, on average, an interviewer conducted 8.4 interviews per hour.

The questionnaire was designed in German, and then translated to English and French to account for the high percentage of people with different native languages in Zurich (around 25 %, Statistik Stadt Zürich, 2021a). Depending on the abilities of the interviewers, some interviews have also been carried out in Italian or Spanish.²⁵

Timeslots for the survey were fixed to 8 a.m. – 10 a.m., 12 p.m. – 2 p.m., 4 p.m. – 6 p.m. on a normal weekday (Tuesday or Thursday) and 12 p.m. – 2 p.m. on a Saturday.²⁶ The City of Zurich's

²⁵ Considering the very factual nature of the questions, mistakes or inaccuracy during translation are not considered an issue.

²⁶ In the case of Lindenplatz, the timeslot had to be moved to 2 p.m. – 4 p.m. due to the farmer's market taking place in the morning.

law on the use of public space demands that everyone carrying out a survey in public space obtain the authorization from the local police, indicating the dates and times of surveying. The authorization was granted for both waves of the survey in 2021.

Apart from the practical limitations of not being able to approach everyone, the sample was further reduced by people refusing to participate in the survey. To keep track of possible biases in the data, refusals have been recorded by the interviewers by filling out a simple tally sheet, differentiating between different apparent age groups and genders. This allowed calculating the response rates. On average, 36.4 percent of approached people were willing and could spare the time to participate. Response rates varied between the squares: it was 32 percent for Lindenplatz, 34 percent for Hallwylplatz, and 46 percent for Idaplatz. It also varied according to apparent age and gender. For those two variables, however, using Pearson's chi-squared test²⁷, the refusals and the interview sample (and a sub-sample of only those people who live in the neighbourhood of the squares) could be tested for significant differences to the neighbourhood population. No significant differences were found. It can therefore be assumed that with respect to age and gender, the sample is fairly representative. However, because other characteristics are not known for people who refused to participate, their true distribution in the study population remains unknown. Yet, thanks to the research design, the intercept survey data can be triangulated with screening and mapping data in order to assess how the methods compare to each other (see Section 4.6.2).

The paper questionnaires were digitized and put together into one master dataset. It contains a total 1,474 individual questionnaires, 492 for Lindenplatz, 464 for Hallwylplatz, and 518 for Idaplatz. See Appendix D for the code book.

Method of Analysis: Binary Logistic Regression

Besides descriptive statistics, the data from the intercept survey were analysed using a binary logistic regression modelling (McNulty, 2021). The basic idea of regression modelling is that based on predictor variables and a model fitted to the data at hand, an outcome variable is estimated (Field, 2009). With the right data at hand, we could, e.g. predict a person's salary based on gender, education, and years of professional experience. While the aim can indeed be predicting values of the outcome variables, regression modelling gives us insights about relationships between two or more variables (but not causality!) also if we are not interested in predicting. In the above example, the model would for example also give information about

²⁷ Pearson's chi-squared test is a statistical test to assess the hypothesis that the observed frequencies match the expected frequencies under the assumption of statistical independence between variables in a cross-tabulation (Kühnel & Krebs, 2012, p. 343).

whether a variable is positively or negatively associated with the outcome variables, and the relative importance of a variable (what has a stronger effect on salary, one year of additional education, or one year of additional professional experience?).

Logistic regressions are regressions which have a categorical variable as an outcome variable. In the case of binary logistic regressions as used here, it is a dichotomous variable (i.e. a categorical variable with only two outcomes). With the regression, a model is fitted to the data that predicts the predictor variables' effect on the probability that the outcome variable changes from 0 to 1. In other words, depending on what values the predictor variables take for an individual, we can estimate this person's likelihood to, e.g., belong to group A instead of B, or to carry out one type of activity as opposed to another type of activity.

A binary logistic regression model was used to analyse which factors (i.e. which predictor variables) are associated with a higher likelihood of carrying out optional activities as opposed to necessary activities (see article on conviviality, Chapter 5).

3.3.5. Keeping Track of the Weather and COVID-19

To keep track of the conditions in which the fieldwork took place, I recorded the weather conditions (temperature, and whether it was sunny/cloudy/rainy) and the epidemiological situation of COVID-19. In the case of COVID-19, this included key figures on the incidence of new cases of COVID-19, hospitalizations, and deaths, the basic reproduction number (the number of persons infected per person infecting), and a weekly journal on how the situation evolved. The journal covered measures and rules in force and my subjective assessment of how people behaved. This data was recorded to come back to in case irregularities in the data would need an explanation. However, because the two waves of fieldwork produced two very similar samples, no special analysis was carried out regarding the influence of the pandemic on the data. Likewise, the weather was also not considered in the analysis of the data because all fieldwork took place in dry conditions. Minor effects of the weather cannot be ruled out, but are not the focus of this research.

3.3.6. Secondary Data and Diversity Measures

In view of the main objective of Part II, exploring the extent of diversity in the square in relation to the neighbourhood population, I needed data on Zurich's residents. The City itself has register data on its inhabitants that is available for research. This data includes the variables age, gender,

nationality, type of household, equivalized income²⁸, and a rough indication of the place of residence²⁹. This register data can be combined on an individual level with data from the Structural Survey that replaced the Swiss Census in 2010 that is available in a sufficient sample size for Zurich thanks to the city's size. This data also contains variables on the country of birth, people's highest level of education, their main language, and their employment status. I obtained data from the Structural Survey from the Swiss Federal Statistical Office via the Municipal Statistical Office of Zurich which combined it with their register data.³⁰

Owing to the relatively small-scale indication of a person's residence, it is possible to flexibly define 'neighbourhood radii' around the squares, independently from administrative spatial units which might not correspond to the catchment area of a square. The squares' neighbourhoods were therefore defined by a 500m-radius around the squares.³¹

The intercept survey data – the 'population of square users' – and the secondary data – the 'neighbourhood population' was compared by means of indices of diversity. As is the case for any index, indices of diversity compress a lot of data into one number, losing information in this process (Johnston et al., 2014). The same number may stand for very different patterns of diversity and the processes of formation of these patterns cannot be traced by looking at index numbers (van Kempen, 2005). However, the indices provide a measure to easily compare the level of diversity of different entities (square A and neighbourhood A, square A and square B, etc.), and to examine whether differences in the level of diversity are statistically significant.

The underlying idea of many measures of diversity is that the more evenly individuals are distributed across as many different groups as possible, the more diverse the population (the dimension of evenness, see Figure 4). Apart from this common starting point, there are a number of different indices. Each has its advantages and disadvantages (Fossett, 2017; Massey & Denton, 1988; Reardon & Firebaugh, 2002). I tested different indices: the Shannon-Wiener diversity index (Shannon, 1948), Leik's D for ordinal variables (Leik, 1966), local entropy index (Theil, 1972; Tivadar, 2019), and Simpson's index (Simpson, 1949). Since all of the indices lead to similar results, I decided to use the Shannon-Wiener diversity index. Besides its original use in biology

²⁸ The equivalized income is a person's hypothetical income based on the taxable income of the whole household. The concept assumes that a household benefits from economies of scale so that households which are composed of more than one person need less resources to reach the same standard of living. Members of the household are therefore weighted according to the OECD-modified scale (Hagenaars et al., 1994). The first member has a weight of 1, any subsequent adults and children over 14 get assigned a weight of 0.5, and children up to 14 years have a weight of 0.3. The equivalized income equals the household income divided by the weighted number of household members.

²⁹ The place of residence is roughly indicated by the ID of the 'Kleinquartier' in which the individual lives. 'Kleinquartiere' are spatial units which in most cases correspond to perimeter/street blocks. They represent the smallest unit of geostatistical aggregation in Zurich.

³⁰ Sources: Federal Statistical Office: Structural Survey; Canton of Zurich: tax data; Statistik Stadt Zürich: register data.

³¹ This corresponds to five to ten minutes on foot.

– measuring biodiversity (Hutcheson, 1970) – the index has recently been applied in urban studies to measure functional diversity (Bernabeu-Bautista et al., 2023; Lu & Giuliano, 2023; Yuo & Tseng, 2021). The measure is based on the concept of entropy and takes the value of 0 for a perfectly homogeneous population (one group). It increases with an increasing number of groups and with a more even distribution of individuals across these groups. The formulae for the index can be found in Appendix E.

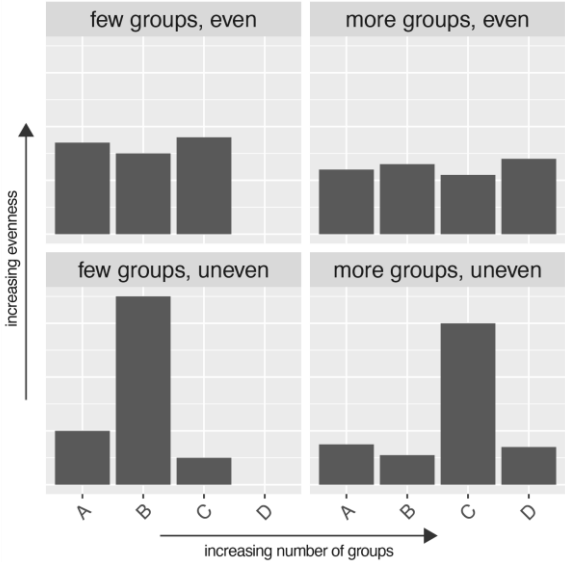


Figure 4: Illustration of the basic principle of diversity. Diversity increases with the number of groups and with the evenness of the distribution of individuals across the groups.

In this study, the number of groups is simply an arbitrary decision taken when categorizing the data. Since the absolute value of the diversity index depends on the number of groups, I am not interested in the absolute index values, but only in how they compare between the squares and the neighbourhoods. The diversity indices can also not be compared between different variables. To assess whether differences in diversity between the square users’ population and the neighbourhood population are statistically significant, Hutcheson’s t-test was used (Hutcheson, 1970).

Results from this comparison are reported in the book chapter ‘Mixed neighbourhoods, mixed squares? Exploring the diversity gap in public squares’ (Chapter 7).

3.4. Part III: Semi-Structured Interviews

Part III was designed to better understand the perception and experience of diversity, and semi-structured interviewing was deemed as most appropriate because it allows to directly approach topics but still leave leeway for participants to contribute new perspectives and touch upon other topics not anticipated by the interview guide. From the previous interviews in Part I, and

informal conversations in Part II, I was aware that one of the main challenges would lie in separating general attitudes from experiences and attitudes related to the specific squares and the actual users of the squares. I therefore decided to conduct ‘sedentary interviews’, modelled on walking interviews (J. Evans & Jones, 2011; see also Kühl, 2016). These benefit from the fact that participants ‘are prompted by meanings and connections to the surrounding environment and are less likely to try and give the ‘right’ answer’ compared to interviews that are conducted in enclosed settings such as participants’ homes, or cafés (J. Evans & Jones, 2011, p. 849). Participants of sedentary interviews, as opposed to participants of walking interviews, have furthermore been shown to have a tendency to produce more narratives on people than on the urban form (even though accounts on the urban form were still present), making them particularly suitable for the research question at hand.

In preparation of the interviews, I developed a purposive sampling strategy (Robinson, 2014), and an interview guide for the semi-structured interviews, both are outlined below (Sections 3.4.1 and o). Content analysis, i.e. the method I used to analyse the data, is explained in Section 3.4.3.

3.4.1. Sampling Strategy

The sample universe consists of all adults with the *possibility* of using the squares, i.e. who either live, work, study, etc. in proximity to the squares. Actual use of the squares was not a prerequisite, because to better understand the under-representation of certain groups, I also wanted to speak to people who rarely or never frequent the squares. For practical reasons, participants needed to fulfil two inclusion criteria: be aged 18 or over, and living/working/studying/etc. roughly within five to ten minutes walking distance of the square. The areas around the squares comprise a population of 13,000 (Lindenplatz), 10,000 (Hallwylplatz), or 20,000 people (Idaplatz). The only exclusion criterion was not knowing the square. The objective was to conduct approximately twenty interviews per square.

To ensure sample heterogeneity, the purposive sampling strategy designated quotas for different population groups which were presumably harder to reach or less likely to participate. Table 4 gives an overview of different population groups and their quotas (if indicated in the corresponding column), and the sample composition in general. Recruiting participants included contacting contacts from fieldwork in Part II, snowball sampling, asking square users in the square to participate (now or later), asking people in nearby public spaces to participate (now or later), hanging up posters or distributing leaflets in shops, cafés, neighbourhood organizations, housing cooperatives, and big housing estates. An article in Zurich’s local weekly

newspaper and a post on the website of one of the neighbourhood associations also helped the sampling efforts.

However, the quotas were not reached in all cases. The sample is considered to be sufficiently heterogeneous nonetheless: various age groups and people in different stages of life (students, parents of small children, pensioners, etc.) are present, there is a mix of different household types and considerable variation in socio-economic status (as estimated by me). Also, the sample is relatively balanced in terms of educational level. Most importantly, the sample covers different types of users. The initial categorization of users/users with a necessary use only/non-users proved too crude as participants show very different use patterns: some only ever pass by, some occasionally visit to shop or sit on a bench for a moment, and others frequently spend whole afternoons or evenings in the squares. Moreover, users differ in the significance and symbolic value they attribute to the square (see the article ‘Desirable or Unremarkable? Perceiving and Living with Diversity in Public Squares’, Chapter 8).

Table 4: Number of interviews per group. For categories with a quota, bold numbers indicate that the quota has been reached.

		Quota	Lindenplatz	Hallwylplatz	Idaplatz
Total			20	21	22
Gender	Female		10	13	16
	Male	8	10	8	6
Age	below 25	2	1	2	0
	between 25 and 65		14	15	15
	above 65	3	5	4	7
	above 75	1	4	2	1
Household type	Family with (small) kids	4	5	7	5
	Couple		2	2	5
	Single		6	8	11
	Flat share		4	4	1
	Other		3	-	-
Socio-economic status	Low	3	8	6	5
	Average		12	13	17
	High	3	-	2	-
Education	Compulsory	2	2	2	1
	Secondary	3	9	5	4
	Tertiary		9	14	17
Migrant background	Yes	6	5	8	5
	No		15	13	17
Living in the neighbourhood	Yes		15	12	19
	No		5	9	3
Use	Users		15	14	18
	Necessary only	3	5	2	2
	Non-users	6	-	5	2

3.4.2. Interviewing

The interview guide covered three main topics: participants' own use (or non-use) of the square, and how it might have changed during or due to the pandemic, their perception of other people, and, if the narratives produced did not already cover that, also their general views of diversity. The full interview guide can be found in Appendix F.

I did not mention the word 'diversity' or any of its synonyms, to see what vocabulary participants used. I then went along with their terminology. If the topic did not come up during the interviews, I did mention diversity towards the end of the interview. To the interviews, I brought a map of the square to be able to take note of any references to territories of certain people or groups of people.

Interviews took place between 17th May and 8th November, but most were conducted between June and August. In total, 63 interviews were conducted (Lindenplatz: 20, Hallwylplatz: 21, Idaplatz: 22). Most took place on-site, i.e. sitting on a bench or in a café in the squares. I made sure to always bring a document folder and a pen to mark the situation as an interview situation, so as to avoid any awkward situation for the participants that could be caused by being seen sitting on a bench with a person from the opposite sex/a different age group (Kühl, 2016). A number of interviews were conducted at people's homes or at their workplace (16), either on the participant's request or because it was the place where people were approached (i.e. in their workplaces around the squares). One interview took place online. At the beginning of the interview, the participants were asked for informed consent. The interviews lasted 45 minutes on average, were audiotaped and later transcribed verbatim by me and a student assistant who was hired to support the transcription of the qualitative interviews. Interviews that were conducted in Swiss German were translated to Standard German in the process.

3.4.3. Content Analysis

The semi-structured interviews were part of two separate analyses which are reported in an article each. The first analysis is concerned with the squares' affordances (see article in Chapter 6), and the second analysis with the perception and the experience of diversity in the squares (see article in Chapter 8). Both analyses were carried out with the software ATLAS.ti, and both followed the guiding principles of qualitative content analysis (Mayring, 2014). The aim of qualitative content analysis is to make sense of a corpus of data (usually text, but also other types of data such as pictures, sound recordings, plans, etc., could be analysed) by attributing relevant passages of text to a system of categories that is developed and refined throughout the process of analysis, either inductively, deductively, or in a combination of both (Kuckartz, 2018). Mayring puts special emphasis on the 'systematic and rule-bound' character of the analysis and an initial

coding system that is theory-guided. However, the method is open to inductive category development as well (Mayring, 2014).

The analysis is explained in more detail in the method sections of two articles (6.5 and 8.6).

3.5. Methodological Reflections and Positionality

Limitations of the Intercept Survey

In the survey data, there is presumably a bias towards people capable of easily conversing in German. Even though we offered the possibility of conducting the interview in English or French, we approached people in Swiss German. Often, we were not able to articulate this possibility because people signalled their unwillingness to participate right away or would be too much in a hurry to wait for an explanation in another language. This kind of refusal has not been recorded separately, the observation is solely based on my own and the student assistants' experience when approaching people for the survey. During fieldwork, we also felt that especially highly educated people took interest in our survey³². This might be due to a subjectively felt connection with research for people with a university degree, and a general feeling of uneasiness towards higher education institutions and people representing them on the side of people without a higher degree.

However, in the case of Lindenplatz and the neighbourhood Altstetten, where the percentage of people without Swiss nationality is higher than in the other neighbourhoods (36.2 %, vs. 33.6 % in Werd (Hallwylplatz), and 31.0 % in Sihlfeld (Idaplatz)), and the percentage of people without tertiary degree is higher (22.0 %, vs. 12.2 % in Werd, and 15.6 % in Sihlfeld), their respective shares in the sample are also higher (Stadt Zürich, 2021, 2023a). It can therefore be assumed that the observed diversity gap between the squares and their respective neighbourhoods (see Chapter 7) is not solely owed to methodology.

Limitations of Observational Methods

As the above-mentioned limitations of the intercept survey method show, the true population of square users is unknown. Also the other quantitative methods used in Part II have their biases. First of all, in the case of screening and mapping, the documented characteristics of people (age, gender, activity) are only *observed* characteristics. They might not coincide with people's stated characteristics. Especially the categorization into different age groups was sometimes

³² People very often looked annoyed by our approaching them, but then saw our name tags with university logos and were suddenly quite willing to participate. It happened more than once that people approached us, asking what we were doing, why we had not approached them yet and whether they could participate as well.

ambiguous. Secondly, the processes of taking notes in a hurry and digitizing the data are possible other sources of error, particularly relevant in the case of screening (Zweibrücken et al., 2005).

The advantage of using several methods to capture the uses and users of the squares is that it allows for methodological triangulation, i.e. the comparison of the different methods. In those cases where the same variable has been collected via more than one method, i.e. age, gender and group size, the triangulation suggests that there are no major biases in any of the methods that would seriously affect the data's reliability. The distributions of the variables age, gender, and group size of all methods is documented in Section 4.6.

Limitations of the Semi-Structured Interviews of Part III

As already pointed out in the description of the sampling, the quotas were not reached for all groups. It was particularly difficult to find and motivate people who have a neutral or negative view of the squares. This limits the possibility of finding out more about processes of non-belonging or exclusion which might be at work.

Besides non-users, it was also hard to find participants among people aged below 25 and people with a migrant background. This raises questions of representation: some groups are not (adequately) represented in the sample. Even though representativeness is not the aim of qualitative research, it is challenging in this case. In light of the research questions, it would have been important to give those who might find it harder to make their claims to public space the opportunity to speak. Also, people with a high socio-economic status were difficult to reach. This is less problematic in terms of participation in the production of space – they presumably have the resources to do so if they desire to. However, it is not possible to unpack the specificities of public space use of this group which would actually be important, too, if public space is to be a place where *all* parts of society come into contact (Madanipour, 2020, p. 182).

Positionality

I am aware that my own position influenced qualitative research (Rowe, 2014), and that also the lifestyles and position conveyed by the clothing of the student assistants and me during the intercept survey partly affected who responded and who did not. Being a white, German-speaking Swiss woman employed at a university meant that there was a social distance between many of the potential participants and me. This might have deterred some from participating, and others from disclosing their experience of diversity and general opinions on it openly in the interviews. It also means that my own perspective on others, influenced by my personal characteristics and history, may contain blind spots, i.e. issues of public space use that are off my radar. This research is therefore also to be seen as an unassuming attempt to make sense of

diversity in public space, acknowledging that the findings can only cover part of the reality of experiencing diversity in public space.

4. The Three Cases: Planning History and Design Analysis

This chapter introduces the context and the three squares selected during case selection (Section 3.1.2). I first provide the backdrop for this research by briefly presenting Zurich, the general everyday practices of public space use in the city (Section 4.1), and the city's public space policy (Section 4.2). In Sections 4.3 to 4.5, each square is then presented with an overview of the land uses in the surroundings, a site plan including urban furniture, a few pictures and some key figures. After a brief presentation of the neighbourhood in which the square is situated, the square's planning history is summarized in the following section, focusing on the initial planning of the square and on its last redevelopment. Then, I analyse the current design using the seven qualities of responsive environments identified by Bentley et al. (1985, see also Section 2.3.2). In Section 4.6 I discuss the everyday uses and users of the three squares. Section 4.7 provides a tabular overview of the squares' most important characteristics.

This chapter is based on three main data sources: the qualitative interviews conducted with landscape architects, city officials and neighbourhood associations (Part I, see Section 3.2.2), the design analysis (Part I, see Section 3.2.3), and the fieldwork carried out in Part II (see Section 3.3).

4.1. Context of the Study: Zurich, Switzerland

Zurich was chosen for this study because it is by far the biggest city in Switzerland (447,082 inhabitants in 2023) and therefore has the following advantages related to the topic. One, to observe and study diversity, a city needs to have a) a sufficiently diverse population³³, and b) an area large enough for the population to spread over distinct neighbourhoods. Two, to compare the square users' diversity to the neighbourhood diversity, secondary data on residents is necessary. Due to its size, the city of Zurich not only disposes of register data on its residents, but also of national survey data available in sufficiently large sample sizes even on the local scales. Moreover, this project further develops ideas and questions of my master's thesis where I had already studied Zurich with a focus on residential segregation (Widmer, 2018).

Despite its rather small size in global comparison, Zurich is often counted as one of the World Cities (Friedmann, 1986) or Global Cities (Sassen, 1996). Nowadays, the city has reached

³³ As mentioned above (footnote on p. 61), Zurich might be regarded as less hyper-diverse in terms of ethnicity than other contexts where diversity in public space has been researched (Barker et al., 2019; Peterson, 2023; Reichl, 2016; Zuijderwijk & Burgers, 2015) because roughly seventy percent of foreign nationals are EU/EFTA nationals and immigration from overseas is less frequent. Still, given that 46.9 percent of Zurich's population were born outside Switzerland, and over 60 percent have a migrant background, its population is culturally diverse.

the same population size it had in the 1960s when it had reached its first population peak (440'000). Suburbanisation processes then lead to a shrinking population during the 1970s and 1980s. The city started to grow again only in the 1990s, a trend that has continued since but started to slow down with the onset of the pandemic (Statistik Stadt Zürich, 2021b).

The city is divided administratively into twelve districts (*Kreise*, see also the topographic map, Figure 5), 34 statistical neighbourhoods (*Quartiere*) and 216 statistical zones (*statistische Zonen*). There is a further spatial unit called 'Kleinquartier' (in English: 'small neighbourhood') which are comprised of street blocks or approximations thereof (Stadt Zürich, 2023c).

The delimitation of districts and statistical neighbourhoods runs for the most part along the borders of the historical suburbs and villages that have been incorporated in the city in two stages in 1893 and 1934 (Lendenmann et al., 1993).

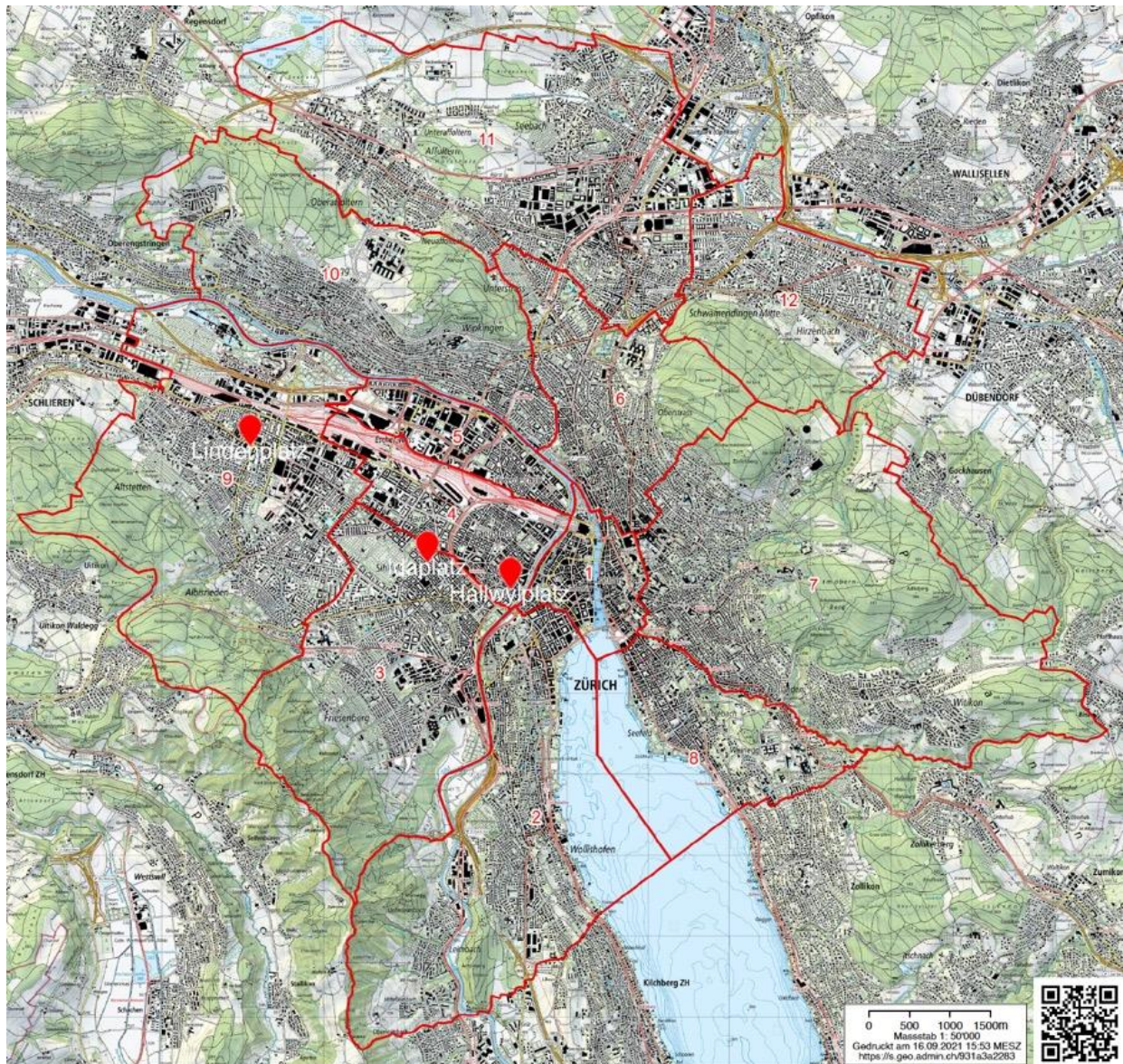


Figure 5: Topographic map of Zurich, the city's twelve districts and the selected squares. Source: swisstopo, Open Government Data City of Zurich.

Open public spaces are relatively abundant in Zurich, a city that boasts a lake that is largely accessible to residents across the city. The river Limmat which runs right through the city also provides access to blue space and is a popular spot for swimming in summer. Many neighbourhoods are not far from the woods that cover the hilltops (see Figure 5). In terms of open public space, the City of Zurich strives to provide its inhabitants and people coming to work in the city with a minimum of 8 m²/person (inhabitants) or 5 m²/person (working population) of open public space that is easily reachable by foot, i.e. not further than 400 m (inhabitants) or 200 m (working population) from their place of residence/work.³⁴ These numbers are benchmarks fixed in the regional structure plan (Stadt Zürich, 2017, p. 67). In terms of its resident population, the latest evaluation of open space provision found that in 2018, 62 percent of the 'Kleinquartiere' are adequately provisioned with open space (i.e. more than 6 m²/person), and only 5 percent show a serious lack of open space (i.e. less than 2 m²/person) (Stadt Zürich, 2019a), the rest of the city lying somewhere in between.

Practices of public space use in Zurich resemble those of other European and North-American contexts (as described in Gehl & Svarre, 2013, for example). They are to a large extent leisure-related, and generally do not include the street trading activities that characterise public space in the Global South (Bodnar, 2015). An extensive applied research project on Zurich's public spaces and their use, commissioned by the City and conducted in 2004 (Gehl Architects, 2004), lists the following activities carried out in public spaces: shopping, outdoor seating & serving, recreation, physical activity, play, pausing, waiting, meeting, transit, and staging/attending events. Almost twenty years later, even though many of these activities are accompanied by smartphone use, they remain roughly the same as will be explained in more detail when presenting the squares (Sections 4.3 – 4.5).

Two specificities of Zurich regarding public space are worth a brief presentation: the instrument of expelling people from public space, and *sip züri*, a team of street workers.

Expulsion from public space

In Zurich, there is no specific legislation regulating public space use. However, since the Canton of Zurich's Police Act came into force in July 2009, the police has the instrument of 'expulsion from public space' specified in paragraph 33 of the law (in German: 'Wegweisung', Kanton Zürich, 2007). The instrument allows the police to remove a person and prevent them from entering a place for a maximum of 24 hours, or – in case a person had to be turned away or kept

³⁴ The World Health Organization recommends at least 9 m²/person of urban green space within 15 minutes walking distance. With 400 m (less than 10 minutes walking distance), Zurich has chosen a shorter distance. In international comparison, recommendations and actual supply differ widely. New York City recommends 10 m²/person, but most neighbourhoods have less. Hong Kong recommends 2 m²/person, and Johannesburg 24 m²/person (UN Habitat, 2018).

away from a place repeatedly – the police may impose a ban for a maximum of 14 days. The most important grounds for expulsion orders in the context of this research are the following three cases. Expulsion from public space is legal if 1) a person or an assembly of persons jeopardizes public safety and public order, or if 2) the person seriously endangers or harasses third parties, or 3) to protect the rights of individuals, especially their privacy.

This measure has been fiercely debated at the time of entering into force and shortly after and is critically viewed in its role of a control measure giving the police power (and room for interpretation). Not least, it has been criticized as being a form of aesthetic cleansing of urban spaces from noise and dirt rather than ‘a response to any real threat or criminal act’ (Litscher, 2013, p. 109). In Zurich, the expulsion orders have markedly increased from 1,703 expulsions in 2010 to 5,770 expulsions in 2011, then dropped to a slightly lower level (5,232 expulsions in 2012, Stadt Zürich, 2013). In 2013, the municipal police issued internal guidelines for expulsions which reduced their number. From 2013 to 2019, there was an average of 2,500 expulsions per year. During the COVID-19 pandemic, the number of expulsions increased again due to violations of the restrictions on assemblies (10,335 expulsions in 2020, 5,142 in 2022; D. Balogh, Stadtpolizei Zürich, personal communication, December 21, 2023).

Sip Züri

The City of Zurich has a specialized team of social workers employed for and trained in mediating conflicts in public space, *sip züri*. The acronym ‘sip’ stands for safety, intervention, and prevention, the guiding principles of the street workers. In their work, they target ‘people at the margins of our society’ in need of help, as well as any other users of public space (Stadt Zürich, 2023d). In case of conflict, they try to engage with public space users, local residents and business owners to find a solution to the conflict. Importantly, they are not part of the police force and therefore intervene in the first instance and call the police when necessary as they have no policing powers themselves. The social workers of *sip züri* can be seen circulating around the city on cold nights or when events happen, but they are not an unusual sight also on ordinary days, especially in proximity of spots where people experiencing homelessness gather, where drug dealing takes place, or where youth drinking is seen as problematic.

While the City of Zurich tries to make an effort to facilitate ‘a tolerant living together’ in public space with its *sip züri* team (Stadt Zürich, 2023d), the same team has also been criticized for being a ‘behavioural police’ (Fritzsche, 2017) and can be seen as exercising exclusionary ‘soft power policing techniques’ (Piñeiro et al., 2023). Overall, however, public life in Zurich seems to be less formally regulated in comparison to other European and US-American cities, with no

laws on antisocial behaviour or on public drinking, or curfews for young people being in place (Demant & Landolt, 2014).

This sets the backdrop against which public space practices in Zurich and this research project can be better understood. Another important element of context is the City of Zurich's public space policy which I will discuss in the next section.

4.2. Zurich's Policies Regarding Public Space and Diversity

4.2.1. Urban Space Strategy

In 2006, the local government of Zurich passed a strategy concerning public space called 'Stadträume 2010' (in English: 'Urban Spaces 2010'; Stadt Zürich, 2006).³⁵ The strategy is based on an internal assessment of the strengths and weaknesses of public space in Zurich, and on a study by Gehl Architects (2004) whom the city commissioned to evaluate public space from an outside perspective.

The public space strategy provides a framework for the design, redesign, or redevelopment of public spaces. Its main aims are a clear hierarchisation of spaces in order to enhance the readability of the urban form and orientation, a coherent design language throughout the city, and high quality of stay for those using public space. The policy a) provides a vision and strategic goals for planning, designing and maintaining Zurich's public space, b) categorizes the relevance of all public spaces into four categories (international/national, regional/city-wide, neighbourhood-wide, local; see Figure 6; for the methodology, see Tiefbauamt Stadt Zürich, 2019b), c) provides a typology of public space (e.g. squares, traffic junctions, green spaces) and d) defines design guidelines per type of public space and a catalogue of standard urban artefacts such as benches, street lights, rubbish bins, bike parking, etc.

The City of Zurich distinguishes between seven types of urban public space (Stadt Zürich, 2023e):

- Green spaces and bodies of water
- Squares
- Streets and paths
- Transport nodes

³⁵ The strategy is being revised at the time of writing, together with the strategy for mobility (Stadt Zürich, 2023f) and is expected to be published in spring 2024. The City has also commissioned participatory measures and an exhibition to encourage the population to express their views and ideas about future public space and mobility (Brückmann et al., 2022). One part of the strategy, 'Bedeutungsplan Stadträume' (the plan indicating the relevance of all public spaces) had already been updated in 2019 (Tiefbauamt Stadt Zürich, 2019b).

- Engineering structures (e.g. bridges, underpasses)
- Public transport stops
- Parking areas

The typology provides guidelines per type of space which have been agreed upon by the City's various departments and services involved in the planning, designing and maintenance of public space. The guidelines therefore facilitate the design process as well as internal processes regarding the management of these spaces (for the role of typologies, see also Section 2.3.1).

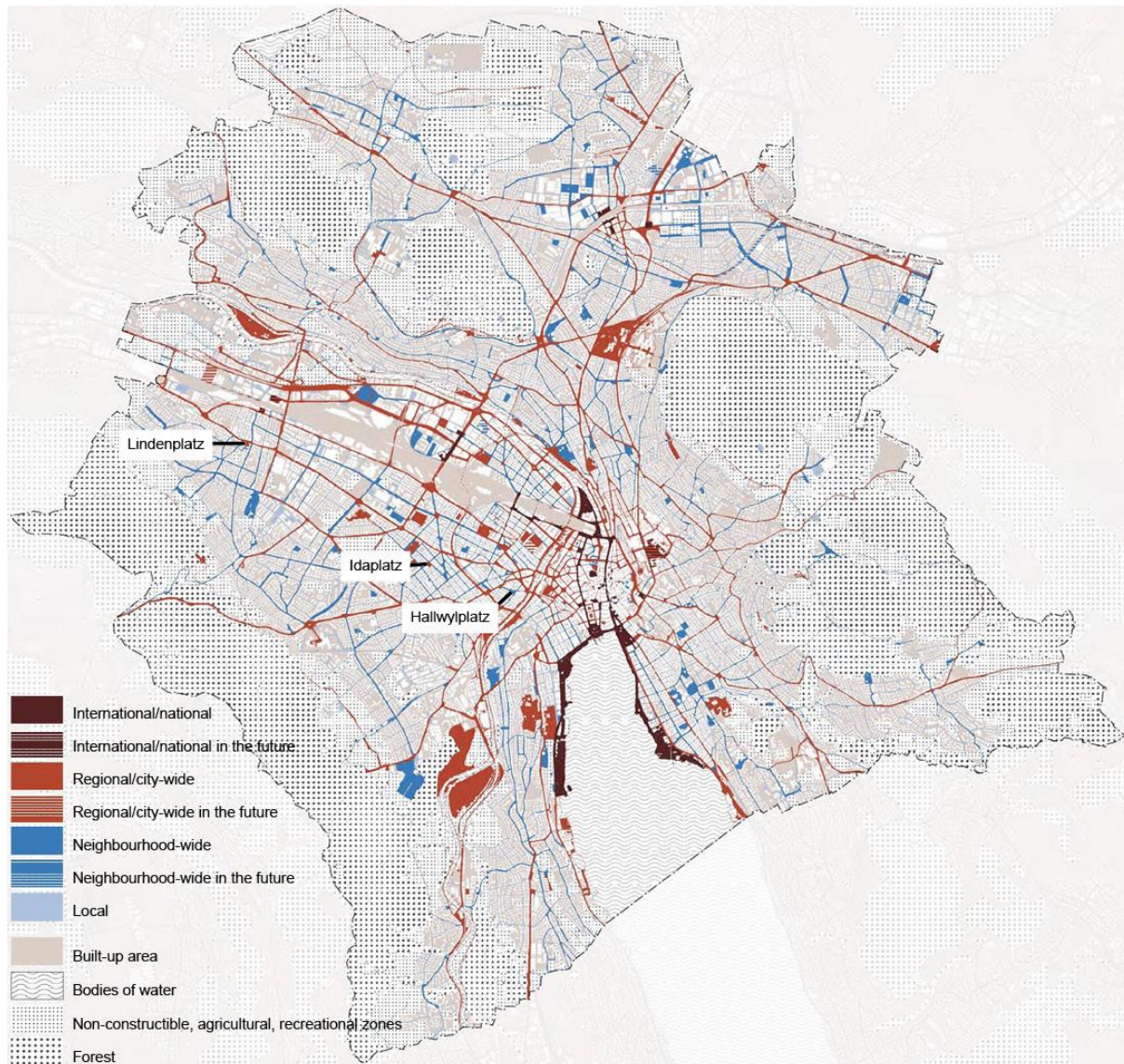


Figure 6: Relevance of public spaces in Zurich. Source: 'Bedeutungsplan Stadträume' (Tiefbauamt Stadt Zürich, 2019a).

The strategy 'Stadträume 2010' itself does not contain any references regarding the diversity of users. The diversity of uses is mentioned as one of the challenges of dealing with the many claims on public spaces (Stadt Zürich, 2006, p. 3). However, within the design guidelines for squares, the City states that squares are fundamental to the public life: square users should be able to

spend time in public spaces and engage in social and cultural exchange (Stadt Zürich, 2023e). This hints at the role public space can have for public life (see Section 2.4) but no specific objectives are formulated.

While the primary intention of the strategy 'Stadträume 2010' is to create liveable public space of high quality and consistent visual identity, there are also financial and organizational reasons that motivate it. The strategy facilitates the mandating of the design process to external studios as well as the process of developing projects internally by the Office of Civil Engineering. The standardization also streamlines maintenance of public space. However, the strategy foresees an implementation of the standards as 'cost neutral in the long run' (Stadt Zürich, 2006, p. 21). The savings from standard projects leave room for extended design processes, more costly materials, and more art in public space in other projects.

The framework sets the rule that only for spaces with at least city-wide relevance an architectural competition can be set out. Spaces with relevance for the region, the city or the neighbourhood are usually designed in cooperation with external studios, whereas projects for local spaces are usually worked out internally, as we will see in the histories of the squares.

4.2.2. Housing Policy

Housing policy is relevant in the context of this research as it concerns one of the elements of the second research question (How does a neighbourhood's diversity compare to square users' diversity?, see Chapter 7 for results). Section 2.5 has shown that the composition of a neighbourhood's population may be linked – but does not have to – with the composition of users of public space.

In the 'Programm Wohnen' (in English: 'Housing Programme', Stadtrat von Zürich, 2017), the municipal government states its objectives in the domain of housing. It takes into account that in 2011, the voting population of Zurich voted in favour of a policy that aims at increasing the proportion of non-profit housing (provided by housing cooperatives and public housing) to one third of all rental flats by 2050. According to the 'Programm Wohnen', this aim – as well as the fact that the proportion of non-profit housing is high already (25 % in 2023; Stadt Zürich, 2024) – contributes to Zurich's heterogeneity in terms of place of residence. This in turn is seen as playing an important role in ensuring socio-political stability and a high quality of life (Stadtrat von Zürich, 2017, p. 5).

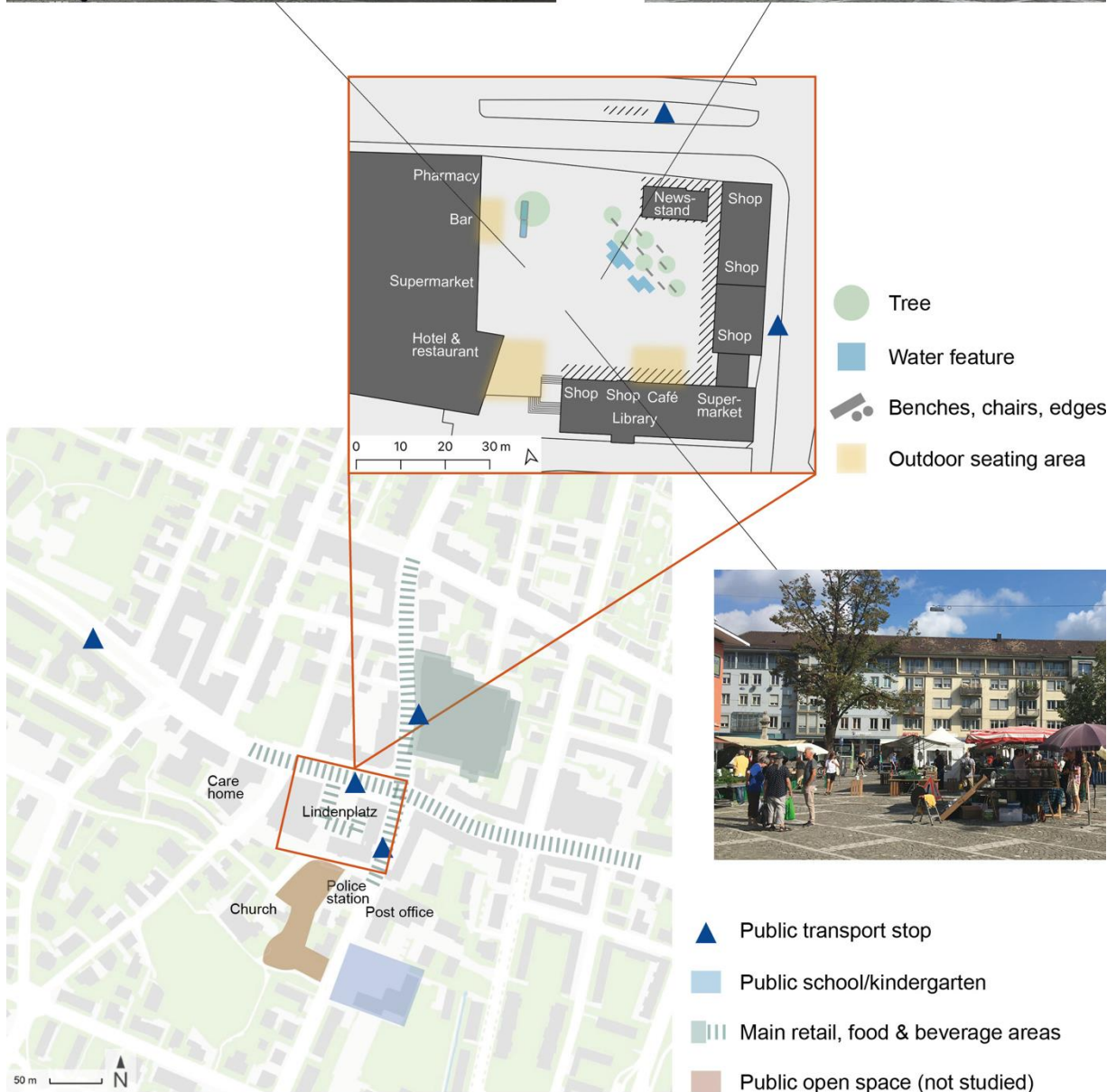
In Zurich, housing cooperatives have historically been an important actor in the housing market from the beginning of the 20th century. While their construction activities were at their peak before and after World War II, they have increased again since the 1990s (Duyne Barenstein et al., 2022). In order to maintain the heterogeneity in housing, the programme envisages that

the City will be active in housing policy in all neighbourhoods, and supporting housing cooperatives is one of the main pillars of this policy.

The City states that it actively seeks to make non-profit housing available to the main target groups, i.e. those for whom finding adequate housing on the free market proves more difficult: people with lower and medium incomes, older people, families, and students (Stadtrat von Zürich, 2017, p. 6). The City also rents out a proportion of the flats in its portfolio to refugees entitled to stay, and it aims at increasing the offer of assisted living options. At the time of writing, there is no evaluation of the Housing Programme.

4.3. Lindenplatz

4.3.1. Overview: Square and Context



Lindenplatz

Built: 1957/1958

Last redeveloped: 2010/2011

Size: 1,900 m²

Source larger map: online city map, City of Zurich, 2023.
The rest of the data was collected in 2021.

4.3.2. The Square's Neighbourhood: Altstetten

Altstetten, where Lindenplatz is situated, was chosen as a neighbourhood from cluster 3 (see selection process, Section 3.1.2). Altstetten is a former village that was incorporated into Zurich in 1934 and is now its westernmost and largest neighbourhood. It is characterised by a density that is below Zurich's average. The jobs-housing balance³⁶ is 1.4 in Altstetten, the same as in Zurich overall. Regarding the sociodemographics of its inhabitants, Altstetten has a comparatively narrow range of incomes as most incomes are at the lower end of the scale. Out of the three neighbourhoods, it has the highest share of family households (24 %), and also the highest share of people without Swiss nationality (36 %). Among those who do not have the Swiss nationality, the five most frequent nationalities are German, Italian, Portuguese, Spanish and Turkish.

Altstetten has undergone significant change. While buildings from the post-1940 era used to dominate, there are now many new and in some cases large-scale constructions scattered throughout the area (Statistik Stadt Zürich, 2023a). In its municipal structure plan, the City of Zurich outlined several new projects concerning transport infrastructure, housing, and industrial areas (Stadt Zürich, 2019b). Altstetten is an area designated for densification and is seen very much as a neighbourhood undergoing substantial transformation.

4.3.3. Planning History

In 1945, a group of 'villagers' from Altstetten saw the rapid growth of Zurich as a threat to their village centre. To counteract, they founded the cooperative *Initiativ-Genossenschaft Lindenplatz Altstetten* (in English: 'Pro-active Cooperative Lindenplatz Altstetten') with the aim of 'establishing and preserving a neighbourhood centre at the Lindenplatz in Altstetten' (Acker, 1970, p. 7). The city administration welcomed the private initiative and promised to finance the land acquisition necessary to build a neighbourhood centre. After years of convincing landowners and negotiations over plots of land, the cooperative and the City of Zurich succeeded in building a residential building, a hotel (sporting an event hall big enough for celebrations and assemblies of local associations), and a building for the district's administration (in German: 'Kreisgebäude'), and a square between them. The complex was inaugurated in 1958 (Acker, 1970). Nowadays, the whole complex, i.e. the buildings, the square, and also the former village fountain dating from 1773, is listed as a historical monument. The buildings on three sides – but not the square – are still property of the cooperative.

³⁶ The job-housing balance is defined by the ration of jobs to inhabitants in an area. Values above 1 mean there are more jobs than inhabitants in the area.

The square's most characteristic feature was (and is) its paving. Diagonally arranged stripes of light natural stones amid darker classical paving stones give the square's pavement the appearance of a giant rug (Figure 7). However, in the early 2000s, the paving was disintegrating in many places. This propelled the City Administration to initiate a redevelopment process in 2006. They mandated a landscape architect studio with experience in the preservation of historical open spaces with the redevelopment. Many actors were involved in the process as the City Administration asked for the local community's (residents, associations and other organizations) opinions in a formal participation process. In two workshops, needs and ideas were collected before the design process started.

The main work, starting in 2010, consisted in renewing the paving, disposing of several plant containers, and adding a new water feature and a new ensemble of trees and benches (Figure 8). Another objective was to increase the permeability of the square and to create clear visual axes. For that aim, the stairs connecting Lindenplatz to the lawn and the church grounds on the southern edge of the square were rebuilt with a simplified layout (interview R10). The square, thus brushed up, was handed over to the residents in 2011. The final project did not please everyone, in part because many of the ideas (e.g. a sandbox, a playground, or protection from the sun) were not compatible with the conditions imposed by the listing as a historical monument (Schüepf, 2009). However, in general, users of the square were happy with the result of the 'gentle' redevelopment as a survey showed (Marti & von Stokar, 2012).



Figure 7: Structured pavement in Lindenplatz, 2011. Source: Dokumentationsstelle Bauprojekte, Tiefbauamt Zurich.



Figure 8: Lindenplatz and the new ensemble of trees, benches and water feature, 2011. Source: Dokumentationsstelle Bauprojekte, Tiefbauamt Zurich.

4.3.4. Design Analysis

The last redevelopment of Lindenplatz was more a refurbishment of the existing square. Since it is listed as a historical monument, the aim of the project was not to redesign the square, but to renew its existing features, make it feel somewhat more friendly and welcoming, and strengthen its character of a neighbourhood square. The local community's ideas guided the design process (interviews R3, R9, R10).

Lindenplatz now consists of a large, relatively empty area with natural stone paving in a pattern similar to the original one. Towards Badenerstrasse in the north, the square is partially enclosed by a one-storey building that contains a newsstand and public toilets. Inside, two elements structure the square: on the one hand, the large old lime tree near the old village fountain, and on the other hand, the group of newly planted lime trees, the newly designed water feature that takes up the pattern of the pavement, and wooden benches (the classical model often used in Zurich). Behind this ensemble, there are several parking spaces for bikes. The rest of the square is empty and provides space for the biweekly market and other events. In the south-western corner of the square, stairs lead up to the hill where the church and the church hall are located. Right on top of the stairs, there is a small terrace with a street chess and two park benches. Billboards for election posters, electrical connections, and the anchoring for the

Christmas tree are infrastructural elements that support the use of Lindenplatz as a neighbourhood square.

In the following seven sections, the design of Lindenplatz is analysed according to the seven principles of responsive environments (Bentley et al., 1985).

Permeability

The design of Lindenplatz has the highest physical permeability of the three cases. There are at least five ways of entering the square (Figure 9), but since most of the northern edge is open in practice people can be observed entering the square from this edge in two ways resulting in six accesses. Most people approaching Lindenplatz from the east enter between the ensemble of trees and the old village fountain, whereas those coming from the west often turn sharp right and pass between the old village fountain and the building facades. The high number of entrances to the square provides a variety of different combinations of passing through the environment, many of which do not simply go along the edges but right through the open space in the middle of the square. This adds a bit of life to the space that can feel somewhat empty when it is not populated by the farmer's market.

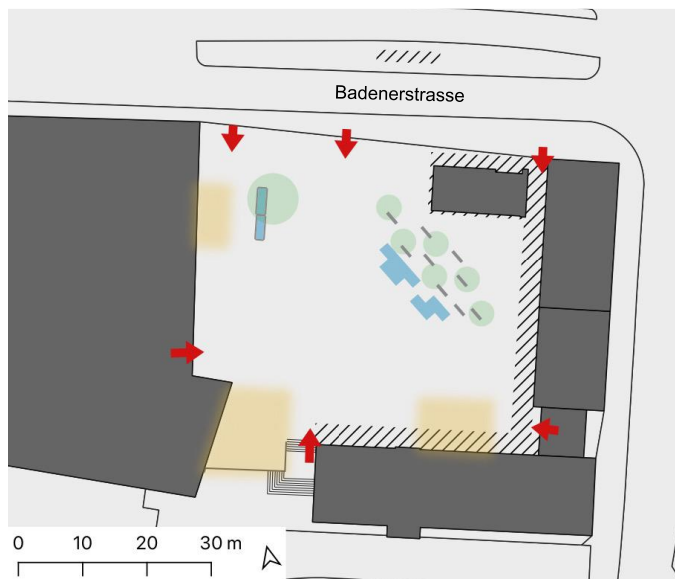


Figure 9: Ways of accessing Lindenplatz. Source: author's own.

The visual permeability has been enhanced in the last redevelopment of the square. The stairs on the southern edge were rebuilt and bushes and trees that had been somewhat obscuring this entrance were removed. Still, visual permeability lags behind physical permeability because the two entrances in the south-eastern and south-western corner of the square are foot passages cut out on the ground floor of the buildings surrounding the square. As such, they are rather dark and it is not immediately apparent where they lead to.

The square also offers a high permeability between private and public places. There are 15 entrances to buildings that are located around the edges of Lindenplatz. Most of them are entrances to ground floor amenities, but some entrances also lead to doctor's practices, the district's administration, flats, etc., providing an interface between the strictly public character of the square and more private functions located in the buildings.

Variety

Variety can be found on different levels (Bentley et al., 1985). In this section, I consider variety of building types, of ground floor uses, and variety of use within the square itself.

In Lindenplatz, the buildings around the square are quite uniform since they were all built at the same time and with the aim of creating a coherent centre for the neighbourhood (see Section 4.3.2). There is a purely commercial building (a hotel), on one side, a public building on the second side (containing the district's administration, a library, doctors and dentists), and a mostly residential building on the third side (flats, with some exceptions, e.g. a dentist's practice). The buildings have two storeys on two of the square's edges, and the residential building on the third edge has three storeys.

Variety of ground floor uses is high, since a broad range of day-to-day facilities can be found on the square's edges: 2 supermarkets, 5 other shops, 3 cafés, bars or restaurants, 1 newsstand, a pharmacy, and on the upper floors a library, medical practices, and the district's administration. Moreover, one of the supermarkets is more affordable than the other, and also the three venues for food and beverages have an offer that caters to different clienteles.

The square itself is used in many different ways (see Section 4.6). Important here is that besides the everyday use, twice a week a farmer's market is held and now and then cultural events are staged in the square. They are organized by the local neighbourhood association, the cooperative owning the buildings around the square, or other local communities.

Legibility

Just like the other squares, Lindenplatz is clearly recognizable as a public square by its form, a relatively open space that is enclosed by buildings. With a height/width ratio of 0.31, Lindenplatz falls just short of Bentley et al.'s (1985) definition of weakly enclosed (1:3, or 0.33), even more so with the northern side of the square opening on the adjacent street. However, because the buildings form a coherent ensemble, there is still a sense of enclosure. Orientation and internal legibility are facilitated by the clear layout without many artefacts. Since the redevelopment, the visual axis between Badenerstrasse and the church grounds in the south of Lindenplatz is open, increasing visibility and legibility. The newsstand on the northern side of Lindenplatz is

reducing legibility when the square is approached from this side, as the one-storey building makes the layout of the square less clear.

In terms of internal legibility, the old village fountain is certainly a landmark that has also a symbolic value for many of the long-term residents in the neighbourhood. But also the newer ensemble of the water feature in the ground and group of benches and trees forms a focal point within the square. The open space in the middle of the square clearly signals the square's function as a market square and as a location for events by and for the local community.

Robustness

The robustness of Lindenplatz in terms of animated edges is very high. Since almost all the adjacent buildings have active ground floor uses, the ground floor facades are very much oriented towards the square, with outdoor seating areas or shops displaying their goods outside. There are only a few stretches of passive facades (around one of the supermarkets and one of the shops). Lindenplatz is mostly 'colonized' (Bentley et al., 1985) from the edges: on the one hand, there is plenty of seating on the terraces of the adjacent cafés, restaurants and bar, and on the other hand, the ensemble of water feature and benches is also placed along the edge of the square. This is a positive affordance for people-watching: the seating opportunities offer a good view of the square.

The central area of Lindenplatz is not as animated and thus reduces the square's robustness. It must be kept open for the farmer's market and cultural events, however. The water feature helps in drawing some activity closer to the open space in the centre. Children frequently play there and when chasing around each other also make use of the central area.

In terms of seating, Lindenplatz offers around 200 places of commercial seating. At the time of fieldwork, there were nine benches (a tenth one was added later), and the old village fountain offers secondary seating. The stairs on the southern edge would also offer secondary seating, but in practice this can be observed only rarely. The benches are arranged in a way that only favours small groups (on one bench), or slightly larger groups that interact between two adjoining benches. However, only 'regulars' have been observed doing this, as it requires awkward seating positions. The stairs would in theory allow for bigger groups but they are hardly ever occupied, and if, then only by groups of two or three during lunch hours.

Taken together, all the non-commercial seating opportunities (i.e. including secondary seating) result in a seating ratio of 6.3 centimetres per 3 square metres. If the commercial seats are factored in, however, the ratio gets close to the minimum 30 centimetres per 3 square metres suggested by Bentley et al. (1985).

An additional feature that adds to the robustness of Lindenplatz is the public toilets in the newsstand building along the northern edge of the square. It considerably extends the amount of time you can spend in the square and could be one of the reasons the group of long-term 'bench-sitters' chose this spot (see Chapter 8).³⁷

The relatively sparse seating opportunities are sometimes also problematic in combination with the microclimate. In the afternoon, there is very little shade on the benches. Only the benches at the back of the ensemble are shaded by the trees. The central area can get very hot on warm summer afternoons. On the plus side, the arcades along two edges of the square, plus the passageways in the two southern corners can give shelter in case of rain.

Visual Appropriateness

The way Lindenplatz is designed gives many cues about its function and its use. The open space in the central area indicates that the square is used for gatherings and events even when they are not happening. There are three billboards that are put up before votes or elections, hinting at the square's function as a civic space (Carmona, 2010b). The letters saying 'Kreisgebäude' (in English: district building, building where the district's administration is located) and the local neighbourhood association's noticeboard both suggest that the square plays an important role for the local community.

Richness

Visual richness is inbuilt in the way Lindenplatz is paved (see Figure 7). The buildings surrounding Lindenplatz are relatively uniform, however. The water feature in the ground provides a tactile experience for those – mostly children – who engage with it, first because the water appeals to the sense of touch, and second because it has a different surface that can be experienced when splashing around barefoot.

The richness of the soundscape is limited by the traffic noise from Badenerstrasse on the northern edge, a constant sound in the background. However, when moving closer to the water feature or the old village fountain, the pleasant sound of trickling and splashing water can be heard.

Personalization

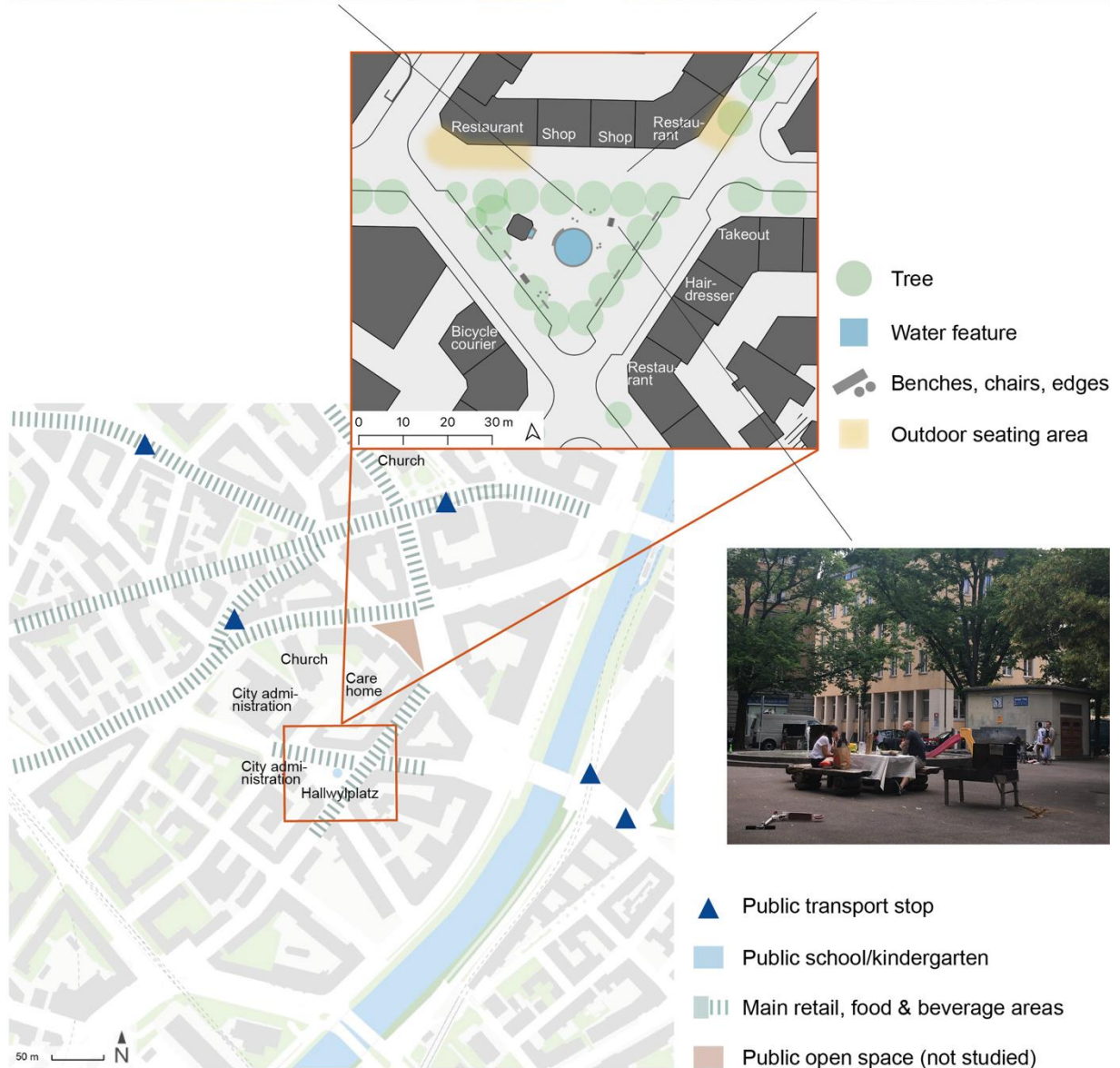
In Lindenplatz, only very few examples of personalization can be found. This could be because the square does not offer a lot of possibilities to personalize the environment, or because not a

³⁷ The Social Services of the City of Zurich offer counselling to the bench-sitters (and to any other people interested in the offer) by regularly sending 'A Bus' (in German: 'Ein Bus') staffed by social workers to Lindenplatz. The bus is aimed at 'people on the margins of society who spend time in public space in Zurich and who are supported by social welfare and/or supplementary benefits' by counselling on topics like housing, health, etc. (Stadt Zürich, n.d.).

lot of people are staying long enough or are invested enough in the square to devote time and energy to personalization. The outdoor seating areas are instances of practical personalization that also convey the style and atmosphere of the respective establishment, as are the displays in front of the shops. Other than that, space appropriation is only temporary and hardly ever leaves traces.

4.4. Hallwylplatz

4.4.1. Overview: Square and Context



Hallwylplatz

Built: 1895

Last redeveloped: early 1990s

Size: 1,450 m²

Source larger map: online city map, City of Zurich, 2023.
The rest of the data was collected in 2021.

4.4.2. The Square's Neighbourhood: Werd

Werd, where Hallwylplatz is situated, was chosen as a neighbourhood from cluster 2 (see selection process, Section 3.1.2). The neighbourhood is characterised by having one of the city's highest densities of inhabitants and employees, as a result of the high concentration of jobs in this particular area (jobs-housing balance: 3.2). The range of incomes is slightly above Zurich's average, and the median income in the neighbourhood is slightly above that of the city as a whole. Werd has a relatively low share of family households (16 %). Among the third of inhabitants who are not Swiss nationals, the five most frequent nationalities are German, Italian, Spanish, French, and British.

The neighbourhood is part of the area Aussersihl which saw a massive population growth during the 19th century largely due to the influx of members of the working classes (Statistik Stadt Zürich, 2023c). Historically, the whole district (district 4) has been a place where 'undesirable' practices and people were kept well at a distance. The district was and is notorious for its red-light area, the drug scene, a vibrant nightlife, and the presence of socially excluded groups and individuals. However, the area has undergone urban renewal, and this ongoing transformation has turned the neighbourhood into an attractive inner city residential area where rents are well above the average.

4.4.3. Planning History

Hallwylplatz came into existence in 1895 when most of the adjacent buildings were built. Further information on the rationale of the square could not be found. The more recent history of the square is better known. Since there has not been any redevelopment in the last decades, I focus here on the attempts to redevelop the square and several minor changes made to its design since the 1970s.

In the early 1970s, Zurich had a programme called 'Zürich braucht Plätze' (in English: 'Zurich needs squares'). Hallwylplatz was among the list of squares to be developed from sites without any attraction for public life (but with some parking spaces) into squares serving the local community. However, due to 'reasons of priority' (Stadtratsbeschluss, 1986) – or, in other words, a lack of resources – the square had not been redeveloped in the course of the programme. In 1979, planning was taken up again, and for the neighbourhood around Hallwylplatz and the square itself, a new traffic regime was developed. As a result, in 1982, Morgartenstrasse, the street framing the square on its northern side, was closed to motorized traffic which effectively increased the pedestrianized area of the square. In 1987 and 1988 further construction work was undertaken following the renewal of pipelines. Benches and streetlamps were added, board games were included in the pavement on the southern corner of the square, and the street

surface on Morgartenstrasse was levelled out. A bit later, in 1991, the flowerbed in the middle of the fountain was replaced by a shallow fountain. Also in the early 1990s, further traffic calming measures (speed limit of 30 km/h, curbs) were introduced, and the lines of trees were prolonged into the adjacent streets, reflecting a slight shift in priorities regarding the use of public space (Interview R8). These changes were always closely accompanied, if not initiated by an association of residents engaged in efforts towards a more liveable Hallwyl neighbourhood ('Interessensgemeinschaft Wohnliches Hallwylquartier IGWH', in English: 'Interest Group for a More Liveable Hallwyl Neighbourhood'). The group also furnished the square with a barbecue grill, between twenty and thirty chairs, a picnic table, a bright yellow-red slide and table tennis equipment. Initially, the grill and picnic table were funded by the City of Zurich's neighbourhood fund (in German: 'Quartierfonds'). Nowadays, this additional furniture is maintained and replaced, if necessary, by the IGWH or by other invested square users.

Since the 1990s, several attempts to redevelop the square or temporarily upgrade the square initiated by residents or the city administration have failed due to either financial reasons or because residents backpedalled because they feared a revitalization would be 'too successful', as was the case with the Idaplatz (Interview R3, R8, see section 4.5.1 for the planning history of Idaplatz).

4.4.4. Design Analysis

Hallwylplatz is a triangular square that, to the north, directly adjoins the row of houses since the street was closed for motorized traffic. On the other two sides, the square is bordered by two streets with cars parked along the sides. The square is paved, and at the southern corner, there is a chess and a nine men's morris embedded in the ground. The inner edge of the square is lined with lime and elm trees, among which wooden benches are placed on two sides of the square. In the north-eastern corner, there is a small building containing a transformer substation of the municipal electric power company (Aeschlimann, 2009). A drinking fountain is attached to it. A rectangular advertising column is located between the northern row of trees. In the centre of the square, there is a shallow fountain with a broad edge affording secondary seating. As mentioned above, there are additional furnishings that are not part of the official design of the square. These include two wooden boxes (on the south-western side), one filled with children's toys, the other with chess pieces. Furthermore, there is a barbecue grill, a table tennis table, a plastic slide, a picnic table, as well as some benches, coffee tables and numerous movable chairs.

In the following seven sections, the design of Hallwylplatz is analysed according to the seven principles of responsive environments (Bentley et al., 1985).

Permeability

With the three crossroads at its corners, Hallwylplatz has three main ways of accessing the square (Figure 10). Physical permeability is further increased by two other entrances: a passage left out on the ground floor of a building along the northern edge of the square, and a connection to the courtyard of the perimeter block on the south-western edge. For both, but especially for the passage in the north, visual permeability is slightly diminished because they are not clearly legible as passageways. Since one is a cul-de-sac and the other only an attractive connection for those living in these buildings or in the care home behind it, they are used much less frequently than the others. This leaves essentially three ways to pass through the square, i.e. along the streets, even though it still leaves passers-by with the choice of either the facade's side or the square's side of the street. Because of its triangular layout and the shallow fountain in the middle, people in Hallwylplatz rarely cross through the middle when simply passing through.

The interface between the public space and the surrounding buildings is also permeable in Hallwylplatz, but a bit less so than in Lindenplatz. From the thirteen entrances that are located on the edges of the square, nine lead to buildings with a public function. The others are entrances to private residential buildings.



Figure 10: Ways of accessing Hallwylplatz. Source: author's own.

Variety

The buildings around Hallwylplatz are all of equal height (five storeys) but have slightly different designs because they were built or renewed in different time periods. One building on the south-western edge of the square is an office building housing a part of the City Administration, while all the other buildings are mixed-used (offices and housing). A high-rise that is one block away

from Hallwylplatz, but can still be seen from it, adds more variety. Built in the 1970s as an office building for a bank, it is now used by the City Administration as well.

The variety of retail and food and beverage in the square is limited because not all buildings have public ground floor uses, and because the square is smaller than the two other cases. Besides offices, ground floor uses include a wine shop, an interior design shop, two restaurants with outdoor seating areas, two restaurants or takeouts (and many others nearby, catering to the many office workers who take out lunch), a hairdresser and a bicycle courier company. The variety of the food and beverage offer in the square itself would increase if a café or a bar were to open (as opposed to restaurants or establishments that only serve lunch).

Everyday use of the square is described in Section 4.6. With regard to variety, it can be said that due to the additional furniture put there by locals the affordances of Hallwylplatz are multiplied. Children playing with the toys that can be found in one of the boxes on the edge of the square are a common sight, as are larger parties of people celebrating a birthday or the end of a working week that make use of the various seating opportunities and tables. The table tennis table is also frequently occupied by either players or by people eating their lunch.

Legibility

The square is not as easily recognizable as a square as the two other cases, and it is also generally less known by people who do not live or work in the area. On approaching the square, the parked cars on the south-eastern and south-western sides obstruct the view until one is sufficiently close to see behind the cars. The motorized traffic on the same two sides leads to a clear demarcation of the square, but also the surrounding buildings provide a strong feeling of enclosure with a height/width ratio of almost 1:2. The trees surrounding the square on three sides and the small building inside it also make the square feel well framed.

The north-eastern corner of the square is quite a busy node. The northern edge (the street closed for motorized traffic) is an important cycle path to and from the city centre, and there are a lot of pedestrians on both streets. This sharing of space between cyclists and pedestrians can lead to conflicts because the path is clear and easily legible and thus sometimes tempts cyclists to higher speeds than pedestrians find comfortable.

The square in itself is highly legible. Due to its small size, almost the whole space can be overlooked at once. Orientation is easy, and the shallow fountain and the small building provide focal points within the square.

Robustness

In terms of animated edges, Hallwylplatz can be considered less robust than the two other squares. The two outdoor seating areas animate the northern edge, but the other two edges are

not animated and consist of less active facades. Moreover, due to the parked cars along this edge, the square is cut off from the buildings. On these two sides, the square offers seating along the 'inner edge'. The seven benches arranged in two lines offer a perfect overview of the square.

The middle of Hallwylplatz is well animated for two reasons. First, there is the shallow fountain right in the centre of the square. It is very popular with children, as it is shallow enough to stand inside and splash around in summer. At lunch time, the fountain functions as secondary seating for the mass of office workers who come to the square to eat lunch. The second reason is the additional furniture that has been placed there by locals (see Section 4.5.2). The movable chairs allow customized seating arrangements. They are key to the square's robustness, because they offer a lot of choice to square users: they can be placed near benches to accommodate bigger groups, they are often found near the shallow fountain to be closer to the children being supervised, in sunny spots when it is not too warm, and in the shade when the sun gets too hot.

Secondary seating opportunities can also be found along the base of the drinking fountain adjacent to the small building in the square. Taken together, the primary and secondary seating (including the additional furniture, but excluding commercial seating), results in a seating ratio of 11.6 centimetres per 3 square metres. Almost forty percent of the primary seating is provided by the additional furniture. Approximately 100 seats of commercial seating further animate the square.

Concerning the microclimate, the big lime and elm trees provide plenty of shade in summer. The asphalt surface can get quite hot in summer, but because of the trees there are never large parts of the asphalt that are exposed to the sun at the same time for longer. The square does not offer any shelter from rain nor any public toilets.

Visual Appropriateness

Overall, Hallwylplatz has cues that clearly indicate that this is a neighbourhood square that can be used for hanging out with friends and family, people-watching and for a quick break from the city centre's hustle. There are benches to sit and the trees provide a bit of green relief in the dense city centre. The additional furniture provides cues that are ambiguous: for some, they create a cosy, personal atmosphere and plenty of additional uses and choices, others find they make the square look run down, and to some, the initially private furniture has atmospheric affordances that signal a strong appropriation of the space (see Section 6.6.5).

Richness

In Hallwylplatz, the soundscape is very pleasant on the whole, despite the cars that drive by on two sides of the square. Because speed is limited and because normally there is no breaking and

starting of the engine, the burbling of the water in the shallow fountain and the murmuring of people in conversation is easily discernible.

Just like in Lindenplatz, the shallow fountain provides a different tactile experience, but other than that, there is not much richness of surface texture in Hallwylplatz, the square having the same surface as the surrounding streets.

Personalization

Hallwylplatz has been greatly personalized by the people who put the additional furniture in the square (and who continue to maintain and replace broken pieces). This has, on the one hand, improved the environment in a practical sense – the square’s affordances are multiplied by artefacts like the seating opportunities, the barbecue grill, the slide, the table tennis, and the toys. The two restaurants’ terraces and the area in front of one of the shops also have a personalized feel in that they reflect their respective style. It also signals to most people that someone (or several people) are taking care of the square which makes it feel lively welcoming.

On the other hand, the additional furniture is read by some as an affirmative personalization, i.e. displaying a certain lifestyle that a) might not appeal to everyone, and b) makes the space feel like the privatized front garden of the surrounding buildings (see also Section 6.6.5). During the unstructured observations, I took this note describing the additional furniture:

‘In general, the square gives a bit of a worn-out impression. This is mainly due to the furniture, which all seems to be quite old. Wood is crumbling off the picnic table, the grill is rusty, slats are missing from the wooden chair, another chair is missing the entire backrest. The small building is covered in graffiti and stickers.’

(Field note, 29.05.2021)

A further interesting feature of the additional furniture is that because it can be moved around, it leaves traces and thus signals its use to other users (thereby also contributing to visual appropriateness). In the early mornings, the arrangement of movable chairs often provides information about how a group of people was gathering the day before (Figure 11). Even if they may look messy, the toys that are often scattered around the square signal that children are playing in the area even if they are not there. The combination of beer can and toys found one morning in the fountain (Figure 12) indicates that sometimes, adults play too.



Figure 11: Movable chairs in Hallwylplatz. They indicate that a group of six or more people had been gathering in this spot. Source: author's own.



Figure 12: A can of beer balancing on top of toys in the fountain in Hallwylplatz. Source: author's own.

4.5. Idaplatz

4.5.1. Overview: Square and Context



Idaplatz

Built: ~ 1900

Last redeveloped: 2004-2006

Size: 1,600 m²

Source larger map: online city map, City of Zurich, 2023.
The rest of the data was collected in 2021.

4.5.2. The Square's Neighbourhood: Sihlfeld

Sihlfeld, where Idaplatz is situated, was chosen as a second neighbourhood from cluster 3 (see selection process, Section 3.1.2). Despite being similar to Werd, the neighbourhood where Hallwylplatz is situated, in terms of building structure, the share of family households (19 %) and the share of people without Swiss nationality (31 %), the neighbourhood was selected because it contrasts with Werd in one important aspect: it is a much more residential neighbourhood as indicated by the population density (which is still above Zurich's average, but below that of Werd) and a jobs-housing balance below 1, i.e. there are more people who live in the area than people who work there.

Among the people who do not have the Swiss nationality, the five most frequent nationalities are German, Italian, Spanish, Portuguese, and French. In terms of income, the neighbourhood has an income heterogeneity that is slightly below average, with a median income that is similar to that of the city as a whole.

The neighbourhood is characterized by workers' housing estates, but also boasts more representative, spacious perimeter block developments, especially in the area around Idaplatz. However, during the second half of the 20th century, Sihlfeld was not a quiet neighbourhood to live as the inner-city highway connection ran right through it. With the opening of a bypass in 2009, the streets became quieter residential street again. In recent years, the area around Idaplatz has become a coveted residential and nightlife zone with rising rents because of urban renewal and the increased attractiveness of the area (Statistik Stadt Zürich, 2023b).

4.5.3. Planning History

The buildings surrounding Idaplatz were built just before the turn of the 20th century, after the first round of incorporation of ten surrounding municipalities into Zurich. New residential neighbourhoods were planned according to a municipal construction law defining the layout of streets. The area around Idaplatz consists of perimeter block developments, a common choice for designing urbanizing areas also in other parts of Zurich. A rectangular area was left out, forming Idaplatz. This meant that the landowners had to forgo utilizing the space to the maximum but were able to attract a more affluent clientele for the flats adjacent to Idaplatz (Barth, 2018).

After several decades of a rather shadowy existence of being mostly a transit square (where in 1980 also ten parking spaces were added), the square got its present form in the course of a redevelopment process lasting from 2004 to 2006. Although the square's surface had been in a bad state of repair, the impetus for the redesign came primarily from the upcoming maintenance work on the underground pipes. Residents and neighbourhood organizations fiercely opposed

the first design plans presented by the City in 2004. As a consequence of this opposition, the plans were set aside and a participation process with the local residents was set up by the city's Office of Civil Engineering (Tiefbauamt Zurich, TAZ; Kocan, 2013). In line with the 'Strategie Stadträume' (Stadt Zürich, 2006; see Section 4.2), the design was done entirely by TAZ, i.e. no external design studios were involved in the process.

The aim of the whole redevelopment process was to 'wake up the [square's] potential for more recreational quality' and to make it more attractive, indicating a growing awareness for the importance of life in public space on the side of the City (Arnold, 2010; interview R1). This explicitly stated enhancement of the square's qualities has been almost prophetic: There is widespread consensus that the redesign was successful and that today, the square is bustling with urban life. Some consider the redesign even as too successful: residents complain about side effects (e.g. noise and litter) of the persistent cheerful atmosphere on warm evenings.

The TAZ's and its designers' ambition was to design the square based on 'the Parisian model' (interview R1). To avoid the feeling of a high-end design, however, standard elements and furniture from the City of Zurich's catalogue were used. The redesign itself encompassed a slightly elevated gravel surface with relatively fine gravel, the planting of new trees, some replacing existing but sickly trees, the removing of six parking spaces and the re-placing of a recycling station³⁸. The original advertising column and the fountain were kept and still provide a spatial focus.

4.5.4. Design Analysis

The redevelopment of Idaplatz included some major changes to the design, i.e. decreasing the number of parking spaces, relocating the recycling station, and renewing the pavement. In many ways, the rationale of the design followed a similar logic as the process in Lindenplatz. The aim was to follow the wishes of the local community wherever possible and to make the square more inviting (interview R1, R6).

The main feature of Idaplatz is its slightly elevated gravel surface. Two ramps as well as two flattened-out corners ensure wheelchair accessibility. Several trees are strewn around the square, leaving an open space in the southern corner. On the north-western edge of the square, there is a recycling station, and on the north-eastern side, there are car and bike parking spaces and a bike pump arranged along the street. Another small cycle rack is placed close to the

³⁸ The placing of the new underground recycling station had been heavily contested by the owners of the bar in front of which the new station was planned. The conflict was called a class struggle because the residents adjacent to the old recycling station were house owners, whereas the new station was planned in front of appartement blocks that were rented to tenants (Zumoberhaus, 2003).

outdoor seating area of the restaurant-café. Inside the square, there are several seating areas with benches. One group of benches is arranged around a drinking fountain. A circular bench around a tree complements the seating furnishing. A round advertising column is another distinctive feature of the square. On the north-eastern edge of the square, there are two electrical enclosures which are sometimes used as furniture as well (see Section 6.6.3).

In the following seven sections, the design of Idaplatz is analysed according to the seven principles of responsive environments (Bentley et al., 1985).

Permeability

Idaplatz is accessible from the four corners of the square (Figure 13). Along its edges, it can also be entered, leading to many more options of crossing the square in theory. In practice, however, this is observed only rarely, and the diagonal connection from the northern to the southern corner is the most important way of passing through Idaplatz. Even though it could be just as attractive to cross the square through the other diagonal connection (west-east), this is done less often – presumably because the square itself is less permeable in this direction as the outdoor seating area in the western corner and the benches slightly obstruct the passage in these two corners. The visual permeability corresponds entirely to the physical permeability. All the entrances and ways of passing through the environment are clearly recognizable.

The interface between the public square and the private buildings is given by thirteen entrances that are located on the edges of the square. Of these, only seven are entrances to ground floor uses with public character, making the square a bit less permeable on this scale than Lindenplatz and Hallwylplatz.



Figure 13: Ways of accessing Idaplatz. Source: author's own.

Variety

Most buildings around Idaplatz are residential. They are perimeter block developments, mostly in a similar style and all dating from the same period, i.e. the years before 1900. Because they have the advantage of having an open and relatively green space in front of them – Idaplatz –, the buildings are slightly more upmarket than in the rest of the neighbourhood (Barth, 2018). All buildings have five storeys. They are of different colours and most buildings have ornaments or decorated facades and thus offer high visual contrast while maintaining a coherent appearance. Most buildings are – apart from ground floor uses – residential, but a few offices can also be found around Idaplatz.

The ground floor offers quite a wide variety of uses. There is an organic food shop, a shop producing and selling trophies, pewter items and name plates, and a fabric shop. Besides a newsstand that also sells drinks and has a few seating opportunities outside, there are two bars, a restaurant-café, and an establishment that combines a shop with a restaurant.

At first glance, the variety of uses of Idaplatz is not very large as the square mainly offers seating. Nevertheless, the benches afford seating in many different combinations and can accommodate larger groups just as well as individuals engaged in people-watching or reading. The gravel surface also allows playing pétanque (see Chapter 6 for this and other affordances). The square is most heavily used in the evenings and on weekends (see Section 4.6) as a place to hang out and meet friends. Additional uses are the yearly open-air cinema and the famous ‘Idaplatzfest’ (a festival in the square with food, drinks, and live music).

Legibility

In Idaplatz, there are two sets of edges that define the square: the edges of the gravel surface provide an ‘inner edge’ while the surrounding buildings enclose the space further out. With a height/width ratio of 0.41, the square approaches a 1:2-ratio and therefore is well enclosed. The square is well recognizable at first glance and from all sides as an opening in the perimeter block grid. The northern corner of the square is an important node because two streets cross at a right angle, and one of the streets being an important feeder street for the tram stop close by, it is quite a busy crossroad. It is also the point of entry for crossing the square diagonally.

Internal orientation is facilitated by the rectangular shape of the square. There are no elements that would reduce visibility or legibility. There is no clear landmark or focal point that stands out particularly strong, but the advertising column is a point of reference for many people. The fountain could provide a focal point as well, but as it is rather small in size and encircled by benches, it does not seem to have this effect.

Robustness

The edges of Idaplatz are well animated and thus contribute to the square's robustness. The outdoor seating areas provide a lot of space to populate the edges, reaching quite far into the square. Moreover, the facades are composed of relatively small units with different uses in them, so even if a couple of them are relatively passive and do not offer any public use, taken together the buildings give a lively impression.

Due to exceptionally high number of benches (at least in the context of Zurich), the central area of the square is well animated. There are twelve standard benches, a round bench around a tree and a double-sided bench which corresponds to approximately four standard benches. The remaining open space is used mostly as a path for crossing the square diagonally and therefore seems 'occupied' most of the time as well, and if there is some open space left, it can be used to play pétanque.

The arrangement of benches can accommodate various social arrangements, in particular the ones grouped around the fountain in a circle, and the L-shape provided by the benches to the left and right of the double-sided bench. Still, there are many possibilities to be alone and keep one's distance, most easily on the row of four benches on the south-western side and on the round bench. The square offers very limited opportunities for secondary seating, however. Only the base of the drinking fountain can be used to sit on, although this affordance seems to be actualized only when all the other seating opportunities are taken since it is a bit too low to sit comfortably and have a good view.

All in all, the seating opportunities in Idaplatz result in a seating ratio of 8.2 centimetres per 3 square metres, excluding the commercial seating. However, if the approximately 220 commercial seats were added to this, the ratio approximates the 30 centimetres suggested by Bentley et al. (1985).

The microclimate in Idaplatz is very hospitable. The numerous trees ensure that there is always shade somewhere, and the gravel surface is noticeably cooler on hot summer days than the surrounding asphalt. Like in Hallwylplatz, there are no public toilets in Idaplatz, nor any shelter from rain apart from the trees.

Visual Appropriateness

Similarly to Hallwylplatz, Idaplatz provides clear cues that the square is a neighbourhood square which is primarily used for recreation. The benches indicate that this is a place to meet, to hang out, but also to be alone in public and watch others. It is not obvious that the square is also used (even if only rarely) for events like the open-air cinema and the Idaplatz Festival, because the open space used for it usually does not feel empty because of the outdoor seating and a bicycle

parking. However, it can be argued that this appropriately reflects the importance of everyday life in the square.

Richness

The acoustic quality in Idaplatz is very good as there is hardly any traffic noise. The square is well enclosed, so usually there is a pleasant mixture of voices that contributes to a lively atmosphere. The same effect, however, leads to complaints about noise on warm summer nights when the square is packed with people. Because the square itself offers many different places to sit down, one usually has a bit of choice of where (and next to which source of sound) to sit, but once a certain noise level is reached, it fills the whole square and creates a nuisance to neighbours (see Section 8.7.3).

The gravel surface in Idaplatz provides visual richness because it contrasts with the pavement of the surrounding streets, and a tactile richness as it feels differently when walking.

Personalization

Just like in the two other cases, the outdoor seating areas and the display areas of the shops give the square a unique character. Other examples of personalization in Idaplatz are not as obvious. There are usually a couple of stickers on lamp posts and on the benches, as well as graffiti on the electrical enclosures. The neighbours who plant flowers around the trees that line the street or in parking spaces outside buildings are also personalizing the space (Figure 14). What is more striking in Idaplatz than in the other squares is that many of the facades have balconies with personal elements like flowerpots or banners with political statements on them, so that the interface between the private and the public realm also feels personalized.



Figure 14: Personalized parking space in one of the buildings on Idaplatz. Source: Suzanne Dietler.

4.6. Everyday Use and Users

The previous sections gave an overview of the planning history and the design of the three squares, occasionally touching on uses and users. In this section, the focus is on these two: to complement the presentation of the cases, I describe how the squares are typically used (Section 4.6.1) and characteristics of the people who use the squares (4.6.2) based on empirical material that was collected during Part II (for the methodology, see Section 3.3). This additional material has informed the analysis that lead to the articles and the book chapter of this thesis (Chapters 5 – 8) but was not included in the text because of word limits.

4.6.1. Uses

Intensity of use

Before turning to the activities taking place in the squares, it is worth looking at the temporal dimension of the square use. With the data collected, it is possible to establish the intensity with which the squares are used throughout the day, and the amount of time people spend in the squares.

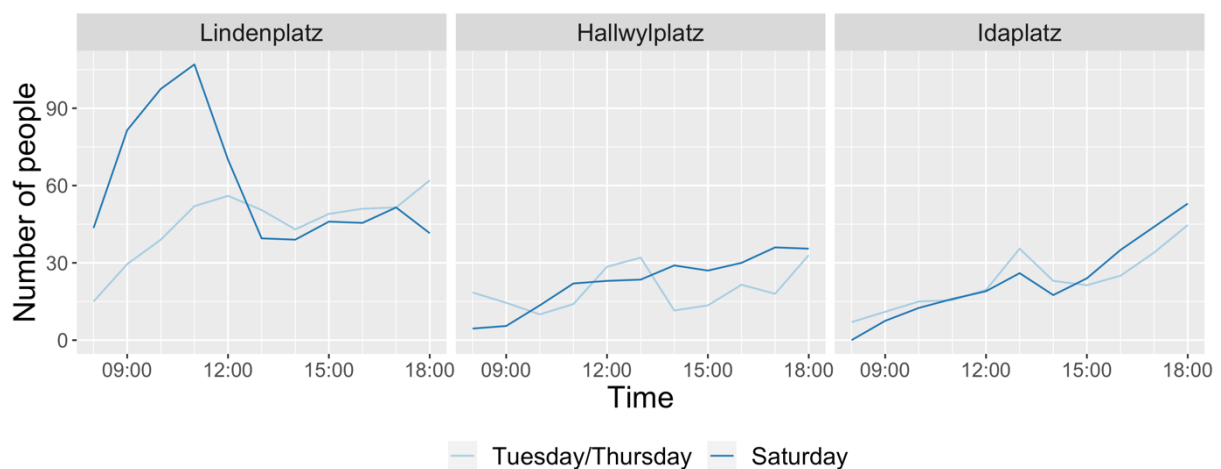


Figure 15: Number of people using the squares at each hour, 8 a.m. – 6 p.m. Data source: screening.

As can be seen from Figure 15, the number of people present in the squares varies between the squares and throughout the day. Lindenplatz, which is also the largest square, has more users on average than Hallwylplatz and Idaplatz. In this square, there is also a remarkable difference between weekdays and Saturday. On Saturday morning, the farmers' market takes place, attracting a lot of people and turning the square into a bustling neighbourhood centre (visible in the peak around 11 a.m.). On weekdays the intensity of use increases during the morning, with a slight peak around lunchtime, and remains relatively high throughout the afternoon. Between

5 p.m. and 6 p.m., the number of people increases again, mostly with people going to the supermarkets on their way home from work.

The number of people using Hallwylplatz is lower than in Lindenplatz, corresponding to its smaller size. On weekdays, there is a noticeable peak around lunchtime when the number of people in the square doubles as people from the surrounding offices flock to the square. On Saturday, the number of people increases constantly, reflecting the image of the square as a nice spot for a drink with friends and for playing in and around the fountain during warm afternoon hours.

A similar pattern can be found in Idaplatz, although the lunch peak during weekdays is less marked than in Hallwylplatz. In late afternoon, the number of people using the square is at its peak, both on weekdays and on Saturday because the square is a well-known place for grabbing a beer after work and hanging out on warm summer evenings (cf. complaints about noise in Section 8.7.3).

Time Spent in the Squares

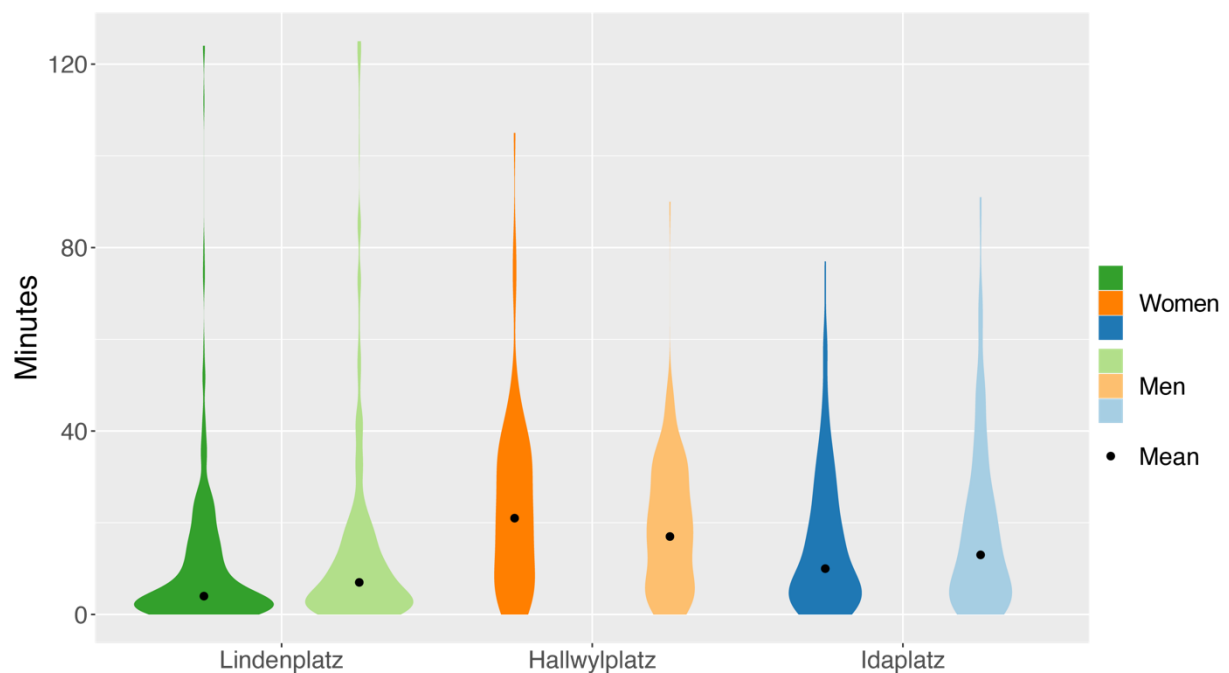


Figure 16: Distribution of the number of minutes that stationary activities last in each square, according to gender. Data source: behavioural mapping. Observation lasted two hours, sometimes a bit longer. Longer stays are therefore not reflected in the data.

The violin chart in Figure 16 depicts the time people spend in the squares when engaging in stationary activities, i.e. excluding those who just pass by. Data on stationary activities was recorded with behavioural mapping (Section 3.3.2). Wider sections of the violin indicate that this duration (measured in minutes) was observed more frequently. The skinnier the violin, the

more rarely the corresponding number of minutes was observed. Two violins per square show the frequency distribution for women and men separately.

The mean duration of stay is shortest at Lindenplatz for both women and men (11 vs. 15 minutes). In Hallwylplatz, it is highest (24 minutes for women, 19 minutes for men), and the duration in Idaplatz is in between the two others (16 minutes for women, 19 for men). The difference between the two genders in Idaplatz is not significant, however. In Hallwylplatz, the gender difference can be explained by the high number of female carers who supervise the children playing in the square and who therefore tend to stay in the square longer (see also Section 5.7.1). In Lindenplatz, the gender difference is most likely to be linked to the long-term ‘bench-sitters’ who are predominantly male (see Chapters 6 and 8). The effect of these bench-sitters can also be seen in the skinny sections of the Lindenplatz violins which indicate that, even if it is not a frequent practice, some very long stays do occur.

Variety of Activities

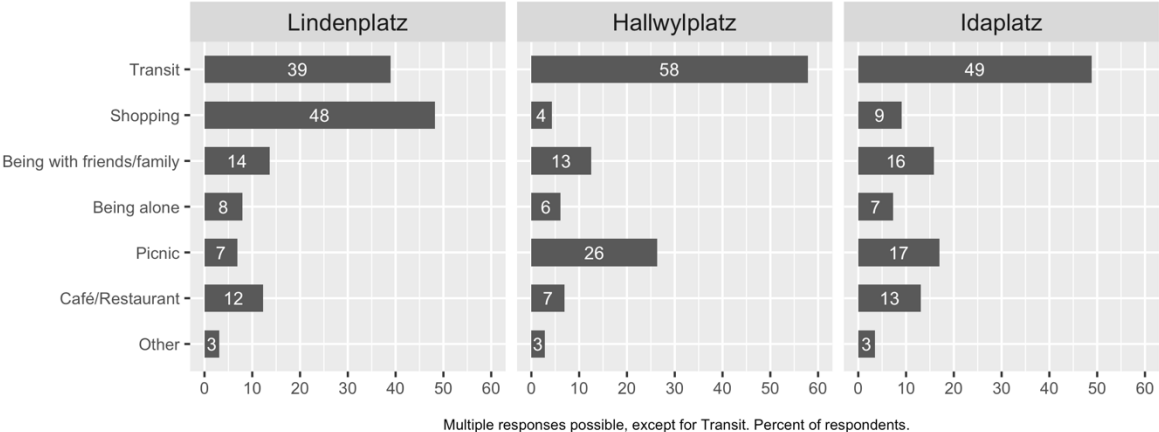


Figure 17: Activities carried out in the square at the time of being interviewed. Data source: intercept survey.

Even though activities are analysed in detail in the article ‘Conviviality in Public Squares: How Affordances and Individual Factors Shape Optional Activities’ (Chapter 5), the basic activities and their relative frequencies are briefly presented here as well (Figure 17) by using data from the intercept survey that covers all activities, i.e. not only stationary ones. This data also provides an idea of the importance of transit and shopping activities.

Transit is in fact a very frequent activity in all squares, but in Lindenplatz, shopping is the most frequent activity (48 %). In Hallwylplatz and Idaplatz, the percentage of people shopping is much lower as there are no supermarkets in the squares like in Lindenplatz. The other activities – hanging out with friends and family, hanging out alone, eating or drinking takeaway or food/drinks brought from home, or going to one of the cafés or restaurants – are similarly

important in the three squares. Picnicking, however, is a more frequent activity in Hallwylplatz presumably because of its popularity as a lunch place (see also peak in the intensity of use reported above), and in Idaplatz where having a drink on the benches is a common activity as well.

Other activities are rarely mentioned (3 %). They include sports, taking a pet for a walk, sightseeing, cultural events, political activities, parking, working, studying, etc. Chances are that people prefer other places for these activities which can be found nearby in all cases, e.g. parks, the woods, or libraries.

Location of Stationary Activities

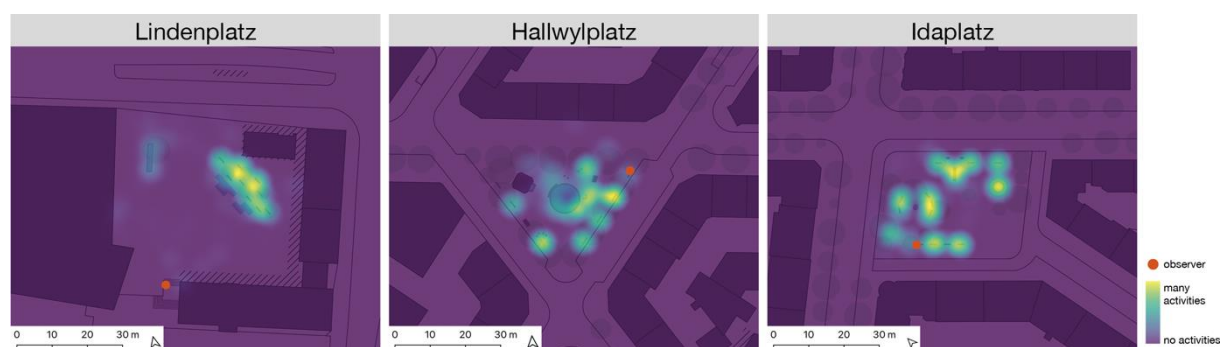


Figure 18: Location of stationary activities weighted by the duration of the activity. Data source: behavioural mapping. Activities in cafés and restaurants are not considered. In Hallwylplatz, the bench in the north-western corner was out of sight.

For stationary activities (i.e. excluding passers-by) that are not taking place in cafés or restaurants, the location of the activity can be mapped in heat maps (see Section 3.3.2). Figure 18 shows the density of stationary activities in the three squares, weighted by the duration of the activity. The yellower a spot, the more people carry out activities in this spot and/or the longer people stayed in this spot.

In the three squares, benches are the places where stationary activities concentrate. Stationary activities not only take place on the benches, but also in the immediate proximity of benches (e.g. people stopping to talk to someone sitting on a bench, children playing around parents or carers sitting on a bench).

In Lindenplatz, additional stationary activities take place around the old village fountain that is used as secondary seating. Splashing in the water feature near the benches is an activity that is frequently observed, but usually relatively short, or, if it is longer, it is attributed to one of the benches where parents/carers sit because children's play is centred around it. Another spot with a slightly higher density of stationary activities can be found at the entrance to one of the supermarkets on the western edge of the square. People stop to stand and chat with acquaintances they happen to meet or wait for their friends to finish their shopping.

In Hallwylplatz, stationary activities are more spread out over the square due to the additional furniture, the movable chairs especially, and the shallow fountain that affords secondary seating and prompts parents and carers to stand nearby when their children are playing. The heat map also shows that not all benches are equally popular with square users.

In Idaplatz, stationary activities take place almost exclusively around the numerous benches. Some standing can be observed as well but usually also in proximity of the benches, and sometimes people stop to stand or children play in the relatively open space in the southern corner, but usually for a short time only.³⁹ Additionally, sedentary activities can be observed in the western corner of the square where the outdoor seating area of a bar is also used outside its opening hours.

Gender Heat Maps

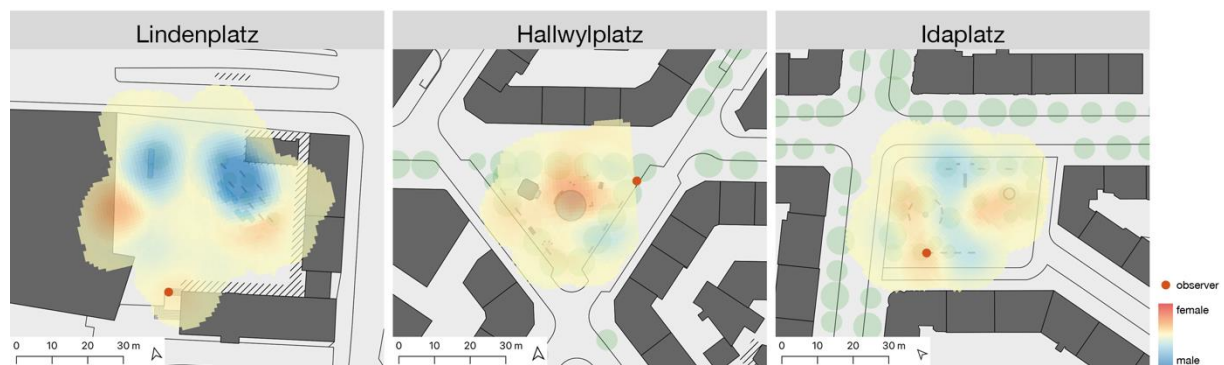


Figure 19: Gender heat maps, showing the relative density of gender. Data source: behavioural mapping.

Besides analysing the density of stationary activities, data from behavioural mapping can also be used to look at differences in the appropriation of space between genders (see Section 3.3.2).⁴⁰ In Figure 19, red spots indicate a higher relative density of women and blue spots a higher relative density of men.

The strongest relative density of men of all squares can be found in Lindenplatz around the group of benches. This finding was also observed during unstructured observation and has been confirmed by many comments during the intercept survey (Part II) and the qualitative interviews (Part III) along the lines of ‘The benches are always occupied by [predominantly male] alcoholics’. Supposedly, it is not only the gender of the alcoholics that produces this result, but also the gendered reaction to it: such comments were more frequently expressed by women, some also stating that they do not sit on the benches for this reason (see also Chapter 6 and 8).

³⁹ Longer stays do occur in the open space as well, e.g. when people play pétanque. However, during the behavioural mapping sessions in Idaplatz, this was not observed.

⁴⁰ Other differences, e.g. relating to age groups or the type of activity, could also be analysed. However, the sample size is too small to draw conclusions when more than two groups are being compared.

Another spot where men are more frequently encountered than women is the fountain in Lindenplatz that is often used as a secondary seating option, more frequently by men than by women. The one distinct spot in Lindenplatz that is slightly redder is in front of one of the supermarkets, where customers have been observed to stop for a short chat or to wait. Presumably, the higher relative density of women in this spot can be attributed to the higher share of women doing grocery shopping.

In Hallwylplatz, there is only one spot where there is a marked gender difference in space appropriation. The whole area around the shallow fountain, but in particular, the area to the north of it, is often used by mothers or female carers to watch children play and splash in and around the water. This is probably related to the finding that women stay longer in Hallwylplatz than men (cf. Time spent in the squares, p. 117).

In Idaplatz, the patterns of stationary activities are not particularly gendered. Survey data shows that a similar share of people was accompanied by children when surveyed as in Hallwylplatz, ruling out the possibility that the less gendered pattern occurs because the square is less popular with children and their (mostly female) caretakers (see also the result of the logistic regression in Chapter 5). However, during unstructured observation, I took a note that could explain why there is no marked gender difference in the duration of stays and the pattern of space appropriation: ‘Today, there were clearly more fathers supervising children than mothers’ (27.05.2021). Several other notes, too, suggest that the share of male caretakers is noticeably higher in Idaplatz than in the other squares.

Attributes

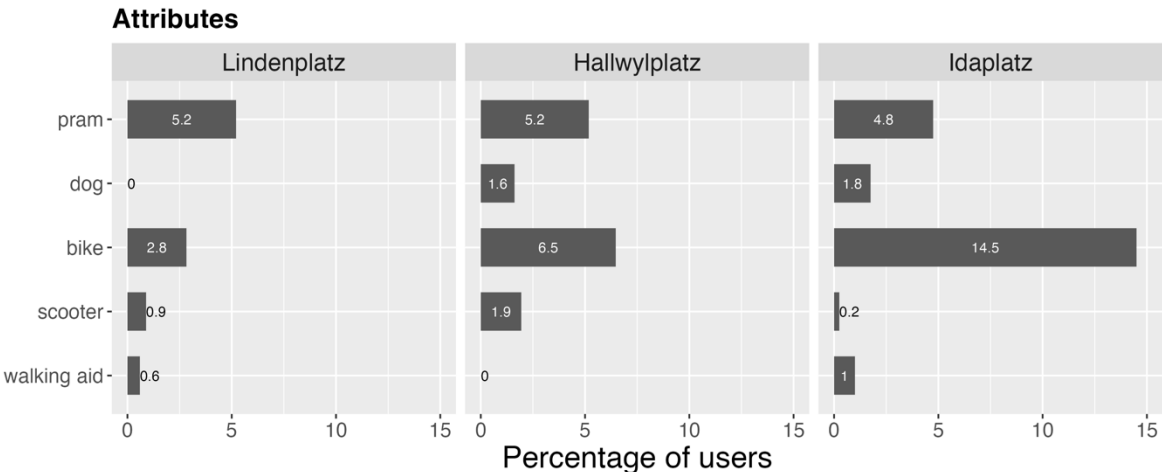


Figure 20: Attributes of people carrying out stationary activities. Data source: behavioural mapping.

With the behavioural mapping method used in Part II (see Section 3.3.2), people’s ‘attributes’, i.e. things or dogs people take with them, were also recorded (Figure 20). The share of people

that push a pram is around five percent in the three squares. Dogs are more frequent in Hallwylplatz and Idaplatz (approximately 2 % of square users with stationary activities had dogs with them). Because only stationary activities were mapped, taking the dog for a walk is not included in these figures. Even if the absence of dogs in Lindenplatz is coincidental, it may well be that dogs are taken to the square less frequently than in the other squares because of the square's proximity to green spaces.

The three other attributes recorded can be subsumed under mobility equipment. Again, it should be noted that these are not attributes of people moving, but people engaged in stationary activities that have their equipment nearby. In Idaplatz, it is a frequently observed practice to park one's bike next to the bench on which one sits (14.5 % of all people carrying out stationary activities have a bike with them), whereas in Hallwylplatz and Lindenplatz, this is rarer. This concurs with the finding that the share of people using the bike for the last leg of their trip to the square is much higher in Idaplatz than in the other squares (see below). Scooters and walking aids are a fairly uncommon sight, not exceeding two percent in any of the square.

4.6.2. Users

While the previous section focused on how the squares are used and where activities take place, I now turn to the users of the squares and look at their characteristics. The characteristics gender, age and group size were recorded with different methods and can therefore not only inform us about the square users, but also about how the different methods compare to each other.

Percentage of women

As Figure 21 shows, slightly fewer women than men responded to the intercept survey (and conversely, the proportion of men refusing to participate is slightly lower). Mapping, which only captures people engaged in stationary activities, recorded a percentage higher than fifty percent of men in Lindenplatz and Idaplatz, and slightly less than fifty percent in Hallwylplatz. As screening is the least likely to be biased, I will examine the gender proportions throughout the day based on screening data in the next paragraph. Mapping is selective with regard to the type of activity (only stationary activities were mapped), the intercept survey data is limited to those people willing to participate, while the refusal data shows people unwilling to participate in the intercept survey. Overall, however, none of the methods used here seems to have a major bias regarding gender.

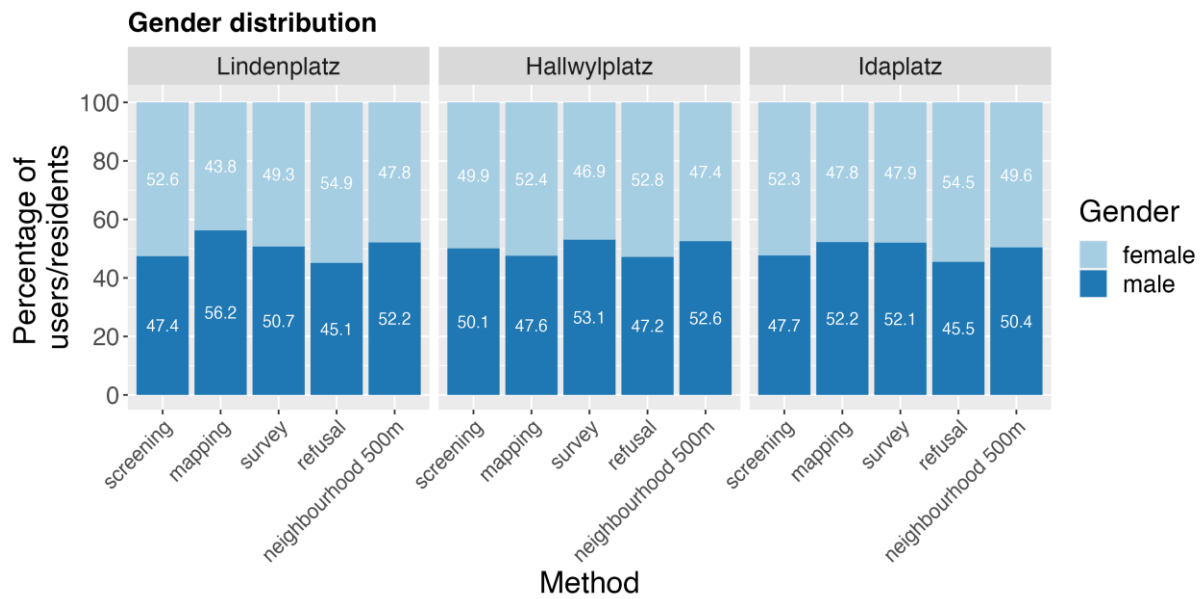


Figure 21: Distribution of gender for different methods and squares.

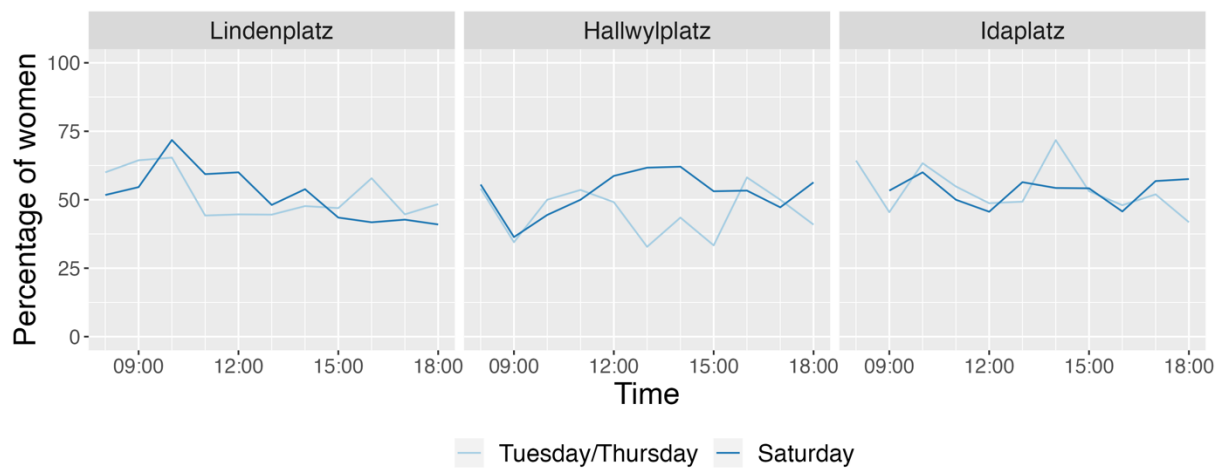


Figure 22: Percentage of women using the squares at each hour, 8 a.m. – 6 p.m. Data source: screening. No value for Idaplatz, 8 a.m., because no people were present.

Overall, the gender distribution is fairly balanced throughout the day in all cases. The percentage of women is sometimes below, sometimes above fifty percent (Figure 22). This number is sometimes taken as an indicator of public space quality and safety (Gehl & Svarre, 2013, p. 14; Whyte, 1980/2010). Being close to or higher than fifty percent, the indicator implies that the three squares are of high quality and that women feel safe in them, at least during the observed time frame (8 a.m. – 6 p.m.).

As there is some uncertainty in the data because the number of observations per time can be small, especially in the morning hours, fluctuations during the day are not further interpreted. As the farmer's market in Lindenplatz draws many visitors, the percentage of

women on Saturday mornings is reliable, however. It is markedly higher than at other times and days, suggesting that the majority of shoppers are women.

Age distribution

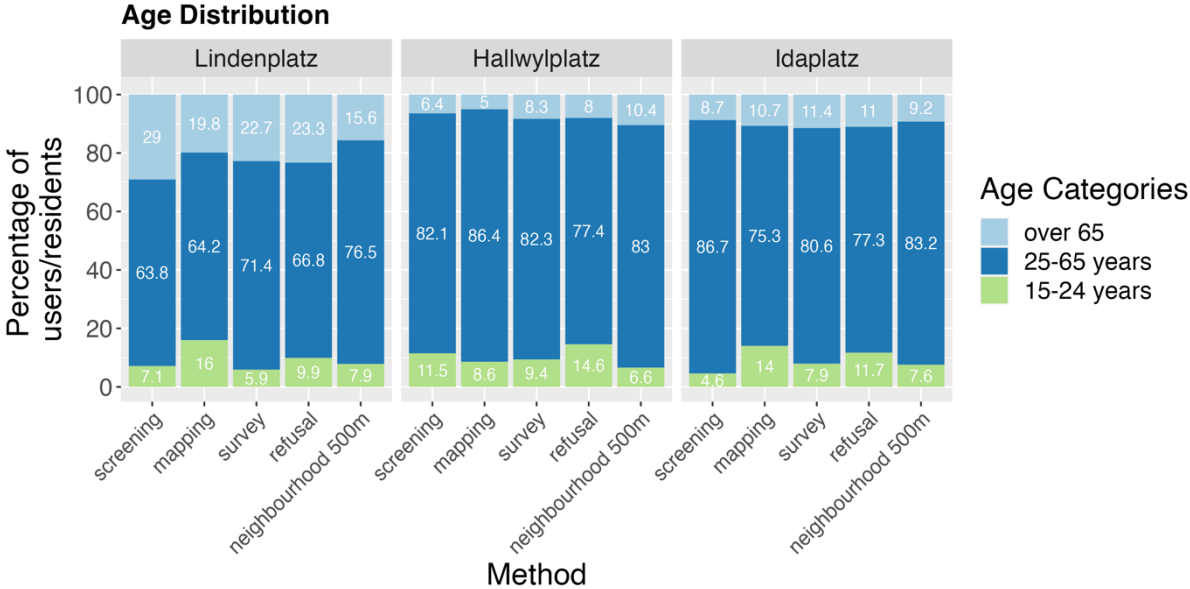


Figure 23: Distribution of age groups for different methods and squares.

As the apparent age was recorded with all the methods, the age distribution of the square users can be compared across the methods and with the distribution in the neighbourhood (defined here as a catchment area with a radius of 500 metres around the square, see Figure 23). It should be noted that for the comparison, children below the age of 15 have been excluded to approximate the age restrictions in the intercept survey.⁴¹

Screening is likely to be the most accurate estimate of the age distribution of the true population of square users (no bias regarding willingness to respond, no bias regarding the engagement in stationary activities). There is no significant difference between the survey sample and the survey refusal sample regarding the age distribution. Differences in percentages between the different methods should not be overinterpreted as there are considerable margins of error.⁴²

One striking result, however, is that the proportion of people over 65 in Lindenplatz is much higher than in the two other cases (see screening data in Figure 23). This corresponds to a higher

⁴¹ Because all people who looked 18 or older were approached, some participants were also between 15 and 18 years old.

⁴² The margins of error are difficult to estimate. Since the true population of square users is unknown, it can only be estimated based on the number of residents in the neighbourhood and a restricted sample of intercept survey participants living in the neighbourhood. At a confidence level of 95 %, the margin of error for this sub-sample is estimated to range between 5 and 7 % for the different squares (see Appendix G).

proportion in the neighbourhood as well, but exceeds its share, presumably because there is a care home located a short distance from Lindenplatz. Interestingly, at Hallwylplatz, despite there being a care home at a similar distance, no such effect can be observed.

Group size

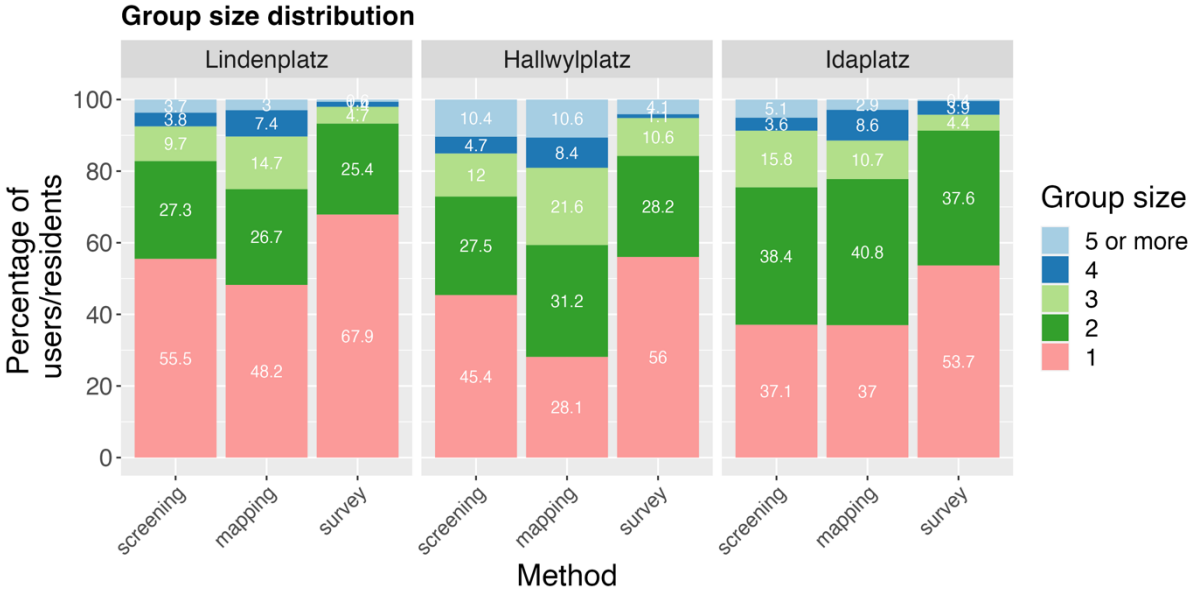


Figure 24: Distribution of group size for different methods and squares.

People often visit public squares in the company of other people – children, parents, friends, co-workers, etc. Figure 24 gives an overview of the group sizes observed in the three squares with different methods. People without company are probably overrepresented in the survey sample, because they are more likely to respond. In contrast to ‘singles’, ‘withs’ (Goffman, 1983), i.e. groups of more than one, tend to be in conversation or ‘busy’ in another way.

The Hallwylplatz case shows a relatively large proportion of bigger ‘withs’. This can probably be attributed to groups eating lunch and families playing. The high proportion of individuals at Lindenplatz is in line with a higher proportion of necessary activities rather than optional (and therefore often more social) activities (see Chapter 5).

Relationship to the Square

In the intercept survey, participants were asked what their relationship to the square was (direct neighbours, residents in the neighbourhood, working or studying near the square, visiting someone or a place, visiting as a tourist). The ZIP code of their place of residence was also noted, allowing to roughly map the catchment areas of the squares as well as people’s relationship to the square (Figure 25 – Figure 27).

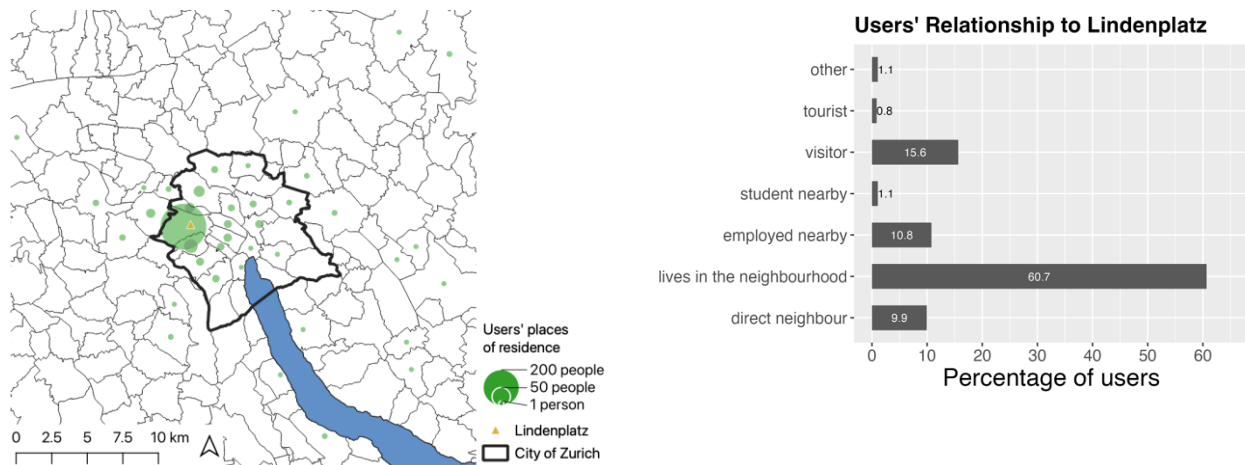


Figure 25 : User's place of residence (zip code units) and relationship to Lindenplatz. Data source: intercept survey.

The percentage of participants living in the zip code area of Altstetten is over sixty-four percent (Figure 25; left). Lindenplatz can therefore be considered as a square with a very local user population compared to the other squares. Hardly anyone from outside Zurich visits the square. As there are not that many offices or other workplaces, and because there are no major attractions close to Lindenplatz, only a minority of the square users reports visiting the square or someone/something close by. While relatively few people live directly adjacent to the square, a big majority (61 %; Figure 25, right) lives in the neighbourhood.⁴³

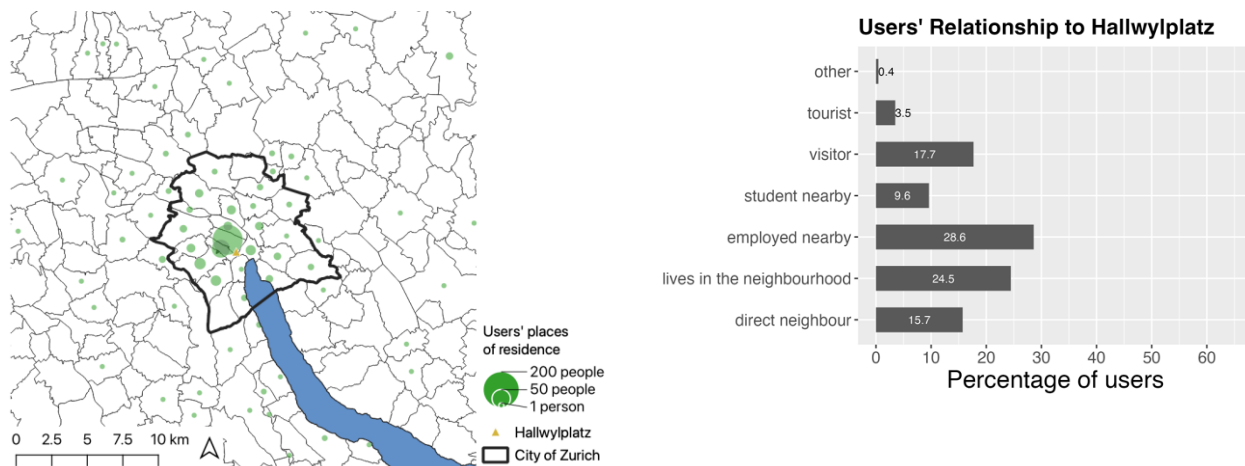


Figure 26 : Users' place of residence (zip code units) and relationship to Hallwylplatz. Data source: intercept survey.

The catchment area of Hallwylplatz is larger than in the case of Lindenplatz, but still thirty percent of the square users live in the same zip code unit where the square is situated (Figure 26; left). Visitors or commuters from outside Zurich are more frequent, as is also apparent from

⁴³ This majority (61 %) is slightly below the percentage of people living in the zip code area of Altstetten (64 %). Since Altstetten is a large neighbourhood, it makes sense that some people live in the zip code area, but do not consider themselves living in the (self-defined) neighbourhood of Lindenplatz.

the share of people whose relationship to the square is defined by their being employed nearby, the most frequent response. Nevertheless, direct neighbours and people who live in the neighbourhood also make up an important share of square users (16 %, and 25 % respectively; Figure 26, right).

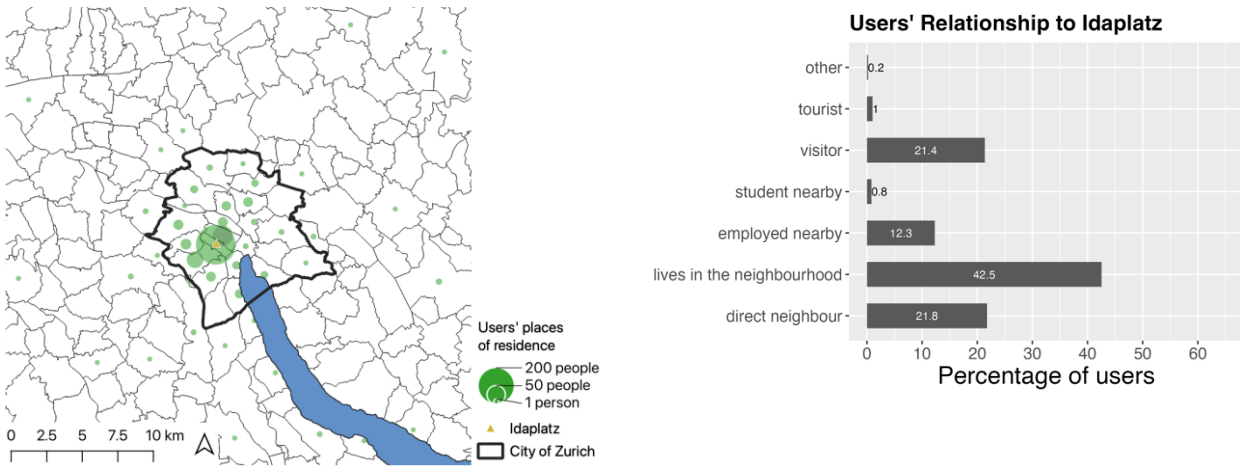


Figure 27 : Users' place of residence (zip code units) and relationship to Idaplatz. Data source: intercept survey.

In the case of Idaplatz, the share of people who live in the same zip code unit as the square is relatively high, too (46 %; Figure 27, left), and only a few square users come from outside the city of Zurich. However, zip code units close to Idaplatz are also frequently reported as places of residence. This is also reflected in the chart showing the relationship to the square: the majority of square users live either directly adjacent to the square or in the neighbourhood (22 %, and 43 % respectively), but a considerable share of people are visiting from further away (21 %; Figure 27, right). The relatively low share of people who are employed nearby (12 %) can be explained by the fact that the neighbourhood is primarily residential.

It is evident from these figures, that a considerable share of square users do not live in the neighbourhood, but visit from other neighbourhoods, or from outside the city. They might visit the square (and the area) for work and education, to visit someone, to visit the square itself, or they might be visiting the area as a tourist. This is relevant when comparing the square users' diversity to the neighbourhood diversity (second research question, Chapter 7). Visitors may increase or decrease the diversity in the square. This effect of mobility is taken into account by looking at square users who live in the neighbourhood and those who visit separately.

Getting to the Square

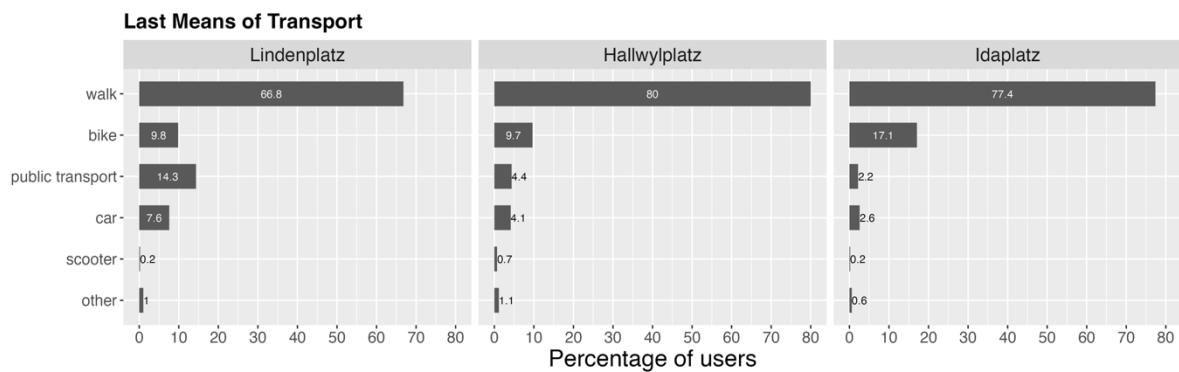


Figure 28: Means of transport used for the last leg of the trip to the square. Data source: intercept survey.

In the intercept survey, square users were asked what means of transport they used for the last leg of their trip to the square. In all cases, a large majority (between 67 and 80 %) reports walking the last bit. Only roughly ten percent cycled to the square in Lindenplatz and Hallwylplatz, whereas 17 percent of the square users in Idaplatz used the bike to get there (cf. the high share of people who have their bike with them on the square, p. 121). In Lindenplatz, 14 percent of the square users use public transport to get to the square, reflecting the high number of public transport stops immediately at the square. In Hallwylplatz and Idaplatz, this share is lower (4 %, and 2 % respectively).⁴⁴ The car is more important as a means of getting to the square in Lindenplatz than in the other squares (8 %, vs. 4 % and 3 %). Scooters or other means of transport such as taxi or motorbike were hardly ever used.

⁴⁴ Since there are no bus or tram stops immediately adjacent to the square in Hallwylplatz and Idaplatz, the last leg of the trip should technically have been 'walking' even for public transport users, but because the questionnaire did not define 'the last leg' of the trip in detail (for time reasons), there is presumably a slight measurement error in these numbers.

Recognizing Familiar Strangers

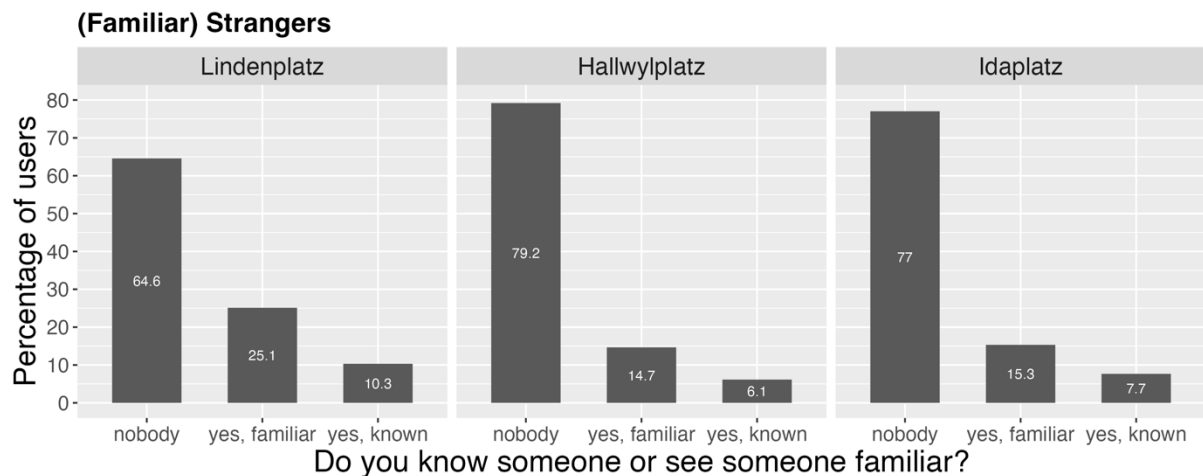


Figure 29: Frequency of recognizing familiar strangers or even acquaintances/friends in the squares. Data source: intercept survey.

Recognizing familiar strangers and ‘absent ties’ are an important element of neighbourhood belonging and successful public spaces (Blokland et al., 2022; Felder, 2020b; Gehl, 1971/2011, see Section 2.4.1). Participants of the intercept survey were therefore asked to look around and tell the interviewer whether or not they recognized someone whom they had not arranged to meet. This could be either a known person (say, e.g. a next-door neighbour), or someone they see often or from time to time but that they do not ‘know’ personally (i.e. a familiar stranger). As is typical of urban settings, the majority of square users did not recognize anyone. Concurring with the insights of square users’ places of residence and relationship to the square, Lindenplatz users are much more connected in the sense that a quarter of the participants recognize at least one familiar face, and ten percent even know someone (and might additionally recognize a familiar face – this combination was not recorded separately). In Hallwylplatz and Idaplatz, where more people from outside the neighbourhood use the square, roughly 15 percent recognize a familiar face, and six percent, or eight percent respectively, know someone who was present at the same time as the participants.

This chapter has shown the similarities and the many specificities of the three squares. Its aim was to set the scene for the publications in the following chapters (5 – 8) in a level of detail that could not be reached in the articles and the book chapter. The last section of this chapter (4.7) gives an overview of the key characteristics of the squares in the form of a table.

4.7. Overview of the Squares

	Lindenplatz	Hallwylplatz	Idaplatz
Neighbourhood	Altstetten	Werd	Sihlfeld
Size	1,900 m ²	1,450 m ²	1,600 m ²
Last redevelopment	2010/2011	early 1990s	2004-2006
Commercial seating	~ 200	~ 100	~ 220
Number of benches	9	7	17
Permeability	6 entrances to the square	3 main, 2 minor entrances to the square	4 entrances
Variety	surrounding buildings and the square designed as an ensemble, high number and variety of ground floor uses, including day-to-day facilities	differently but coherently designed buildings; mixed-use (office and housing); limited variety of public ground floor uses	perimeter block developments, same style and period; mostly residential buildings; fair variety of ground floor uses
Legibility	weakly enclosed, but coherent ensemble; clear layout and visual axes; fountain as landmark	parked cars obstruct view of the square from two sides; adequate enclosure (~ 1:2); easy orientation within the square; fountain as landmark	easily recognizable as an opening in the perimeter block grid; adequate enclosure (~ 1:2); no clear landmark within the square
Robustness	active facades; weakly animated central area (kept open for market); lack of shade in summer	only one animated edge; well-animated centre (shallow fountain and additional furniture), plenty of secondary seating; pleasant microclimate	central area and edges well animated; limited opportunities for secondary seating; pleasant microclimate
Visual appropriateness	open space (for market and events), billboards, district's administration hint at the square's role as a neighbourhood centre	benches, fountain, and trees indicate a place to hang out and relax; additional furniture is ambiguously perceived	benches and trees indicate a place for recreation
Richness	uniform buildings; pavement provides visual and tactile richness; soundscape impaired by traffic noise	pleasant soundscape; shallow fountain provides tactile experience; no richness in surface	no traffic noise, good acoustic quality in the square (sometimes too loud when well used); gravel surface contributes to visual and tactile richness
Personalization	few options for personalization, only by ground floor uses	personalization through additional furniture, some elements are movable and allow personalized arrangements	only weakly personalized (ground floor uses, and residents who personalize the space in front of their building)

5. Conviviality in Public Squares: How Affordances and Individual Factors Shape Optional Activities

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5.1. Presentation of the Article

The first article of this thesis was published in a special issue of the journal Urban Planning with the title ‘Improvisation, Conviviality, and Conflict in Everyday Encounters in Public Space’, edited by Mervyn Horgan and Saara Liinamaa.

In the article, I examine how the squares’ affordances, i.e. the set of behaviours and activities that are offered by them, and individual factors shape how people use squares in convivial ways. This objective relates to the first and the fourth research questions (What is the extent of diversity in public squares? How does public space design shape diversity in public squares?).

Besides looking at conviviality in public space in Switzerland – a context that has never been the subject of studies in this tradition – I contribute to literature on conviviality in two ways. Firstly, contrary to most studies on conviviality, I employ a quantitative approach. However, the concept needs some adaptation to make it useable in logistic regressions (Section 3.3.4). Optional activities (Gehl, 1971/2011) were taken as an indicator of conviviality. The quantitative approach provides the advantage of being able to state which individual factors are related to convivial use, and roughly to what extent the built environment itself plays a role. Secondly, I contribute to the literature on conviviality by not only attending to cultural differences, but also to differences in age, gender, socio-economic status, and people’s relationship to the neighbourhood.

The data analysis suggests that the squares’ affordances are strongly linked to a convivial square use. It is seating opportunities in particular that contribute to the robustness of the squares (they are more abundant in Hallwylplatz and Idaplatz than in Lindenplatz), corroborating previous research. Interestingly, even though the squares are likely to attract a crowd that is not representative of the neighbourhood population (see Chapter 7), those people who *do* use the squares tend to participate in optional activities irrespective of their cultural background, age, or socio-economic status. The temporal dimension, people’s relationship to the neighbourhood, and gender do have an impact on convivial use, however.

5.2. Abstract

Conviviality can briefly be defined as togetherness among strangers despite their differences. While most of the research on conviviality focuses on (inter-)cultural differences, this article argues that considering other kinds of differences (e.g., socio-economic status, gender, age, stage of the life course, etc.) may increase our understanding of conviviality. In addition, to help us measure the convivial use of public space, the article looks at participation in ‘optional activities’ (e.g., enjoying the sun, playing), which contribute to a convivial atmosphere by encouraging people to be co-present, thus offering the potential for ‘thicker sociability’. Based on fieldwork consisting of behavioural mapping ($n = 1,448$) and an intercept survey ($n = 1,474$), this study explores key factors that increase the likelihood of people using three small public squares in Zurich, Switzerland, in a convivial way. A logistic regression model based on survey data shows that, even when controlling for individual factors, the squares and their affordances contribute substantially to convivial use, e.g., by providing ample seating. The model furthermore suggests that gender, people’s relationship to the neighbourhood, their occupation, and the time of day, are more significant factors in shaping convivial use of the squares than the cultural background, socio-economic status, age, or having children.

5.3. Introduction

Public space has long been described as a place where urban dwellers come face to face with each other and with a city’s diversity (Lofland, 1973). These encounters between strangers may be fleeting but still form part of spatial practice in urban public spaces (Zieleniec, 2018). The term ‘conviviality’ neither romanticizes nor stigmatizes these encounters but rather emphasizes the fact that they are an essential part of ‘a shared human condition’ (Sandström, 2020, p. 180) across social differences.

Against the backdrop of an increasingly diverse, or hyper-diverse (Tasan-Kok et al., 2014) urban population, coupled with the privatization of public space and diminishing private open spaces due to densification, the capacity of public spaces to host convivial encounters is becoming an important issue of social infrastructure (Layton & Latham, 2022). Although not all ‘registers of sociality’ (Layton & Latham, 2022) in public spaces can be termed convivial, co-presence and fleeting encounters are the preconditions for ‘thicker sociability’ (Bodnar, 2015).

While most studies on conviviality rely on qualitative methods (mostly ethnographic research: e.g., Koch & Latham, 2012; Radice, 2016; Wessendorf, 2014b), this article takes a quantitative approach. It sees ‘optional activities’ (Gehl, 1971/2011), i.e., activities for which there

is no need or which could also take place elsewhere, as an indicator of the convivial use of public space and aims to shed light on who, from a hyper-diverse population, takes part in optional activities and thus contributes to conviviality and ‘commonplace diversity’ (Wessendorf, 2014b). This research also examines the role of the ‘material base’ (Peattie, 1998): the physical environment, its artefacts, and their respective affordances (Davis, 2020).

This approach provides new insights into the role of the environment and individual characteristics. It allows us, for example, to decouple the effect of gender from childcare duties, or to consider how conducive an environment is to optional activities regardless of the users’ individual characteristics.

Drawing on a case study of three public squares in Zurich, Switzerland, I address the following questions: What is the role of a public square’s affordances (Davis, 2020) in its convivial use, and who is most likely to use it convivially, i.e., to take part in optional activities? Using datasets from an intercept survey and behavioural mapping conducted on-site, this article contributes to the literature by integrating a design and behavioural perspective (Ganji & Rishbeth, 2020) to explore the key factors contributing to convivial use.

This article first outlines the theoretical concepts linking conviviality and optional activities with responsive environments (Bentley et al., 1985) and their affordances. A review of the empirical literature on the topic is followed by the case study, fieldwork, and data analysis. General trends in the use of public squares are then outlined, before exploring the factors which encourage convivial use. Finally, I discuss how the concepts of hyper-diversity and affordances add to our understanding of conviviality.

5.4. Conceptual Framework

Conviviality can be defined as a kind of “rubbing along”, includ[ing] not just “happy togetherness” but negotiation, friction and sometimes conflict’ (Wise & Noble, 2016, p. 425). This article adopts a perspective of conviviality that has been termed ‘convivial spaces’ by Nowicka and Vertovec (2014). This is one of three main ways in which the concept of conviviality is used in scientific literature (the others being ‘convivial collectivities’ and ‘convivial everydayness’). It focuses on the socio-spatial aspects of conviviality in examining the ‘material-practical arrangements’ that enable a ‘collective life marked by openness and accommodation of difference’ (Koch & Latham, 2012, p. 521).

Any quantitative study must inevitably define the meaning of conviviality and conceptualize it in a measurable way. I use Gehl’s (1971/2011) categorization of activities to link behaviour in public squares and conviviality. Gehl classifies activities in public space along a continuous scale

from 'necessary' to 'optional'. Necessary activities (such as passing through space to get somewhere else or waiting for a bus) take place regardless of the environment, while optional activities are characterized by a low degree of necessity. They either do not have to take place at all (e.g., sitting and enjoying the space, taking photographs) or could easily take place somewhere else (e.g., supervising children, sitting down to eat). Optional activities only take place under favourable conditions and therefore indicate a pleasant environment. They contribute to a convivial atmosphere because they tend to prolong stays, and as Gehl (1971/2011, p. 182) states, 'lengthy stays mean lively streets'. Optional activities are thus a suitable, albeit limited, indicator of convivial use.

A square's affordances might attract users seeking recreation, or even encourage people who use it for necessary activities to engage in occasional optional activities. In his seminal work, Gibson (1986) states that affordances are 'what [the environment] offers to the animal, what it provides or furnishes, either for good or ill' (Gibson, 1986, p. 127). They are relational in that they capture the interaction between the material world and human beings (Lanng & Jensen, 2022) and 'apply varying levels of pressure on socially situated subjects' (Davis, 2020, p. 8), being hence neither binary nor determinant.

Similarly, Bentley et al. (1985) are concerned with environments that are responsive to their users' needs: Responsive environments provide users with an arrangement that 'enrich[es] their opportunities by maximizing the degree of choice available to them' (Bentley et al., 1985, p. 9). Responsive environments are defined by seven qualities: permeability, variety, legibility, robustness, visual appropriateness, richness, and personalization. In the context of this research, robustness is of particular interest. Robust spaces offer an environment that can accommodate a wide range of activities (including unplanned activities) and thus potentially support diversity. In the case of public open spaces primarily used by pedestrians, seating is identified as a key affordance to make people 'colonize the centre of the space' (Bentley et al., 1985, p. 73).

Seating opportunities, and other affordances in general, are often intentionally designed to encourage or discourage certain practices (Aelbrecht et al., 2019). However, different uses of space than those intended may also arise from creative appropriation by users. Primary seating (Gehl, 1971/2011) such as chairs or benches afford sitting by design but may have multiple other uses: lying down, propping up one's legs, facing others in conversation, etc. Elements such as window ledges, fountains or steps offer much the same affordances and are therefore called secondary seating, despite different design objectives. The potential for personal appropriation, or personalization, further enhances an environment's responsiveness (Bentley et al., 1985).

The analysis of users is underpinned by the concept of hyper-diversity (Tasan-Kok et al., 2014). While most research on conviviality focuses on (inter-)cultural differences (Radice, 2016),

Tasan-Kok et al. (2014, p. 6) draw attention to ‘an intense diversification of the population in socio-economic, social and ethnic terms, but also with respect to lifestyles, attitudes and activities’. These differences may create just as much friction as (inter-)cultural ones and therefore merit closer inspection when studying conviviality.

5.5. Factors Shaping Optional Activities in Public Space: Literature Review

While there is abundant empirical literature on the use of public squares in general (e.g., Papatzani & Knappers, 2020; Ridings & Chitrakar, 2021; Rishbeth & Rogaly, 2018), little is known about the characteristics of square users who engage in optional and not only necessary activities. I, therefore, included literature on the recreational use of more broadly defined open spaces (e.g., parks, streets) that investigates which user groups are attracted to which spaces and which activities, taking into consideration gender, ethnicity, social status, age, and relationship to the neighbourhood.

Previous research has revealed gender differences: Women tend to visit parks less frequently than men due to (perceived) safety issues (Bühler et al., 2010; Ganji & Rishbeth, 2020) and are more attracted to playgrounds and areas where parental duties can easily be exercised (Gilmore, 2017). They usually visit with family, whereas men are more likely to visit alone or with friends (Jay & Schraml, 2009), to engage in physical activities (Baran et al., 2014; Ostermann, 2009), and stay longer (Huang & Napawan, 2021). Numerous studies show that cultural and religious practices shape gendered recreational use (e.g., Gilmore, 2017; Huang & Napawan, 2021; Sadeghi & Jangjoo, 2022).

Studies from several countries report ethnocultural differences in recreational use: non-Western migrants tend to visit parks in larger groups and for more family- or community-oriented activities (Baran et al., 2014; Lesan & Gjerde, 2020). However, while some authors note that parks attract all cultural groups (Veal, 2006), others find that non-Western migrants are less likely to visit parks (Schipperijn et al., 2010) and that non-Whites are significantly underrepresented in some parks (Reichl, 2016).

Regarding social status and age, studies found that people with higher levels of education and higher incomes tend to visit parks or green spaces more often, and recreational use of public spaces is more common among older people (Bergefurt et al., 2019; Schipperijn et al., 2010). Others report an under-representation of elderly people in parks (Bühler et al., 2010). Evidence on the effect of occupational status on recreational use due to time constraints is scarce, with mixed results in those cases where it is studied (Bassand et al., 2001; Veal, 2006).

People's relationship to the neighbourhood is also found to be associated with recreational use. Residents who feel attached to their neighbourhoods use green spaces more often for recreational activities than those who don't (Bergefurt et al., 2019). Living in proximity to a green space also raises the odds of using it recreationally compared to living further away (Schipperijn et al., 2010). Blokland and Nast (2014) conceptualize the experience of belonging to a neighbourhood in terms of 'public familiarity'. Public familiarity is rooted in spatial practice, but it highlights that practices need not always be active attempts to build neighbourly ties. Indeed, even the thin sociality of merely observing other people contributes to public familiarity and invisible ties (Felder, 2020b). The figure of the familiar stranger, a stranger whose face is nevertheless recognized, is emblematic of this type of relationship to the neighbourhood. Familiarity, as suggested by Felder (2021, p. 194), may well serve as a link between people's relationship to the neighbourhood and conviviality.

Optional activities undeniably have a temporal dimension through their daily, weekly, and seasonal rhythms. They are also subject to time constraints and thus people's participation is likely to be influenced by their occupational status. It could be hypothesized that retired people, job seekers and people who work part-time are more likely to do optional activities than those working full-time. The aforementioned studies, however, suggest that the relationship is more complex. The concept of 'time in-between', i.e., the time 'during which people are on their way to live the rest of their lives' (Blokland & Nast, 2014, p. 1143) is an essential constituent of neighbourhood belonging. Assuming that being an active part of the labour force accounts for a big part of the time in between, being employed might foster optional activities via neighbourhood belonging.

Thus, public spaces, to varying degrees, invite recreational use or optional activities, but this invitation is not perceived equally across population groups. The studies discussed so far suggest that besides the sociodemographic characteristics of individuals, the role of the squares' affordances, people's relationships to the neighbourhood and the temporal dimension merit closer inspection.

5.6. Context and Research

5.6.1. Case Study

This research was conducted in Zurich, Switzerland's largest city (436,000 residents), situated in the German-speaking part. As it studies the convivial use of public squares, a practice that is closely connected to the particularities of the local spatial context, a case study approach was chosen. To make the study and its findings more robust I opted for a multiple-case design. Three

contrasting cases help explore the specificities and similarities of the environment's role in shaping convivial use.

Case selection occurred in two stages according to two sets of criteria. The use of public squares is likely to depend not only on their design but also on the urban structure and the population in the surrounding neighbourhood. Therefore, initially, three contrasting neighbourhoods were selected based on density, jobs–housing balance, income heterogeneity, percentage of family households, and percentage of people without Swiss nationality (Table 5). Then, from each neighbourhood, one square was selected that met the following criteria: feasibly sized for fieldwork (1,500–2,000 m²), publicly owned, 'open and available to all and catering for a wide variety of functions' (civic spaces; Carmona, 2010b, p. 169), not dominated by one function (traffic, playground, etc.), sufficiently clear borders, district-wide or neighbourhood-wide relevance (according to categorization by Stadt Zürich, 2006).

The squares resulting from this process—Lindenplatz, Hallwylplatz, and Idaplatz, and their respective neighbourhoods—are briefly presented in the following paragraphs (see Figure 30 and Figure 31). None of the squares has formal management, and all three are open to the public 24 hours a day.

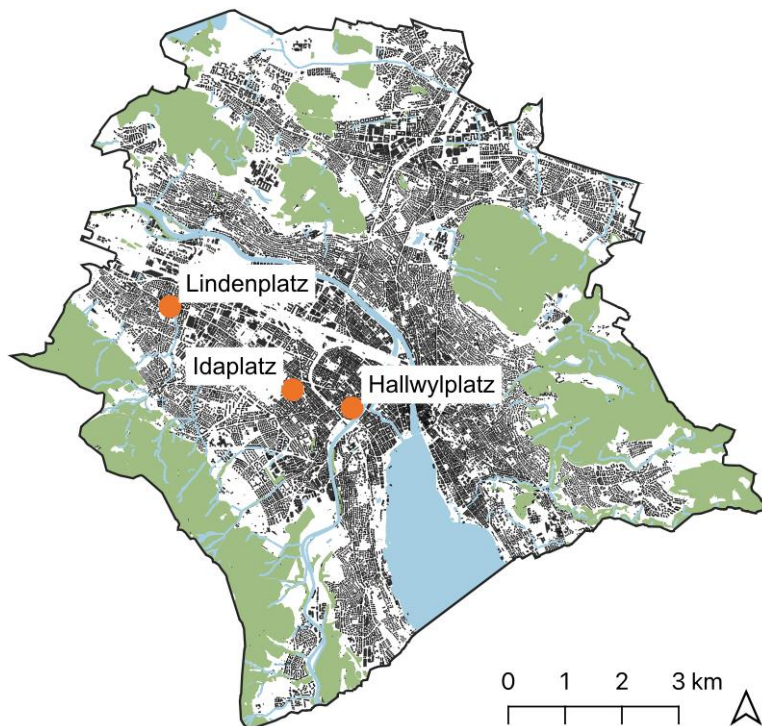


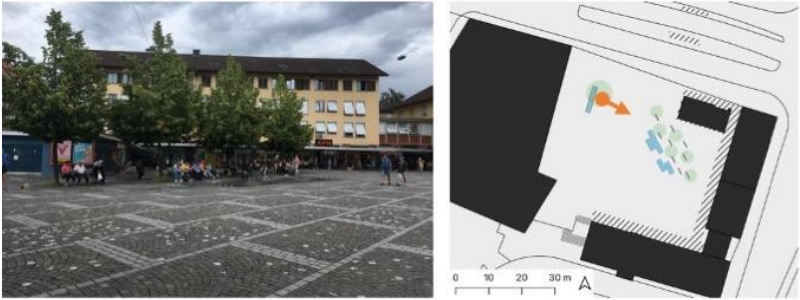
Figure 30: Location of the three squares in the city of Zurich.

Lindenplatz is situated in Altstetten, a neighbourhood on the outskirts of Zurich. Altstetten is the least densely populated of the three neighbourhoods (250 employees and inhabitants per

hectare). The jobs–housing balance is the same as for Zurich as a whole (1.4), meaning there are more jobs than inhabitants in Altstetten. Income heterogeneity, defined by the difference between the 75- and 25-percentile of income (the higher this difference, the more spread out or heterogeneous the income distribution) is below Zurich’s average (42,800 CHF vs. 49,000 CHF), with incomes generally being on the lower side. Altstetten has the highest percentage of family households of the three neighbourhoods (23.5%), as well as the highest percentage of people without Swiss nationality (36.2%).

The Lindenplatz Square is framed on three sides by buildings, and by a busy road with public transport stops on the fourth. It dates from the 1950s and was redeveloped in 2010. The square now features trees, a fountain, several benches facing water features on the ground, and a large open area which affords space for a biweekly farmers’ market and cultural events. The surrounding buildings house several cafés and restaurants, a hotel, a newsstand, public toilets, the district administration, a pharmacy, several shops, and two supermarkets.

Lindenplatz



Hallwylplatz



Idaplatz



- Point and direction from which picture was taken
- Tree
- Water features
- Benches, chairs, edges

Figure 31: Photo and map of each square.

Hallwylplatz is located near the city centre in the Werd neighbourhood, one of Zurich's most densely populated areas (740 employees and inhabitants per hectare). The number of jobs is more than three times the number of inhabitants (3.2). Income heterogeneity is slightly above average (51,300 CHF). The share of family households in Werd is small (15.5%), a fact that may be attributed to its centrality and the correspondingly higher rents. Having significantly decreased in recent decades due to gentrification, the percentage of people without Swiss nationality in Werd is now close to the average (33.6%).

Despite several attempts, no major redevelopment of the Hallwylplatz Square has occurred since the 1990s. It is furnished with some benches and a shallow fountain affording the option to paddle and splash about. Neighbours have provided additional affordances by equipping it informally with a barbecue grill, movable chairs, picnic tables, children's slide, and table tennis equipment. Two restaurants, several takeaways, a shop, a hairdresser, and a bicycle courier company can be found in the buildings on the square.

Idaplatz is located in the Sihlfeld neighbourhood. Its density is above average (391 employees and inhabitants per hectare), owing more to inhabitants than employees (jobs-housing balance: 0.8). Income heterogeneity is below average (46,500 CHF), as is the percentage of family households (18.7%). As is the case for Werd, the percentage of people without Swiss nationality is close to average (31.0%), but only because it has decreased in recent years in the process of gentrification.

Following the redesign of the square in 2006, Idaplatz has become a popular spot for going out in the warmer months, including among people from outside the neighbourhood. Several bars, restaurants, and shops are located on the surrounding streets. The square itself consists of a slightly elevated gravelled surface with ramps and flattened-out corners ensuring wheelchair accessibility. Trees of different sizes allow for both sunny and shady spots on the numerous benches, some of which are arranged around a drinking fountain.

Table 5: Neighbourhood characteristics.

		Altstetten (Lindenplatz)	Werd (Hallwylplatz)	Sihlfeld (Idaplatz)	Zurich
Density	(Employees + inhabitants) / ha	250	740	391	312
Jobs-housing balance	Ratio between employees and inhabitants	1.4	3.2	0.8	1.4
Income heterogeneity	Difference between 75- and 25-percentile of taxable income*	42,800 CHF	51,300 CHF	46,500 CHF	49,000 CHF
Percentage of family households		23.5 %	15.5 %	18.7 %	24.2 %
Percentage of people without Swiss nationality		36.2 %	33.6 %	31.0 %	32.2 %

Note: * Non-married tariff. Sources: Stadt Zürich (2020b, 2020c). Data refers to 2019 (except for income heterogeneity where data refers to 2017).

5.6.2. Fieldwork Methodology

An analysis of the environmental qualities of the three squares was carried out drawing on Bentley et al. (1985). Although all seven qualities identified by these authors were covered (permeability, variety, legibility, robustness, visual appropriateness, richness, and personalization), this article only reports on seating as part of an environment's robustness. Seating opportunities provide positive affordances for optional activities. A seating ratio was calculated by dividing linear seating by surface area (as a rule of thumb, Bentley et al. suggests a minimum of 30 cm of linear seating, i.e., approximately one seat per 3 m²; Bentley et al., 1985, p. 73).

Data were gathered during the summer of 2021 in dry weather, against the backdrop of the global COVID-19 pandemic. The threat of infection with coronavirus, and the protective measures taken against it by the Swiss government in 2020 and 2021, undoubtedly had an effect on public life and mobility practices. This affected both presence and behaviour in public spaces. However, at the start of the fieldwork, in late May 2021, there were no longer any restrictions in place in Switzerland regarding outdoor behaviour, and the vaccination campaign was showing positive effects. In terms of mobility, mean distances travelled and radii were comparable to pre-covid times, and the number of commuters was up to 80% of pre-Covid times (intervista AG, 2021). Nevertheless, public life was still likely to be affected by individual cautiousness. The fieldwork was divided into two waves (May/June and August/September) to account for differences in the epidemiological situations. Despite a more relaxed context during the second wave, the composition of public square users did not differ significantly between the two waves.

This finding suggests that the external validity is not too strongly compromised by the pandemic, but comparison with pre-covid times is impossible.

The fieldwork on users and their activities consisted of behavioural mapping (Gehl & Svarre, 2013) and an intercept survey (Velu & Naidu, 2009). During repeated mapping sessions (12–2 pm and 4–6 pm on weekdays, and 12–2 pm on a Saturday), stationary users were coded with their location, estimated age group, gender, posture, type of activity, and duration, resulting in 1,448 observations (Figure 32).



Figure 32: Maps of users recorded during behavioural mapping sessions.

An intercept survey administered by researchers was used to gain data on unobservable characteristics such as socio-economic status or migrant background. Besides sociodemographic information, the questionnaire (available in German, English, and French) contained questions on the use of the square (type of activities, frequency, duration) and the participant's relationship to the neighbourhood.

Research assistants and the author tried to approach all square users who looked older than 18. In a few cases, the participants turned out to be younger, so the minimum age in the sample is 15. Each square was surveyed twice for each timeslot (8–10 am, 12–2 pm, 4–6 pm on Tuesday/Thursday, and 12–2 pm or, due to a time clash with the farmer's market in the case of Lindenplatz, 2–4 pm on Saturday), yielding 1,474 responses (Lindenplatz: 492, Hallwylplatz: 464, Idaplatz: 518), with an average response rate of 36.4% (the number of responses divided by the total number of people approached; refusals, i.e., people who were approached but did not participate were recorded by noting their apparent gender and age group).

Response rates vary according to age and gender; the lowest response rate was for women below 25 (25.5%), and the highest was among men aged 25 to 65 (39.4%; see Table 13 in the Supplementary File, Appendix H). Nonetheless, these differences are not significant and do not account for the fact that non-German speaking people and people who were not born in Switzerland are underrepresented compared to the neighbourhood population. People with a university degree and those with average incomes are overrepresented.

It should be noted that under- or overrepresentation can stem from lower/higher use by the residents, from an influx of people from outside the neighbourhood, or from different response rates by these specific population groups. For this study, these biases are considered unproblematic because (a) the three squares show sufficiently different distributions to rule out a method-driven response pattern, and (b) the sociodemographic variables are controlled for in multivariate analyses.

5.6.3. Data Analysis and Variable Description

In addition to descriptive statistics, binary logistic regression was used to analyse the survey data. Optional activity was used as the dependent variable in the regression models. The dummy variable takes the value of 0 for those only engaged in transit or shopping activities, and 1 for those doing optional activities such as eating, drinking, and spending time alone, with friends, or family, etc.

The regression models aim to explore the relationship between explanatory variables and optional activities when controlling for other variables, rather than to make predictions or establish causal effects. Explanatory variables were identified based on the literature review. They include the variable square (indicating in which square an individual was surveyed), and the three groups ‘relationship to the neighbourhood’, ‘temporal dimension’, and ‘sociodemographics’.

The relationship to the neighbourhood is modelled by two dummy variables. Neighbourhood indicates whether someone lives in the neighbourhood, i.e., in proximity to the square, and familiar stranger whether someone recognized a familiar face in the square by chance.

The temporal dimension is captured by the timeslot in which people were surveyed and by occupation, coded as a dummy variable indicating being/not being (self-)employed.

Sociodemographic information includes gender, age, and being accompanied by children as a proxy for life course stage, and two variables crudely indicating migrant background—born in Switzerland (yes/no) and main language: German (yes/no). Socio-economic status is captured by income (equivalized income according to the OECD modified scale; Hagenaars et al., 1994), in three categories, low/average/high, based on the median) and the highest level of education (no formal or only compulsory education/secondary, i.e., vocational education and training, general education/tertiary, i.e., university degree or equivalent).

Since people were approached on the street unprepared, the questionnaire had to be very short. Because of this, and due to the limited sample size within the squares, for some variables, it was either not possible to collect more nuanced data and/or not feasible to analyse it according

to detailed categories. For example, apparent gender is coded as a binary and migrant background rests on two relatively quick questions about language and country of birth. I am aware that sorting people into statistical categories masks a substantial part of (hyper-)diversity within the categories. However, it allows us to explore relationships between the convivial use of squares and sociodemographic groups in broad terms.

It is assumed that a square's affordances and the timeslot influence the likelihood of carrying out optional activities independently of individual characteristics. To account for this random effect of square and timeslot, a mixed effects logistic regression model was performed (McNulty, 2021). Additionally, a purely fixed model was run. The fixed model is reported here as the direction and significance of the effects did not change and for ease of comparison of the three separate models by square.

The models measure the effect of each variable, all things being equal, on the propensity to participate in optional activities in terms of odds ratios. An odds ratio above one means the group in question has higher odds of taking part in optional activities in the square than the reference group.

Table 14 in the Supplementary File (Appendix H) shows the frequency distribution of all variables used in the regression. The regression model is based on complete cases only ($n = 1,087$). All other analyses include the whole sample ($n = 1,474$).

5.7. Convivial Public Square Use

5.7.1. General Trends

First, the way in which the squares are used is defined by looking at the types of activities people carry out, the proportion of optional activities, the seating affordances, and the time people spend there.

Figure 33 displays the relative frequency of the different activities people were carrying out at the time of being surveyed. In comparison to the other two squares, Lindenplatz has a lower percentage of people passing through, presumably because it is framed by buildings on three sides. Its many shops, making it almost a commercial centre, are reflected by the high proportion of people who were shopping. Despite its utilitarian character, between 7% and 14% of the users were also engaged in spending time with friends/family or being alone in public, consuming self-brought food/drink or visiting one of the cafés/restaurants.

As for Hallwylplatz and Idaplatz, the majority of people are only crossing the square (58% and 49% respectively were passing through). Of the activities which involve spending more time in the squares, being with friends or family and consuming takeaway (or food/drinks brought from

home) or eating/drinking in one of the cafés/restaurants are the most frequently mentioned. Consuming takeaway or food from home is the second most common activity in Hallwylplatz, where at noon, staff from nearby offices make use of the seating affordances to eat their lunch. This use pattern generated by a relatively high proportion of jobs in the neighbourhood of Hallwylplatz is also reflected in the proportion of people carrying out optional activities (peak at lunchtime; see Figure 34).

In general, the proportion of people carrying out optional activities varies depending on the time of the day and between weekdays and weekends (Figure 34). It differs between the squares, hinting at the different affordances in the squares and the varying responsiveness of the environment: In the case of Lindenplatz, due to its numerous facilities connected to necessary uses (supermarkets, pharmacy, dentist, etc.), a comparatively low seating ratio (Table 6), limited shade and a rather noisy soundscape, a relatively small proportion of people surveyed there engage in optional activities. The square does have a busy, convivial atmosphere (particularly on market days, see Figure 35), but the everyday use as it was intentionally captured by fieldwork is characterized by a somewhat pragmatic use, mirroring the square’s functional design and furnishing.

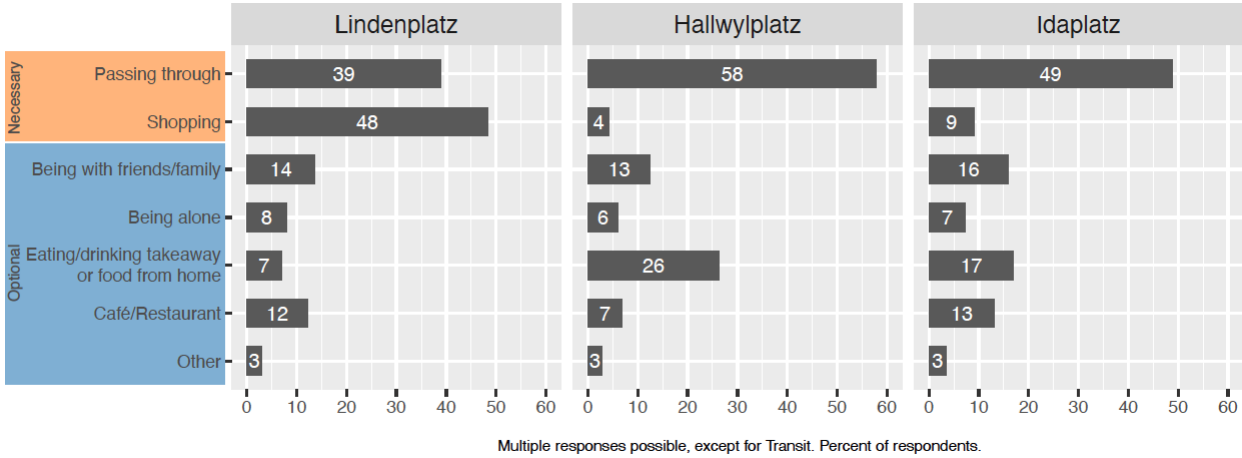


Figure 33: Current activities. Shopping is considered a necessary activity as it was most frequently grocery shopping.

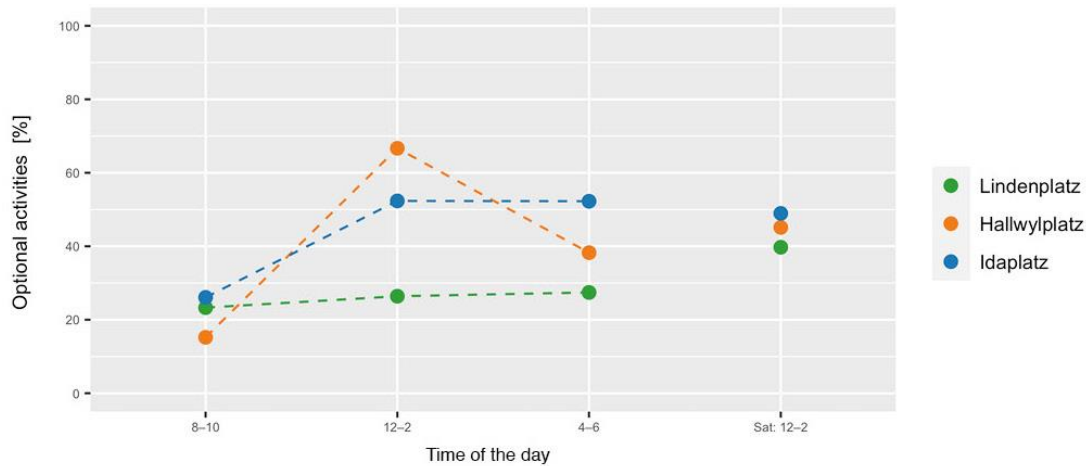


Figure 34: Proportion of people carrying out optional activities.

In the two other squares, there are both fewer everyday facilities and more affordances encouraging optional uses. Most notably, there is a higher seating ratio (Table 6). In Hallwylplatz, there are quite a few affordances that encourage children’s play (a shallow fountain, a slide and table tennis; see Figure 35), thus prompting parents and carers to engage in optional activities, too. These affordances are not offered by Idaplatz. However, as it is located in a rather quiet residential area, it is not surprising that the proportion of people engaged in optional activities is highest in Idaplatz compared to the other squares, except for the ‘lunch peak’ in Hallwylplatz.

As sitting is a necessary activity in only certain cases, the proportion of seated people is a simple yet telling indicator of optional activities (Table 6). Consistent with Figure 34, Hallwylplatz and Idaplatz have a much higher proportion of seated people than Lindenplatz.

This proportion of seated people is in line with the squares’ affordance of seating. The seating ratio is higher in Idaplatz and Hallwylplatz than in Lindenplatz. In Idaplatz, this mainly includes benches (86% of the seating is primary seating, see Figure 35), which contributes to the square’s robustness. In Hallwylplatz, primary seating consists of 39% additional furniture provided by the neighbours, and more than half of the seating opportunities are secondary seating on the edge of the shallow fountain.



Figure 35: Optional activities. (a) Standing to chat on market day (Lindenplatz); (b) Splashing in the fountain (Hallwylplatz); (c) Sitting to chat and enjoy the sun (Idaplatz).

Table 6: Metrics of seating affordances (non-commercial) and the number of minutes spent by square.

	Lindenplatz	Hallwylplatz	Idaplatz
% of people seated (of all people involved in stationary activities)	56	77	72
Seating ratio (cm/3m ²) (Bentley et al., 1985: at least 30 cm/3m ²)	6.3	11.6	8.2
Primary seating (% of all seating)	49	45	86
% of which additional furniture by neighbours	–	39	–
Secondary seating (% of all seating)	51	55	14
Average time spent (minutes)	13	21	17
Women	11	24	16
Men	15	19	19

The differences in affordances between the squares are also reflected in the time that people spend there. On average, people stay longest in Hallwylplatz (21 minutes) and shortest in Lindenplatz (13 minutes; Idaplatz 17 minutes). As only stationary activities are considered (i.e., excluding those who are passing through), the data is not skewed by a different percentage of passers-by.

There is a significant gender difference in the time people spend in two of the squares. In Lindenplatz, men spend 15 minutes on average, whereas women only spend 11 minutes. At Hallwylplatz, it is women who stay longer than men (24 and 19 minutes, respectively). At Idaplatz, although men tend to spend more time in the square than women, the difference is not significant.

Hallwylplatz is popular with children as a place for playing and splashing. Gendered patterns of use could therefore simply be the result of different uses of the public squares by parents and carers. Likewise, having more free time (e.g., pensioners) might also explain why some groups spend more time in the squares than others. Since univariate analysis only allows speculation about a potential connection between optional activities, affordances, and individual factors, I have also carried out a multivariate analysis of optional activities.

5.7.2. Which Factors Are Associated With Optional Activities?

The intercept survey dataset provides a combination of individual data on the way people use the public squares, their relationship to the neighbourhood, and sociodemographic characteristics. It is well suited for exploring which individual factors are associated with optional activities and thus a more convivial use of public squares. The first model in Table 7 reports the result of binary logistic regression assessing the effect of the variables in the four groups (square, relationship to neighbourhood, temporal dimension, and sociodemographics) on optional activities. Columns 2–4 show the same models run separately for each square. Due to the smaller sample size similar or smaller effects than in the general model may not be

significant in the individual square models. Case-specific significant results are discussed wherever they deviate from the general result.

Table 7: Logistic regressions on the propensity to carry out optional activities.

Variable	All (n = 1087)		Lindenplatz (n = 334)		Hallwylplatz (n = 353)		Idaplatz (n = 400)	
	OR ^{1,2}	SE ²	OR ^{1,2}	SE ²	OR ^{1,2}	SE ²	OR ^{1,2}	SE ²
Square								
Lindenplatz	—	—						
Hallwylplatz	1.71**	0.189						
Idaplatz	2.24***	0.178						
Familiar stranger (ref: no familiar stranger)	1.79***	0.156	1.70	0.276	1.35	0.321	2.27**	0.259
Neighbourhood (ref: living outside neighbourhood)	0.47***	0.148	0.41**	0.304	0.52*	0.282	0.43***	0.235
Timeslot								
8–10	—	—	—	—	—	—	—	—
12–2	4.71***	0.220	1.76	0.412	15.4***	0.446	4.21***	0.365
4–6	2.86***	0.224	1.55	0.428	4.01**	0.458	3.52***	0.352
Sat: 12–2	3.79***	0.219	2.44*	0.392	6.67***	0.451	3.83***	0.354
Occupation (ref: not (self-) employed)	1.86**	0.210	1.15	0.404	2.71*	0.416	1.83	0.339
Gender (ref: women)	1.36*	0.138	1.74*	0.269	2.20**	0.274	1.05	0.221
Age								
15–24 years	—	—	—	—	—	—	—	—
25–65 years	0.84	0.310	0.54	0.820	0.28*	0.592	1.93	0.502
older than 65	1.16	0.362	0.77	0.854	0.42	0.737	2.09	0.616
Accompanied by children (ref: no)	1.19	0.221	1.85	0.410	2.81*	0.452	0.61	0.361
Born in Switzerland (ref: yes)	0.85	0.175	0.93	0.347	1.10	0.312	0.75	0.300
Main language: German (ref: yes)	1.12	0.211	1.14	0.404	0.64	0.414	1.49	0.345
Household income								
low (less than 50% of median)	—	—	—	—	—	—	—	—
average (50–150% of median)	1.09	0.274	3.79	0.829	0.52	0.572	1.24	0.400
high (more than 150% of median)	0.74	0.313	5.41	0.904	0.24*	0.648	0.78	0.453
Education								
None/compulsory	—	—	—	—	—	—	—	—
Secondary	0.72	0.367	0.42	0.550	1.21	0.706	0.63	0.813
Tertiary	0.62	0.370	0.33*	0.556	0.91	0.699	0.63	0.812

Notes: ¹* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ²OR = Odds Ratio, SE = Standard Error. Model fit indicator McFadden R Square: all squares: 0.108, Lindenplatz: 0.076, Hallwylplatz: 0.215, Idaplatz: 0.098.

Square

Consistent with Figure 5, people in Hallwylplatz and Idaplatz have a significantly higher propensity to take part in optional activities than people in Lindenplatz. It should be noted that this effect is to be understood as all things being equal. As several other variables are controlled for in the model, the possibility that it is the result of a different sociodemographic composition of the square users can be ruled out.

This result can be attributed to the squares' material base. The affordances in Hallwylplatz and Idaplatz are more accommodating of optional activities than in Lindenplatz. Having a higher seating ratio, the two squares are more robust. Additionally, in Hallwylplatz, there is plenty of opportunity for personalization, as the movable chairs enable a wide range of seating arrangements for groups of different sizes.

Relationship to the Neighbourhood

To model the relationship to the neighbourhood, two variables, familiar stranger and neighbourhood, are included. People who recognized familiar strangers or acquaintances were more likely to be engaged in optional activities than those who did not. The salience of the familiar stranger variable can be attributed to the public familiarity that comes with recognizing strangers. As suggested by the literature, familiarity is presumed to increase the feeling of belonging to a neighbourhood that has been found to be positively associated with recreational use.

People living in the neighbourhood of the squares are less likely to participate in optional activities than people who live further away. This seemingly counter-intuitive result can be explained by the 'time in-between' and the methodology. Assuming time in-between is relevant for optional activities (see below), it is plausible that the closer to home these moments of time in-between occur, the more likely they are to be spent at home and not in public space. Also, due to the frequency with which they pass the squares, the people living close to the squares are more likely to have been asked to participate in the survey while in transit than those living further away.

Temporal Dimension

To model the temporal dimension of optional activities, the timeslot when people were being surveyed and their occupations are used. The timeslot is the most important variable in the model. Unsurprisingly, the people surveyed at noon, in the late afternoon or on Saturday are significantly more likely to engage in optional activities than participants in the morning. This result applies to all three squares, implying that the rhythm of work drives optional activities regardless of the squares' affordances. Nevertheless, it should be noted that in Lindenplatz—where, as mentioned, there are fewer affordances for optional activities—the effect is less pronounced. Affordances supporting optional activities, such as in Hallwylplatz and Idaplatz, seem to reinforce the recreational character of lunchtime, late afternoon and weekend hours.

Although occupation is only a crude indicator of time budget, employed people (full-time, part-time or self-employed) presumably have less free time on average than people not in employment (retired, in education, unemployed or engaged in full-time home duties). Yet,

unexpectedly, it is those who are employed that are more likely to be engaged in optional activities. When travelling to and from work (plus during lunch breaks) they have more ‘time in-between’, which connects them to spaces of proximity such as the squares, making it more likely that they will use them for optional activities.

Sociodemographics

This last group of variables helps clarify who, from a hyper-diverse population, forms part of the ‘commonplace diversity’ (Wessendorf, 2014b) of convivial public square use. Are some population groups more likely to do optional activities than others?

All things being equal, men are more likely to take part in optional activities than women. No significant relationship was found for the variables of ‘age’ or ‘accompanied by children’. Replacing ‘accompanied by children’ with ‘living in a household with children’ led to the same result. It should be noted that men are more likely to be engaged in optional activities than women, despite there being no major amenities that would suggest a gendered use, as described in the literature (e.g., sports facilities, playgrounds; Bühler et al., 2010; Ganji & Rishbeth, 2020).

No evidence was found for a significant relationship between whether someone was born in Switzerland or speaks German and the propensity to carry out optional activities. It can be inferred that, from those people present, people from a migrant background feel equally entitled to spend leisure time in the squares, a precondition for ‘thicker’ kinds of sociality thus being fulfilled.

The effect of income and education remains unclear, as the effects are not significant in the overall model and are inconsistent in the separate models.

Contrary to the other groups of variables, the sociodemographic group evidences some instances in which there are significant effects in the individual square models despite there being no significant effect in the general model: In Lindenplatz, people with a tertiary degree are significantly less likely to take part in optional activities than people with no formal or compulsory education. One potential explanation for this could be that people with higher status are more likely to perceive a social distance between them and other square users, and therefore feel less inclined to participate in optional activities.

A similar explanation could hold for the significantly lower propensity towards optional activities of people with high incomes in Hallwylplatz. The perceived social distance might not only apply to other square users but also objects (e.g., the sometimes shabby additional furniture in Hallwylplatz). In Hallwylplatz, 25- to 65-year-olds are significantly less likely than 15- to 24-year-olds to participate in optional activities. This could be explained by the relatively low share of young people in the neighbourhood, making it more likely that those who do come to the

square do so specifically for optional activities. In the same square, there is a significant relationship between being accompanied by children and participation in optional activities. It could be speculated that the shallow fountain's attractiveness accounts for the positive effect of being accompanied by children on the likelihood to carry out optional activities.

In Idaplatz, there are no significant relationships in the individual model that cannot be found in the general model.

It is important to note that these findings apply to people who use the squares and not necessarily to those who do not choose to be present in the first place. As affordances structure the set of possible activities, people might fall back on alternative public places for more culturally specific activities (e.g., spaces where larger groups can be accommodated).

Overall, for those who are present, the squares seem to be equally conducive to optional activities for a diverse range of population groups, the only significant difference being that for men, the likelihood of participating in optional activities is higher than for women. Of all the other groups included in the analysis, there does not seem to be one that is particularly likely or unlikely to do optional activities in the three squares. There are indications, but no conclusive evidence, that people of higher social status are less likely to participate in optional activities.

5.8. Conclusion

This article defines conviviality in public squares as the co-presence of a hyper-diverse urban population, extended by optional activities. It explores the factors which encourage people to use the Lindenplatz, Hallwylplatz, and Idaplatz public squares in Zurich in a convivial way. It thus sheds light on what contributes to lively public squares and hence more robust social infrastructure (Bentley et al., 1985; Layton & Latham, 2022).

There are considerable differences in the proportion of optional activities carried out in the three squares, corroborating previous research that has found design and affordances such as seating opportunities to be important factors in shaping public space use and encouraging optional activities (Gehl, 1971/2011; Lanng & Jensen, 2022; Rishbeth & Rogaly, 2018). This article contributes to our understanding of the role of affordances by providing evidence that more convivial use results not only from attracting a different crowd (e.g., people with more free time) but that the effect persists even when controlling for variables such as gender, cultural background, or socio-economic status which previous research has shown to have an influence on recreational use (Bergefurt et al., 2019; Ganji & Rishbeth, 2020; Huang & Napawan, 2021).

Regression analysis also reveals the importance of the temporal dimension of the activities and people's relationship to the neighbourhood, suggesting self-reinforcing connections

between the time in-between periods occupied by a professional activity (time may be spent in public squares on the way to and from work and during lunch breaks), the co-presence of people and the public familiarity resulting from this temporal overlap (Blokland & Nast, 2014). Living in the neighbourhood, i.e., in proximity to the square, however, seems to lower the likelihood of participating in optional activities. This link could benefit from further research.

The finding that men are more likely to carry out optional activities than women concurs with the existing literature on the gendered use of public space (Huang & Napawan, 2021), with the added benefit of clarifying that it is not (only) an effect of being attracted or not to certain spaces, nor of having childcare duties. As the survey took place during the daytime, we can also rule out the hypothesis that this result stems from women's greater or more prevalent safety concerns in the evening and at night. Besides potential safety issues during the day, the result may also be explained by a gendered appropriation and interpretation of the square's social space. Even though the actual affordances are the same for all, women might perceive their attractions and limitations differently. The finding might also reflect overarching social labour and care work structures, which are difficult to unpack through a quantitative analysis of behaviours.

The quantitative approach used here also takes a narrow view of conviviality in assuming that carrying out optional activities contributes to a convivial space. This is a crude indicator of conviviality. A different methodology would be necessary to study how a convivial 'rubbing along' (Wise & Noble, 2016, p. 425) is practised and experienced. However, the quantitative approach allows us to explore which factors affect an individual's likelihood of participating in optional activities, and to decouple individual and environmental factors.

There are also other limitations to this study. Firstly, the data only covers limited hours of the day. No surveys were conducted in the evening/at night. Secondly, the model might be underspecified, meaning important variables are missing (e.g., time budget, preferences for certain environments). Thirdly, the data was collected during the COVID-19 pandemic. As there were no health measures in force regarding behaviour in outdoor spaces, it can be assumed that the data was not greatly affected. However, there might be certain groups whose use of public squares was modified (e.g., at-risk individuals, or people working from home).

Notwithstanding these limitations, this article shows that mobilizing the concept of hyper-diversity contributes to our understanding of conviviality. Although the way the cultural background is measured here might mask certain effects, it is interesting to note that the people who use the squares in fact tend to extend their co-presence by engaging in optional activities regardless of their cultural background, age, or socio-economic status. Instead, gender,

relationship to the neighbourhood, and temporal dimensions appear to be more important factors in convivial use, in combination with the affordances the environment provides.

6. Operationalizing Affordances for Public Space: Artefacts and Their Various Uses

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6.1. Presentation of the Article

The previous article (Chapter 5) provided evidence that the affordances of a square affect how it is used. In the second article of this thesis, Patrick Rérat and I therefore unpack the connection between the affordances of the built environment, i.e. the set of behaviours and activities that are offered by it, and the uses and users it attracts or repels. The article has the objective of gaining a better understanding of how the design of public spaces shapes the diversity of the people using them (i.e. the first and fourth research question of the overall project). We adapt the concept of affordances to public space so it can serve as a tool in planning, designing, and evaluating public space. Furthermore, we propose a typology of affordances with five types of affordance (expected, extended, secondary, intentionally shaped and unintentionally shaped affordances) that is guided by theory and grounded in the empirical material provided by the semi-structured interviews with users (and non-users) of the squares (Section 3.4), and unstructured observations (Section 3.3).

With the typology, we explore the role of designers and users in creating affordances and suggest that asking how and by whom affordances are created contributes to a better understanding of what an environment can offer to different people. We also provide a set of questions to ask when studying affordances in public space. In conclusion, we find that some types of affordance may serve as best-practice examples for other projects, and other types may give clues as to how a place could be improved. The typology also highlights that appropriation can happen in unexpected ways, hinting at the importance of loosely programmed spaces (Section 2.3.3) and planning for unpredictability.

6.2. Abstract

The demands on public space are manifold, and are likely to increase due to the densification of cities and diversification of societies. How can we better understand public space, and plan spaces that accommodate a wider range of users and activities? This paper discusses the concept

of affordances and operationalizes it for public space research. Affordances are potential behaviours that users can engage in when in an environment or using an artefact. Studying public space through the lens of affordances is a relational approach that can serve as a planning and design tool or as a means of evaluating public space in post-occupancy studies. We address three questions regarding affordances in public space: who produces them, what and how do they afford, and to whom? We then present a typology of five affordances, empirically grounded by interviews and observations in three public squares in Zurich, Switzerland: expected, extended, secondary, intentionally shaped and unintentionally shaped affordances. By examining representative artefacts, we show that affordances may be created intentionally by different actors but also emerge unintentionally from relations between human beings, artefacts, and the environment. They all shape the way in which public space is used, and by whom.

6.3. Introduction

Public space is situated and lived; it is an arrangement of human and non-human beings, materiality, and meanings, and as such, is constantly produced and reproduced in practices of public space use (Qian, 2020). Public space is contested: debates about the commodification or privatization of public space highlight the numerous expectations placed on public space (Carmona, 2010a). Diversifying societies, growing inequality and the need to densify cities intensify the demands placed on public space. It becomes imperative that public space be of high quality and serve as a place of encounter that promotes social cohesion across ethnic and economic differences (Aelbrecht et al., 2019).

Public space has the capacity to accommodate a wide range of people – differing in their cultural backgrounds, but also in terms of socio-economic status, lifestyle, age, and their practises in public space (Madanipour, 2019). In public space, countless bodies, practices, material and symbolic objects, and the environment interact with each other, producing dynamics, possibilities, and relations that are largely unpredictable (Qian, 2020). Public space can therefore not be reduced to what planners and designers conceive. Moreover, since planning concerns the (unpredictable) future, the conception of public space needs to be open for unplanned uses and unknown users (Sendra & Sennett, 2020).

In this paper we put forward the concept of affordances as way of including unpredictability into our thinking about public space. Affordances can be defined as relations between the environment and an actor, and are expressed in behaviours or activities made possible (or impossible) for an individual by the environment, a natural object or an artefact (Chemero, 2003). The concept originated in ecological psychology (Gibson, 1986), and was thus initially

concerned with interactions between animals – human beings in particular – and their environment, but gained traction in design (Griffero, 2020; Norman, 1988) and later in communication and technology studies (Davis, 2020). A seminal publication on the affordances of children’s play areas (Heft, 1988) has inspired applications of the concept in public space (e.g. Daly, 2020; Gu, 2021; Lanng & Jensen, 2022).

A recent publication by Stevens et al. (2024) has also made advancements in theorizing the concept of affordances for public space. The authors show, from a theoretical perspective, that adopting a relational understanding of affordances through assemblage thinking and actor-network theory (ANT) can help framing affordances in public space beyond the intentions of designers and users. However, there is still scope for further theorizing, and for operationalizing the concept of affordances for public space and apply it to empirical material.

Even though literature on affordances in public space acknowledges that what an environment offers to users might not be equally attractive to everyone (S. K. Evans et al., 2017; Hadavi et al., 2015; Heft, 2010), the way in which these relations are mediated remains under-researched. We propose to adapt Davis’s (2020) framework for affordances to public space to fill this gap and account for users’ plurality.

The second, more central objective of this paper, is to shed light on who or what produces affordances (Designers? The intermingling of humans, non-humans and materialities?) and by whom they can be actualized. Despite a similar aim, we chose a different approach from Stevens et al. (2024) in addressing this question empirically. In an iterative back-and-forth between theory and our empirical material on affordances (obtained through interviews and observations) in public squares in Zurich, Switzerland, we developed a typology of affordances. We identify five types of affordance: expected, extended, secondary, intentionally shaped and unintentionally shaped affordances. We argue that this framework can be useful in designing and redeveloping public space, and in research on public space, e.g. in post-occupancy studies.

In Section 6.4, we first clarify what it means to look at public space through a lens of affordance, and then present our typology of affordances found in public squares. Section 6.5 introduces the case study and the methodology, and in Section 6.6 we apply our typology to several representative artefacts and examine their type(s) of affordance. Finally, we discuss the wider implications of this typology for planning and designing public space, and propose a set of questions to ask when applying the typology of affordances in further research.

6.4. Theoretical Framework

We share Davis's (2020, p. 8) concern that the concept of affordances be applied with precision to make use of its analytical contribution. Let us therefore first clarify some terms. Affordances are the 'potential behaviours the user can perform' (Davis, 2020, p. 37) in an environment or with an artefact, or 'possibilities for action' (S. K. Evans et al., 2017, p. 36). The use of, or activity performed within, that space or artefact is called an actualized affordance. It is also useful to distinguish between functions and affordances. Functions are defined by features that have been intentionally designed into an artefact or a technology, whereas affordances denote all potential behaviours, including those not intended by the designers (Davis, 2020, p. 37). The notion of intention is also quite fruitful, as it helps us to think about 'shaped affordances' (Raymond et al., 2017), i.e. instances where the environment is modified by its users to open up new potential activities.

In the literature, the concept of affordances has been applied to public space for various purposes and in different contexts. For example, it has been used to analyse the social-material interactions offered by landscapes such as an urban slope (Lanng & Jensen, 2022) or by landscaped water management solutions aimed at reducing flood risks (Mottaghi et al., 2020). Other studies have addressed the fit between the design objectives of a square and its actual uses (Daly, 2020), or the practice of eating and how it relates to affordances and expectations in public space (Kim, 2019). Popovski and Young (2023), for example, investigate how physical elements of the cityscape sustain or hinder urban protests and the activities of individuals experiencing homelessness, while Jensen (2023) explores the affordances of benches and looks at how they either 'gather publics' or create an 'atmosphere of rejection'.

Given this broad range of applications of the concept of affordances, we see scope for further theorizing it and providing a framework that can be used in a variety of contexts and at different stages of the planning, design and evaluation of public space. Returning to our main questions (Who or what produces affordances? How can we account for users' plurality in affordance thinking?), we need two theoretical 'tools': relational thinking (Section 6.4.1), and Davis's (2020) framework for affordances consisting of mechanisms and conditions (Sections 6.4.2 and 6.4.3).

6.4.1. Relational Thinking: Who Produces Affordances?

Literature on affordances is often concerned with their ontological nature, i.e. whether they exist in the physical world or only in the perception of subjects (Chemero, 2003; Stevens et al., 2024). We do not delve into this philosophical question here as we take a more practical perspective. For our purposes, it is sufficient to say that affordances are relational (Davis, 2020; Heft, 2010),

i.e. they lie in the ‘relations between the abilities of organisms and features of the environment’ (Chemero, 2003, p. 189), where ‘abilities’ include both physical abilities and skills that are learnt in sociocultural practices (Rietveld & Kiverstein, 2014).

Stating that affordances are relational puts them in proximity of relational approaches like assemblage thinking and ANT (Daly, 2020; Kim, 2019).⁴⁵ Both have in common that they consider relations or arrangements of human and non-human entities as having agency and as producing new actors (Müller, 2015). In the case of affordances, it is the relations between the environment and a user that enable or constrain behaviour and therefore have agency in their own right.

For our purposes, we draw on the relational approach of Löw (2016). In her sociology of space, she conceives of two ways in which space is constituted (spacing and the operation of synthesis), which has important consequences for affordances. In Löw’s (2016, p. 131) definition, space is ‘a relational arrangement of living beings and social goods’ that is constantly (re-)produced by practice. The constitution of space occurs, on the one hand, through ‘spacing’. This entails the positioning of social goods, living beings or symbolic markings in space (Löw, 2016, p. 134). Designing a space involves the placing of elements such as benches, trees or waste bins, creating affordances. Likewise, bringing a foldable chair is an act of spacing that generates affordances. Also human beings themselves may temporarily alter the affordances of a space for others, by occupying a bench, for example. we temporarily change its affordances for others.

Synthesis, on the other hand, has to do with the way space is perceived by individuals, in which the positioning of social goods and living beings is ‘blended’ into one. This ‘operation of synthesis’ happens through ‘perception, imagination, and memory’ (Löw, 2016, p. 135), within pre-existing spatial structures and social arrangements. Löw argues that, even though these structures may not be visible, they are materially perceptible because living beings and social goods have an ‘external effectuality’ that can be perceived by individuals and ‘which can influence feelings’ (Löw, 2016, pp. 171–172). Löw calls this affective dimension of space ‘atmosphere’. There is a clear link here to Anderson’s (2009, p. 80) concept of ‘affective atmospheres’, i.e. the idea that atmospheres influence people’s moods and collective feelings. (Griffero, 2020, pp. 107–108).

Griffero (2020, p. 101) suggests that affordances are not only instructive to actions, but may also impact sentiments or emotions. Like others (e.g. Lanng & Jensen, 2022), we share this view

⁴⁵ In particular, Stevens et al. (2024) have shown how assemblage thinking and ANT helps conceptualizing affordances in urban design that go beyond what is predictable and designable.

and contend that it is not only artefacts that have affordances, as a space's atmosphere may also play a role in shaping what actions – and what feelings – are possible, and thus spaces in themselves may have affordances.⁴⁶

Atmospheric affordances in public space can be produced intentionally, either by professional producers such as (landscape) architects and designers (Anderson, 2009, p. 80), e.g. by creating a pleasant soundscape through burbling water, or by users, e.g. by hanging up a garland to decorate the site for a birthday party. They can also be created unintentionally, simply in the way that atmospheres are synthesized by users and created by their behaviour in space.

Affordances differ from person to person: while the way atmospheres are synthesized is usually intersubjective, it is not universal, and also intentionally designed affordances afford to varying degrees, as we will outline below.

6.4.2. Mechanisms: What and How?

An environment or artefact does not *either* afford or not afford. It affords different things to varying degrees (S. K. Evans et al., 2017, p. 40) and in varying ways to different people (Heft, 2010). Davis (2020) provides a way to conceptualize both the what and the how of affordances, suggesting the existence of multiple 'mechanisms of affordance', which include requesting, demanding, encouraging, discouraging, refusing or allowing certain activities (Davis & Chouinard, 2016).

While this way of thinking of affordances is useful in the context of technological tools, with regard to public space we think it more apt to place mechanisms of affordance on a continuum ranging from negatively affording (i.e. repelling) certain actions to positively affording (i.e. inviting) other actions (Figure 36). For example, an environment or an artefact can have 'motivating qualities' (Heft, 2010, p. 25), as can be observed at any fountain that is accessible to children and invites them to splash around. Repelling qualities are perhaps less obvious, but we need only think of windowsills with anti-sitting studs, for example, to see that certain behaviours (and consequently certain users) can be designed out of an environment (Townshend & Roberts, 2013).

In contrast to the typology of affordances by Stevens et al. (2024), in our typology (see below), types of affordance are not defined by their mechanism of affordance, i.e. all types of

⁴⁶ Kim (2017, 2019) argues that affordances are used exclusively to look at interactions between humans and the environment or artefacts in the physical realm, whereas the inscription–prescription perspective (Akrich, 1992), which is based on actor–network theory (Latour, 2007), also includes 'nonphysical types of communication between users and objects' (Kim, 2019, p. 282). However, because we also look at uses that were not created on purpose and therefore are not an inscription, we prefer to use the term affordance even to describe nonphysical affordances.

affordance can, in principle, be anything between repelling and inviting. As we will see in the next section, this is all the more important since affordances do not equally afford to everyone.



Figure 36: Continuum of mechanisms of affordance in public space.

6.4.3. Conditions: For Whom?

Previous research has found that ‘differences in the individuals’ concerns and needs’ affect the perception and evaluation of affordances (Hadavi et al., 2015, p. 26; Heft, 2010). Translating this to Davis’s (2020) terms, we could say that both what affordances offer to people and how they offer it depend on three conditions: perception, dexterity, and cultural and institutional legitimacy. This analytical distinction is geared towards technological affordances, but with some amendments it is also applicable to public space. Depending on how these conditions are present in an individual, affordances in public space are recognized differently. This accounts for differences in behaviour in public space based on such attributes as gender, age, ethnic background, life stage and class. In what follows, we discuss the three conditions and their meaning for affordances in public space.

Firstly, perception is a precondition for the actualization of any affordance. Here, the careful design and planning of public space is key, as this should ideally provide easily recognizable cues regarding intended uses, while keeping the potential set of actions as open as possible (Bentley et al., 1985).⁴⁷

Secondly, dexterity denotes the cognitive and physical skills needed to make use of affordances. This holds not only for technological affordances but also for basic activities in public space. We would add that dexterity extends to what individuals can and cannot do more generally, with potential behaviours also depending, for example, on their purchasing power or familiarity with the context and its sociocultural practices (Rietveld & Kiverstein, 2014). For example, access to a public square might be impossible for wheelchair users if there are curbs, while for someone who does not have the money to buy a coffee, a sidewalk café will not permit them to sit in that space.

⁴⁷ It should be noted that perception is closely linked to planning concepts like the visual quality of urban environments described by Lynch (1960/1971), or ‘legibility’, cited by Bentley et al. (1985) as one of the key concepts of a responsive environment.

This brings us to the third condition: cultural and institutional legitimacy. Behaviour in public space is relatively unregulated in a formal sense but, as shown by Goffman (1971/2017), nevertheless entails intricate navigation of formal and informal social norms. This applies to affordances in a particular way: affordances are not determined only by the design of physical artefacts and the ability of people to use them. Learning which behaviours are physically possible and socially legitimate always happens in a sociocultural context (Heft, 2010, p. 25). In addition to what could be termed ‘higher authorities’ (such as culture and institutions), the many informal and sometimes weak social norms in public spaces vary considerably in their interpretation, meaning that different people may assess the appropriateness of behaviour differently, resulting in different sets of viable affordances. Legitimacy can thus refer to any kind of influence of social norms, their interpretation and their acceptance. It ranges from formal regulation that shapes affordances for certain groups (e.g. when the police are given the power to expel certain people from public space) to norms regarding behaviour at different times of day or the impression that a certain behaviour (or indeed certain people) would be out of place.

6.4.4. Five Types of Affordance in Public Squares

Based on the above theoretical reflections and our empirical material, we differentiate between five types of affordance. We do not conceive of them as ideal types as they are not mutually exclusive and, for most artefacts, are found in combination. However, they help us understanding affordances in public space that arise spontaneously, sometimes unintentionally, through relations between users and the environment, alongside those affordances that are formally designed. They also draw attention to the fact that affordances afford different things to different people, depending on perception, dexterity and legitimacy.

We briefly present the types and how they were derived here. In Section 6.6, we look at some representative artefacts and their types of affordance, and consider what this means in terms of *what* and *for whom*.

An initial distinction between expected, extended, secondary, intentionally shaped, and unintentionally shaped affordances is based on the design process. The first three types (expected, extended, secondary affordances) originate from formal design decisions (Stevens et al., 2024), usually made by designers (by which we mean any kind of professional ‘producer’ of environments or artefacts). However, these types of affordance interact with users in different ways (hence the further differentiation), creating unplanned affordances beyond what was intended by designers. The other two types (intentionally and unintentionally shaped affordances) emerge from users participating in the constitution of space by spacing or synthesizing (Löv, 2016). All types of affordance require some knowledge about the intentions

of designers and users. Here, we approximated users' intention by interviews and observations (see Section 6.5.3), but their (mis)match with designer's intentions would be a fruitful area for further research (Stevens et al., 2024).

Let us turn back to the first three categories, and start with expected affordances. Expected affordances are affordances that are intended by the designers. According to the inscription–prescription perspective (Akrich, 1992), designers inscribe into artefacts their assumptions of how actors will or should use them. An artefact then translates the designer's intentions into a prescription for users (Kim, 2017). Expected affordances are inscribed, and at the same time the 'preferred affordances' of users. Preferred affordances are those that are culturally selected, i.e. they reflect 'a shared cultural milieu that predisposes the individual to use objects [...] in particular ways' (Loveland, 1991, p. 101). By the very nature of expected affordances, the average user (which depends on what groups are targeted in the conception of the environment or the artefact) will not usually need to rely on specific conditions to actualize them.

Extended and secondary affordances are also formally designed. In contrast to expected affordances, however, users have a more active role in them and might perceive affordances that transcend conventional expected affordances. Extended and secondary affordances are therefore more demanding on the level of perception as well as in terms of dexterity and legitimacy. While they differ from each other in the conditions that need to be fulfilled to actualize them and in the conventionality of the behaviour afforded, it can be difficult to distinguish between them. The distinction is primarily analytical; empirically, they will be found in different degrees and combinations.

Firstly, extended affordances are provided by the form or the material of an artefact or its environment, but they require some additional dexterity and/or and fewer people will consider this behaviour legitimate. Additional dexterity can mean, for example, further knowledge about the artefact or familiarity with a context, or it may be that extra props or skills are needed in order to actualize the affordance, e.g. a ball to play football on a lawn.

Secondary affordances, then, are even more distant from the conventional behaviour of expected affordances. They entail a creative move beyond preferred affordances (Loveland, 1991): the preferred affordance of another user-artefact-arrangement is transferred to the arrangement in question, despite this behaviour not being part of the initial inscription–prescription. For example, some horizontal surfaces not intended as seating may, nevertheless, allow sitting in what is called secondary seating (Bentley et al., 1985). Secondary affordances highlight a lack of expected affordances. If primary seating opportunities are numerous, secondary seating is less likely to be actualized.

Let us now turn to the other two types, the shaped affordances (Raymond et al., 2017). Both intentionally and unintentionally shaped affordances emerge from users' spacing and their operation of synthesis (Löv, 2016). In the case of intentionally shaped affordances, these are provided through the placing of additional artefacts in a space in the aim of promoting certain activities or discouraging others. Flowerpots at a sidewalk café, for example, or a 'No Entrance' sign, intentionally shape affordances, the first by creating a welcoming atmosphere, the second by setting a social norm.

Unintentionally shaped affordances are also created by users, but without being planned as such. Forgetting a bottle crate, an act of spacing, allows seating or playing to the next users. The spacing of human beings can unintentionally create an audience for a street artist. Unintentionally shaped affordances may also arise through the operation of synthesis. An arrangement of people and/or objects is perceived as having a certain atmosphere even if none of the actors involved planned it. If a group of people is celebrating a birthday in a public space, the atmosphere is probably more cheerful than usual and may invite people to join in the festive mood. Alternatively, the gathering may be synthesized as noisy and discourage participation, depending on the individual perceiving the event.

Before moving on to the empirical examples that illustrate these five types of affordance, we now present our research approach.

6.5. Research Approach

6.5.1. Context

This research is part of a larger project on social diversity in public squares in Zurich, Switzerland. We hypothesize that social diversity is closely related to the materiality of squares, the artefacts within them and the affordances they provide. This paper focuses on how affordances, depending on the conditions of affordance, offer different potential activities to different user groups.

The project is based on a case study of three publicly owned neighbourhood squares: Lindenplatz, Hallwylplatz and Idaplatz. They are relatively small (1,500–2,000 m²), serve a wide range of purposes and uses and are accessible to everyone ('civic spaces' in Carmona's typology, 2010b, p. 169). They all contain artefacts such as trees, benches, fountains, waste bins and advertising columns.

For many users, the squares are simply a passageway. Other activities conducted in the squares include shopping (mostly for groceries), spending time with friends or family, or spending time alone, e.g. reading a book or watching people. Eating and drinking are also very

common activities, whether in one of the cafés or restaurants and their outdoor seating areas, or by consuming self-brought food and drinks.

6.5.2. Case Studies

We briefly present the three case studies here (Figure 37). Elements that are particularly relevant for affordances will be taken up and described in more detail in the following section.

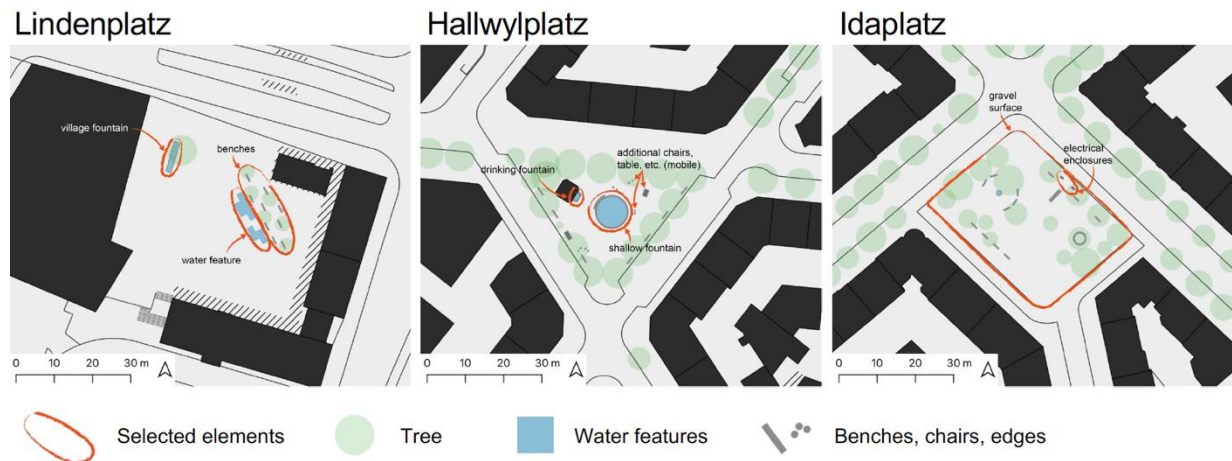


Figure 37: Map of each square. Elements which are reported in Section 6.6 are circled in orange.

Lindenplatz

Lindenplatz is situated in the heart of Altstetten, a former village incorporated into Zurich in 1934. Lindenplatz is named after the lime trees dotted around the square, which provide shade for the benches placed along the side of a shallow water feature on the ground and for the old village fountain. Three cafés or restaurants with outside seating areas are on the square's edges, and there are also two supermarkets, five other shops and a newsstand. The centre of the square remains empty most of the time but fills with stalls and a buzzing crowd when the farmers' market is held every two weeks. The square's redevelopment in 2011 involved the addition of the water feature and the restoration of the square's protected historic paving.

Hallwylplatz

Hallwylplatz is located in the Werd neighbourhood, close to the city centre. Its triangular shape is surrounded by residential buildings, offices, a hotel, three restaurants, of which two have outdoor seating areas in the square, a hairdresser, and two shops. In the north-eastern corner of the square, there is a small building with a drinking fountain. Benches and trees alternately skirt the square on two sides, and right in the middle, there is a shallow round fountain. In recent decades, several attempts to redevelop the square have failed for financial reasons and because residents resisted them, fearing that a revitalization would be 'too successful' and attract a noisy

crowd. However, residents have ‘upgraded’ the square themselves by placing additional furniture there. The City of Zurich only tolerates this uncommon practice.

Idaplatz

Idaplatz is part of the Sihlfeld neighbourhood. After its redesign in 2006, the square has become a very popular spot for visitors from further afield as well as for locals. The square’s main area now consists of a slightly elevated gravel surface, wheelchair accessible via two ramps, and two flattened-out corners. There is a relatively high number of benches, some of which are shaded by the trees that are scattered around the square. In the adjacent buildings, there are three cafés and restaurants, all of them serving in the square or on the sidewalk. A small newsstand has two tables beside its entrance, and the commercial offering is rounded off by an organic grocery shop, two other shops and some office spaces.

6.5.3. Data Collection

The data was collected during two periods of fieldwork in summer 2021 and 2022. In summer 2021, extensive fieldwork took place, consisting of an intercept survey (Velu & Naidu, 2009), behavioural mapping (Gehl & Svarre, 2013) – both reported elsewhere (Widmer, 2023; corresponds to Chapter 5) – and observations (Lüders, 2004). The first author spent more than 70 hours in each square observing the actualized affordances.

Since we are interested in the conditions and mechanism of affordance, i.e. possibly also in discouraging affordances, or people feeling illegitimate to actualize an affordance, observations alone are insufficient. Therefore, we also rely on data from semi-structured interviews conducted in 2022. They inform us about how affordances are perceived – yet not necessarily actualized – by square users. The interview protocol contained open questions on the activities carried out in the square and the use of the urban furniture, as well as participants’ perceptions of other square users and of the general atmosphere. Put together, this information provides a rich database from which the affordances of the squares can be inferred.

Interviews took place between 17th May and 8th November 2022, mostly on site and in dry weather. The fact that they took place in the squares helped, as the environment provided prompts for the participants’ answers, as found in walking interviews (J. Evans & Jones, 2011). In total, 63 interviews were conducted (Lindenplatz: 20, Hallwylplatz: 21, Idaplatz: 22). Interviews lasted around 45 minutes on average, but were sometimes shorter with people who had been recruited on the spot.

A purposive sampling strategy with sampling quotas for different population groups was used, in order to ensure a heterogeneous sample (Robinson, 2014). There are fewer men than

women among the participants (38%), but the sample includes adults from all ages and life stages (students, parents of younger and older children, retired people, etc.). About one third of the participants have a migrant background, corresponding roughly to Zurich's demographics, and the sample is fairly balanced in terms of educational level. It includes some people with a very high socio-economic status, although the quota was not reached in that category. Most importantly, the interviews cover a variety of types of users: people who only pass by, who occasionally sit on a bench or who frequently spend whole afternoons or evenings in the squares.

Participants were recruited by calling upon contacts from previous fieldwork, snowball sampling, asking square users on-site to participate, asking people in nearby public spaces to participate, advertisements in shops, cafés, via neighbourhood organizations, housing cooperatives, noticeboards in big developments, and an article in Zurich's local weekly newspaper.

6.5.4. Data Analysis

Artefacts and elements of the environment are taken as the unit of analysis for a qualitative content analysis (Mayring, 2014). We ask how these affordances came about and under which conditions they offer what to whom. As described in Section 2, affordances can be sorted into five different types: expected, extended, secondary, intentionally shaped and unintentionally shaped affordances. For most artefacts, multiple types of affordance are present, and are not always easy to distinguish from each other. In what follows, we describe the five types of affordance using representative elements of the public squares. The artefacts have each been selected in order to showcase one particular type of affordance. The affordances described here are by no means complete – the list of negative affordances alone would be infinite. We also briefly mention instances of each type of affordance that may be afforded by other elements.

By explaining the conditions and mechanisms of affordance, we demonstrate how our operationalization of affordance for public space is useful in studying who uses public space and for what purposes.

6.6. Types of Affordance and Where They Are Located

6.6.1. Expected Affordances: Benches and Water Feature in Lindenplatz



Figure 38: Benches and water feature in Lindenplatz. Source: authors' own.

The nine benches, arranged in three rows on one side of the water feature in Lindenplatz, are typical wooden benches (Figure 38). Their affordances can be found in most other benches in an urban setting and allow for a wide range of sitting postures or even lying down. The affordances of these benches are thus as expected: elderly people sit to rest, families eat an ice cream or people sit down to watch others, or to have a short chat with someone. Depending on the weather and the time of day, the mechanisms of affordance may shift from encouraging (sunny spots in spring) to discouraging (blazing hot in summer), but generally the mechanisms and conditions of affordance are very similar for almost everyone.

The water feature just in front of the benches consists of five basins embedded in the ground, each furnished with two water nozzles. As the jets of water are only small, the feature invites children to play with it, while drinking is discouraged because the nozzles are placed directly on the ground. The expected affordances do not demand any particular dexterity. Splashing around depends on permission from carers, but other than that, there is no particular normative dimension to the affordance. It can thus be actualized by almost anyone.

Being familiar with the water feature, however, alters its affordances, as this father explains:

‘We always go to the fountain [...]. Also, you can turn the nozzles, most people don’t know that. Well, you can show that to the kids, and soon you get into conversation through that.’

Daniel, m, 42, family

Because of Daniel’s familiarity with the context, he is not only able to open up a new (and extended) affordance to children, i.e. allowing them to splash in different directions, but the water feature also sparks interactions with other adults.

6.6.2. Extended Affordances: Gravel Surface in Idaplatz



Figure 39: Playing pétanque in Idaplatz. Source: authors’ own.

At Idaplatz, the main part of the square is covered by a gravel surface. Its main (and expected) affordance is that of walking on it. The material was chosen for aesthetic reasons in a participatory process, as the residents wished for a square that was not too asphalted. The area was elevated to discourage cars from driving on it as they had previously been allowed to park in the designated spaces.

The surface also has extended affordances that require certain conditions to be present. The gravel facilitates the playing of pétanque (Figure 39), for example, but only for those who know how to play (dexterity) and who dare to take up space for their game (legitimacy).

Extended negative affordances also exist: the same material characteristics that make playing pétanque possible discourage people from sitting on the ground, and the gravel ‘refuses’

to be skateboarded-upon (refusing is a mechanism of affordance identified by Davis (2020)). It can even demand extra effort when walking, depending on one's perception of the surface:

'The only thing I'm not a fan of – but that's completely individual, a personal thing. It's just, the gravel... I don't really think it's a great surface. [...] I just don't like having to polish your shoes every time you've been there. And I just find it – it's always so dirty for me.'

Peter, m, 63, single-person household

Another extended affordance is to be observed in Idaplatz: the outdoor seating of one of the bars is not fenced off and is therefore accessible even when the bar is closed, and thus some people take the liberty (legitimacy) of consuming their self-brought food at the bar's tables.

6.6.3. Secondary Affordances: Electrical Enclosures in Idaplatz



Figure 40: One of the electrical enclosures in Idaplatz being used as an ad hoc bar. Source: authors' own.

On one side of Idaplatz there are two electrical enclosures. At first glance, they have no use for public square users. Yet here, we encounter secondary affordances. As Idaplatz gets very crowded on summer evenings and the space on the benches and in the bars is limited, people very quickly appropriate the enclosures as an ad hoc bar, placing their drinks on them (Figure 40). In terms of dexterity, this affordance requires little: the enclosures are of a certain height, so it only needs a minimum body height. On the other hand, their height provides another secondary affordance as a play setting for children.

In principle, not much is to be said about the bar affordance from a normative perspective. Some residents, however, are bothered by the noise of the crowds attracted to Idaplatz, and find it disturbing that the enclosures are turned into furniture for partying:

‘And that someone puts an electrical enclosure on Google Maps and indicates it’s a place where you can enjoy an aperitif and then people come and find it awesome – well, of course I might be a bit old, but I find it ridiculous.’

Martin, m, 69, coupled household

Most users are not aware of this view, and even if they were, they would probably still feel entitled to use the electrical enclosure as a bar. However, locals close by, who might not share this opinion but are conscious of it, may perceive the affordance as not acceptable for them because it might endanger neighbourhood ties.

More examples of secondary affordances are easily found. The same bar affordance is also actualized on very busy evenings in Idaplatz with windowsills and post boxes that have surfaces on which allow putting-things-on-top. In Hallwylplatz, the shallow round fountain in the middle of the square is often used as a pool for young children. The fountains also provide secondary seating in both Hallwylplatz and Lindenplatz, an affordance that is usually actualized as soon as the benches are occupied.

We will see in the next section that in Hallwylplatz, some locals have positioned additional furniture, such as wooden benches.

6.6.4. Intentionally Shaped Affordances: Toys, Chairs and the Barbecue Grill in Hallwylplatz



Figure 41: Barbecue grill, picnic table, additional chairs, and regular benches in Hallwylplatz. Source: authors' own.

In Hallwylplatz, locals have placed additional furniture and equipment in the square: two wooden boxes, filled with children's toys and chess pieces, a slide that is sometimes positioned to end in the shallow fountain, a table and two benches made from logs, a barbecue grill, a table tennis table, and thirty or so different individual chairs (Figure 41). By putting them in the square ('spacing'), and by regularly repairing or replacing broken elements, the locals intentionally shape the affordances of Hallwylplatz.

For children, the square now offers many of the affordances of a playground, as it allows them to play with toys, to slide down the slide and to race in circles around the fountain on toy cars. The movable chairs encourage adults to position themselves wherever they want, finding comfortable arrangements in larger groups or a spot that best suits their preferences in terms of sun, shade or view. The grill allows barbecuing and so is often found at the centre of birthday parties, but it refuses to be moved around freely as it is chained to the ground. It also requests that those who want to use it bring a grilling rack.

Some affordances are differentiated depending on dexterity, e.g. familiarity with social practices in the square. Those who are familiar with 'how the square works' know that they can

borrow a grilling rack from the person who put the barbecue grill there, and some of those who have been around for years have their own grilling rack, so do not need to borrow one.

There are other examples of intentionally shaped affordances. In Idaplatz, people may bring a blanket that allows them to sit on the ground without getting dusty from the gravel, while in Hallwylplatz, they may do the same to provide a clean surface that functions as both seating and table when they want to eat pizza from the nearby pizzeria. In addition, some Idaplatz residents intentionally shape the square's affordances by planting flowers around the trees that line the street, thus creating a pleasant atmosphere.

6.6.5. Unintentionally Shaped Affordances by the Same Artefacts

The additional furniture in Hallwylplatz also unintentionally shapes the atmosphere. Participants often describe how the children, the adults playing table tennis or the parties celebrating a birthday or the end of a working week, create a lively, stimulating atmosphere. Their synthesis of the arrangement of bodies and artefacts motivates them to join the buzz or simply watch what is happening in the square.

Others, however, have a different experience. Reflecting on the additional chairs and other amenities, Lina realizes that she would not necessarily dare to use them because she is not one of the locals who has put them there:

'Because to me, it looks like it's just the neighbours who really put out the... [chairs, grill], and you know it's from – well I don't know from whom – and you know that of course it must be for everyone, but I don't know whether I'm allowed to use it anyway. I think I know that you could use it, but I don't know if I would do it.'

Lina, f, 24, shared flat

Likewise, Luisa, a woman who lives within a five-minute distance from Hallwylplatz, perceives a certain feeling of non-belonging:

'And I know it's really a square for families, and I would almost not dare to celebrate my birthday here. I feel like the people who use this square, this is their square. That's my idea of it, it's not that it really is this way.'

Luisa, f, 35, coupled household

Interestingly, both are aware that it is their subjective operation of synthesis that makes them feel this way. Like most other participants from Hallwylplatz, they enjoy the relaxed and lively atmosphere of the square, but their perception that the furniture has been put there by others,

for others, unintentionally shapes the affordances for them – and, presumably, others like them – who feel that the use of the additional furniture is not legitimate for them.

In principle, taking a toy or a folding chair to a public space and thus intentionally shaping the affordances is quite common for spaces such as lakesides or parks, but is usually only temporary. The example of the additional furniture in Hallwylplatz shows a more durable appropriation and a more intense use of public space that may exclude those who are not familiar with the practices.

For another example of unintentionally shaped affordances, we return to the benches in Lindenplatz. Their affordances are, in the perception of some people, shaped unintentionally by a group of people who misuse alcohol. After conflicts in the past, most people agreed that the situation had become much better by summer 2022 and that this group was no longer actively creating a nuisance. Yet their mere presence was synthesized by some people as creating an atmosphere that discouraged them from using the benches. This view tends to be stronger in elderly people, parents and women. Some are worried about their safety, while others just feel that ‘it is not right’ for them to sit there. Legitimacy thus conditions shaped affordances. Men and younger people tend to see the atmospheric affordances less negatively, or even find the benches and their occupants entertaining:

‘[They are] obviously having some kind of problems in life, mainly alcohol-related, or other drugs. You also see beggars, you can see that. It’s mainly these characteristics. [...]

Interviewer: And how does that change how you move around?

It doesn’t at all. I like to sit on the benches in between them, it adds a bit of entertainment ((laughs)).’

Lukas, m, 21, shared flat

Another example of an unintentionally shaped affordance was observed in Hallwylplatz. After a party, some empty beverage crates were inadvertently left behind in the square. The next day, they were soon appropriated by other users who perceived that the crates also allowed sitting on and playing with them.

6.7. Conclusion

Based on theoretical considerations and empirical data, we have shown that affordances are a powerful tool for studying public space. The concept of affordances draws attention to the fact that being in an environment, or in public squares in this particular case, is never just a passive uptake of visual stimuli, but always involves actively engaging with the environment (Heft, 2010).

While this seems almost trivial when considering a playground, it may be less obvious in other activities such as standing to wait for the bus or sitting on a bench. But seemingly passive activities, such as enjoying the sun on a bench, also comprise an active ‘operation of synthesis’ through which other living beings and artefacts are brought together into one social construction (Löw, 2016).

We have argued that affordances offer a way of conceptualizing public space in terms of uses that designers conceived, but also in the unpredictability of unplanned uses (Stevens et al., 2024). It also provides a pluralistic view of public space’s capacity to accommodate a wide range of users. Pluralistic, because affordances have a collectively shared dimension, yet ‘[a public square] is not the same place for each user group’ (Heft, 2010, p. 25). Affordances are shaped by conditions which are not the same for everyone.

In this paper, we have operationalized Davis’s (2020) framework of mechanisms and conditions and adapted it to affordances in public space. We have seen that the conditions of perception, dexterity, and cultural and institutional legitimacy alter the mechanisms of affordance, causing affordances to move on a continuous scale ranging from repelling to inviting (Heft, 2010). In this sense, we have shown how affordances shape the diversity of uses in the three selected public squares. Our theoretical reflections and empirical analysis have led us to the conclusion that asking who or what produces affordances provides valuable insights into what public space can offer to different people and how this transcends formal design.

We have identified five types of affordance: expected, extended, secondary, intentionally shaped and unintentionally shaped (Table 8). Expected affordances are those that are designed into the artefact and culturally ‘preferred’ (Loveland, 1991) and are complemented by extended and secondary affordances, which emerge when users perceive additional, more creative uses of the artefact. Affordances can also emerge from users’ spacing and their operation of synthesis (Löw, 2016). This can mean placing or removing bodies and artefacts to encourage or constrain certain activities, directly or via atmospheres. But arrangements of bodies and artefacts can also have affordances (including atmospheric affordances) that were unintended.

Table 8 summarizes the five types of affordance and the roles played by designers and users in their creation. With Table 9, we propose a set of key questions and sub-questions to ask when applying the typology of affordances in further research. The questions offer a way of combining design and user perspectives in the planning and design of (semi-)public spaces, in order to anticipate or understand mismatches between design objectives and actual use, potential use conflicts or unmet demands for activities (Gu, 2021; Lanng & Jensen, 2022).

Positive extended and secondary affordances can act as best-practice models for new projects or redevelopments, while negative ones indicate how spaces may be improved and made more inclusive. Shaped affordances, on the other hand, call attention to their orchestration: who creates these new affordances and for whom? This question links to issues of publicness and the dialectic between inclusion and exclusion (Qian, 2020). The additional furniture at Hallwylplatz, for example, multiplies the affordances of the square and creates a more intense use, especially during lunch hours and on summer evenings. But the furniture does not afford equally for everyone as it makes some users feel out of place. The actualization of secondary affordances might also require some sense of entitlement to public space that people might not have, e.g. if they have newly arrived in a city. Further research could explore how the actualization and creation of positive affordances can be facilitated while keeping public space open in the sense that it is usable by many and not just a few.

Table 8: Five types of affordance and their distinguishing features.

	Expected	Extended	Secondary	Intentionally shaped	Unintentionally shaped
Role of designers	Designers deliberately plan the affordance	Affordance technically created by designers, but not as a preferred affordance	Affordance technically created by designers, but not as a preferred affordance	No direct involvement of designers	No direct involvement of designers
Role of users	Users actualize the prescription as planned	Users perceive an affordance diverging from the conventional use. Actualization is more demanding in terms of conditions of affordances	Users transfer the preferred affordance of another artefact to the artefact in question. Actualization is more demanding in terms of conditions of affordances	Users intentionally modify the environment (spacing of bodies or artefacts), creating affordances directly, or via atmospheres	Users unintentionally modify the environment (spacing of bodies or artefacts), creating affordances directly, or via atmospheres
Representative artefact and affordance found during fieldwork	Bench invites sitting	Gravel surface allows playing pétanque	Electrical cabinet offers use as a bar	Additional furniture provides places to eat	Additional furniture repels because of intimate atmosphere

The different types of affordance serve as a reminder for researchers in urban studies and for the urban design profession that uses of urban settings go beyond what is formally designed into them. In our case studies, city residents and visitors shape the affordances of the squares both intentionally and unintentionally, and appropriate them in sometimes unexpected ways. The concept of affordances sharpens our understanding of urban public space, indicating the wide range of unpredictable activities that can occur in addition to those that the spaces have been designed for. It thus invites us to think of ways to create unfinished, loosely programmed environments that are open to more activities and users, and adaptable in the future (Sendra & Sennett, 2020).

Table 9: Set of questions to ask when studying affordances.

Dimension	Key question	Sub-questions
Who?	What is the role of the designer?	<ul style="list-style-type: none"> Who defined what affordances there should be? Who put the artefact there, or who designed the environment?
	What is the role of the users?	<ul style="list-style-type: none"> Do users actualize the affordance as planned? Do users creatively actualize affordances provided by the artefact/environment that go beyond the primary function and conventional use? Do the affordances stem from users placing additional artefacts, or from users modifying the environment? Do the affordances stem from the atmosphere created by the spacing of human beings and artefacts?
What?	What potential behaviours are offered?	<ul style="list-style-type: none"> Which are the positive affordances? Which are the negative affordances? Which affordances are actualized? Which are not? Are important positive affordances missing?
How?	What is the mechanism of affordance?	<ul style="list-style-type: none"> Is the mechanism the same for everyone? (→ see <i>For whom?</i>) Does the mechanism shift, e.g. depending on the weather or the time of day?
For whom?	What conditions need to be met for the affordance to be actualized?	<ul style="list-style-type: none"> For whom is the affordance perceivable? (e.g. depending on body height, lighting conditions, receptiveness to atmospheres) What cognitive and physical skills are needed to actualize the affordance? What other capabilities are needed? (e.g. purchasing power, familiarity with the context) For whom is the potential behaviour deemed legitimate, for whom not? Is this legitimacy set by a formal authority or by more informal normative patterns?

Our typology is empirically grounded in affordances in public squares. However, we contend that our study offers a relevant framework that could be applied to other contexts and types of public space. Further research could investigate in what combinations and relations the types of affordance we have identified can be found in other public or semi-public spaces such as parks, playgrounds, swimming pools or housing estate courtyards. We believe that our approach is applicable not only in urban contexts in the Global North, but also in small towns or rural areas and in the Global South. In the future, there could be further efforts to theorize the concept of affordances for designing public space (like Stevens et al., 2024), to use the typology in post-occupancy studies, and to study the role of designers in providing affordances to diverse users.

7. Mixed Neighbourhoods, Mixed Squares? Exploring the Diversity Gap in Public Squares

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7.1. Presentation of the Book Chapter

We have shown in the previous article (Chapter 6) that affordances affect how and by whom a square is used. They can provide options that appeal to some but not to others, and the presence of some people may create an atmosphere that – intentionally or not – makes others feel less welcome. The third piece of this thesis, a book chapter, therefore explores how diversity at the neighbourhood level plays out in the public squares. It directly addresses the second research question (How does a neighbourhood’s diversity compare to square users’ diversity?). It looks at the squares through the lens of social infrastructure and asks to what extent they are places that invite everyone into the public realm and thus support sociality across differences. It contributes to literature on diversity in public space by taking into account socio-economic status and self-reported indicators of migrant background that are not easily observable. I add the variables age and education for this thesis (marked with a footnote). These paragraphs had to be removed from the submitted manuscript because there was not enough space. In the chapter, I adopt a quantitative approach of comparing diversities. Drawing on the intercept survey data informing us about the characteristics of square users (see Section 3.3.4) and on secondary data on the inhabitants of the neighbourhoods surrounding the squares (see Section 3.3.6), I compare squares and neighbourhoods with the help of diversity indices.

The analysis finds a diversity gap: the square users’ diversity is lower than in the neighbourhood, in terms of ethnic, socio-economic and educational diversity. The middle classes, and people belonging to the mainstream society (which, in Zurich, means: university degree, speaking German, born in Switzerland) are overrepresented in the three squares. I further analyse whether this is an effect of an influx of people from outside the neighbourhood by looking at neighbourhood residents and visitors (employees, visitors from other parts of the city, tourists, etc.) separately. I show that the diversity gap cannot be attributed to visitors from outside the neighbourhood, suggesting that the squares are not equally appealing to everyone. No diversity gap is found for age. I conclude the chapter by reflecting on the implication these

findings have for the squares functioning as social infrastructure. I appeal for a nuanced discussion of diversity in public space, i.e. for carefully thinking about *what* kind of diversity we think necessary in order for a square (or any other places) to work as a social infrastructure, and about the implications it could have if e.g. upper classes systematically evade public life.

A first draft of this analysis had been presented at the special session ‘Neighbourhoods and social infrastructure: Recovering the social in post-Covid cities’ organized by Alan Latham and Jack Layton at the Annual International Conference of the Royal Geographical Society in 2022. The chapter will be part of a book edited by the organizers of the session, bringing together the research discussed in the session.

In contrast to the submitted version, this version also contains a more detailed discussion of the visitor’s effect and of the rhythm of diversity. The sections that were added are marked with a footnote.

7.2. Abstract

As places where one can pass by or spend time alone or with others, public squares provide space for different kinds of sociality between people from all walks of life. It is not clear, however, to which extent squares function as social infrastructure for the co-presence of strangers in mixed neighbourhoods. Depending on the time of the day, their gender, age, class, lifestyle, family situation, etc., people use public squares differently and might never meet at all. This chapter examines the diversity of users of three public squares in Zurich (Switzerland) and compares it to the diversity in the surrounding neighbourhoods. The analysis of an intercept survey among users and secondary data on the neighbourhood’s inhabitants suggests that there is a diversity gap in terms of ethnicity and socio-economic status. The proportions of the middle classes and people belonging to the mainstream society (speaking German, born in Switzerland) exceed their respective proportions in the neighbourhood. This suggests that the squares do not fully cater to the needs of other parts of the population, thereby challenging their capacity as a social infrastructure that encourages fleeting encounters and meaningful interactions across difference.

7.3. Introduction

All sorts of public life can be found in squares. People hold markets, chat to each other, watch others, and gather for a street concert. But do we also find all sorts of people in public squares? Typically, squares are open spaces that have clear boundaries, are well enclosed, usually by surrounding buildings, and serve a public purpose (Lee, 2019). Market squares are perhaps the

most emblematic example of squares, and can be traced back to Ancient Greece and Rome (Carr et al., 1992). Ideally, squares are open and accessible to all, and accommodate a broad array of functions (Carmona, 2010b). While some have representative functions, this chapter is concerned with smaller, inconspicuous squares on a neighbourhood scale. They provide the local community with a place to meet friends and strangers, to gather for social and political activities, to relax, to play, to exercise, to see and be seen, perhaps to drink a coffee, or to simply pass by (Wolfrum, 2015).

Squares facilitate social connections and 'being out amongst other people', and are therefore also seen as social infrastructure (Latham & Layton, 2019). Social infrastructures are physical and institutional spaces like parks, libraries, sidewalks, swimming pools, and public transport that provide opportunities for social life to flourish (Klinenberg, 2018). Social infrastructures are often publicly owned, but also commercial institutions like coffee houses can facilitate connections between people in much the same way. The public sociality afforded by social infrastructure take many different forms: it ranges from the fleeting sociality of co-presence, to recognizing familiar faces, up to thicker kinds of sociality like friendship (Layton & Latham, 2022).

These spaces of social infrastructure matter, because the social life they facilitate has positive consequences on many dimensions of urban life, most notably on people's health and well-being (Klinenberg, 2018). Another defining characteristic of social infrastructure is their capacity to foster social connections across differences (Peterson, 2023). Ideally, they are places where people from all walks of life can gather, be alone in public, interact and collectively experience their togetherness despite their differences (Klinenberg, 2018).

In today's cities, we find numerous differences between people. They differ in age, gender, income, status, ethnicity, language, religious beliefs, cultural practices, lifestyles, values, activities, and in many other dimensions (Tasan-Kok et al., 2014; Vertovec, 2007). This social diversity can be an asset, but it also poses challenges for social cohesion and belonging (Gijsberts et al., 2012). In societies that get ever more diverse, but also more unequal, places where people can connect with others, even if only superficially, are therefore much needed (Watson, 2022). Here, social infrastructures can help out: they are thought to encourage co-presence or even interaction between people regardless of their ethnic or socio-economic background, their gender, age or lifestyle (Klinenberg, 2018, p. 16). But what if this invitation to public life is not felt equally by everyone?

This chapter addresses social diversity in public squares as sites of social infrastructure. While there is abundant literature on socially mixed neighbourhoods (Casarin et al., 2023; DeFilippis & Fraser, 2010; Galster & Friedrichs, 2015; Oosterlynck & Verschraegen, 2019), only few studies examine how diversity on the neighbourhood level translates to public spaces.

This chapter therefore asks who uses public squares and who, from those living in the neighbourhood surrounding the squares, does not? I examine the ethnic and socio-economic diversity of users in three neighbourhood squares in Zurich (Switzerland). To explore the relationship between the squares and the neighbourhoods, I compare the composition of the square users to the neighbourhood population by means of a diversity index, and I analyse which groups are under- or overrepresented. Since there might be a mobility effect, i.e. people who live outside the neighbourhood and who visit the square for various reasons (work, education, shopping, sightseeing, etc.), I also study the diversity of neighbourhood residents and visitors separately.

The next section explores what we know about diversity in public space. In the subsequent section, I outline the case study and the methodology. I then present the findings on diversity (the representation of age, ethnicity, socio-economic status, and education) in the public squares and how these could be tied to affordances – i.e. the potential activities offered by the squares. I conclude by discussing the results in the context of broader debates on social infrastructure and mixed neighbourhood policies, and the difficulties of defining and measuring diversity.

7.4. Diversity in Public Space: What It Is, and Why It Matters

Squares and other types of outdoor social infrastructure are sites of public life, and as such contribute to lively cities. Lively cities in turn are much more than just lively. In enticing people to be out and about, lively public space is vital in making cities safer, more sustainable, and healthier (Gehl, 2010). What does that mean in the case of squares? Squares with more people in them are (and feel) safer – the famous ‘eyes on the street’ (Jacobs, 1993). Squares provide space for greening and de-sealing, helping to mitigate the effects of climate change (Wellmann et al., 2020). Inviting people to be out amongst other people also counteracts a sedentary lifestyle and loneliness, thereby making life in cities better both in terms of mental and physical health (Wolch et al., 2014).

In this chapter, I attend to squares in particular because from my perspective, they have yet another quality that adds to the good life in the city. They are both part of the pedestrian network and inviting to longer stays. As such, their use is not as closely defined as, e.g., a playground’s. They are open to very different kinds of uses, and can thus potentially be inviting to a wide range of people, and therefore they have a great capacity to bring people of all walks of life together.

Being together in squares does not automatically lead to interactions and meaningful contact (Valentine, 2008). However, the co-presence, i.e. the sharing of space, and the fleeting encounters are important even if it is only by 'sheer volume' (van Melik & Pijpers, 2017). It provides the 'thin sociality' (Bodnar, 2015) that serves as a way of getting a glimpse of whom society is composed of.

This is all the more important given that cities are getting more diverse, but also more unequal and more segregated (Chancel et al., 2022; Tasan-Kok et al., 2014; van Ham et al., 2021). In the domain of housing, diversity has long made its way into policy to counter residential segregation by promoting mixed-income neighbourhood, often tied to the hope of also maintaining or increasing racial or ethnic diversity (DeFilippis & Fraser, 2010; Oosterlynck & Verschraegen, 2019). The question of how social mix translates to public space, however, is less well established. There are a number of studies that have shown that different population groups use public space differently. For example, people of Western European ethnicity use green spaces more solitary than other ethnicities who tend to use them in larger groups (Ganji, 2018). Religious beliefs may lead Muslim people to avoid places where children play only partially clothed (Daly, 2020). In some spaces, research has found that there is segregation according to gender-specific activities (e.g. women supervising playing children, men playing chess; Ganji & Rishbeth, 2020; Huang & Napawan, 2021), and one study showed that young women are largely prevented from using sports facilities by the strong appropriation of these spaces by young men (Shaikly & Mella Lira, 2022). From these and other studies, we know that patterns of public space use vary between different groups.

However, so far, only few studies have examined the extent to which diversity observed in public spaces reflects the diversity present in the neighbourhoods where the spaces are located. In his study of the High Line Park in New York, Reichl (2016) finds that White people dominate the High Line while the ethnic diversity in other parks is much higher. An Indian diaspora community is found to be underrepresented in the use of urban waterways in Leicester, UK, due to a disregard of the community's plurality in participatory processes (Zaidi & Pitt, 2022). Ethnic minorities are also underrepresented in two public squares in Montréal, and the territorialisation of the squares by male elderly regulars and long-term residents seems to come at the expense of women who are underrepresented (Paré & Mounier, 2021). In a study of parks in Zurich, research found elderly people and women underrepresented in comparison to the neighbourhoods in which the parks are located (Bühler et al., 2010).

There are many reasons not to visit parks, squares or other types of social infrastructure. The presence or absence of people in squares depends on their lifestyles, routines, and activity spaces (Wang & Li, 2016). While available free time is likely to be linked to recreational public space

use, it is presumably less important for squares that not only serve leisure purposes but are also passageways.

The presence or absence of different population groups also hinges on a place's affordances. Affordances are potential activities an environment offers in relation to individuals' abilities and normative restrictions (Davis, 2020; Widmer & Rérat, forthcoming). Affordances may determine who is co-present in numerous ways. In a study on Superkilen, the famous contemporary public space in Copenhagen, Daly (2020) examines the space's capacity to enable encounters between different cultural groups. He identifies a trade-off between open programming, i.e., offering a wide range of activities and therefore making it more difficult for specific groups to territorialize the space and more closed programming which only allows certain activities. The latter paradoxically creates commonness through carrying out the same activity despite differences.

Public spaces may also exude an atmosphere that instils feelings of belonging or non-belonging (Widmer & Rérat, forthcoming). This may happen through other people who territorialize a space, or through symbolic objects that show the place is impregnated by culture, history, and/or group identity. While statues are probably the most obvious examples, street signs or urban furniture may have a similar effect (Trawalter et al., 2021).

The decision whether to stay in or to pass through a public square depends on an evaluation of the affordances and the legitimacy of intended activities, individual constraints like time budget and personal preferences, and available alternatives. Nevertheless, a public space's diversity is also likely to depend on the demographic composition of the neighbourhood. Indeed, Reichl (2016) finds that more diverse neighbourhoods are associated with a higher diversity of park users. This 'neighbourhood effect' is complemented by a 'visitor effect', because also visitors from outside the neighbourhood – people working in the area, students, people running errands, tourists, etc. – may alter a square's diversity (Reichl, 2016).

7.5. Studying Social Diversity in Three Squares in Zurich

The aim of this chapter is to explore the relationship between the diversity found among the users of public squares and the diversity of those living in the neighbourhood around the squares. In this way, I explore whether different groups of people are actually co-present in the neighbourhood's public space, and whether some groups are under- or overrepresented in the squares compared to the neighbourhood population.

To this end, I focus on small-scale neighbourhood public squares. I chose squares as the unit of analysis for two reasons. (1) They are relatively loosely programmed and potentially unselective towards their users, and (2) they are in residential areas so that the relationship

between the square users' and the neighbourhood's demographics can be examined. The fact that the squares do not attract a lot of tourists makes it easier to study the extent to which diversity on a neighbourhood level translates to the public squares.

In view of the methodological limitations (discussed below), I opted for a case study approach with the three squares Lindenplatz, Hallwylplatz, and Idaplatz as cases (Figure 42). They are all located in different neighbourhoods in Zurich. The cases were selected to be in contrasting neighbourhoods in terms of the diversity of their population (see Widmer, 2023, for the selection procedure). The three neighbourhoods differ in the proportion of family households, in the heterogeneity of incomes (while in one neighbourhood incomes tend to be on the lower end, in the other neighbourhoods also many people with higher incomes can be found, i.e. the range of incomes is wider), in the proportion of people without Swiss nationality, and in the ratio of residents to employees who work in the neighbourhood. This makes them interesting cases to explore differences in the diversity between square users and neighbourhood residents.

Lindenplatz



Hallwylplatz



Idaplatz



Figure 42: The three cases Lindenplatz, Hallwylplatz, and Idaplatz. Source: author's own.

The squares themselves, on the other hand, were selected to be as similar as possible. They are each between 1,400 and 1,900 m², and feature a couple of trees, benches, one or two fountains or water features, an open area, and a couple of public ground floor uses like cafés, restaurants, shops or supermarkets, and newsstands. These common features should, however, not obscure the fact that the squares also have many specificities regarding the amenities they offer, and the way the squares are integrated into the urban fabric. Lindenplatz is located next to a major public transport stop, is close to a care home, and hosts two supermarkets. Hallwylplatz feels a bit hidden from the main axes and is surrounded by lots of offices. It is also equipped with thirty or so movable chairs which were put there by locals. They have also provided a wooden table, a barbecue grill, a slide, table-tennis equipment, and other toys. Idaplatz boasts a high number of benches strewn throughout the square and is well known for the bars and the cafés on its edges.

Despite their differences, the squares serve a similar purpose in that they cater mostly to the everyday needs of the local community. They matter for the neighbourhood because they are spaces of proximity – spaces where people pass through on their way home from work and maybe stop for a drink, where they meet their friends for a coffee, take their dogs, bump into their neighbours, or sit on a bench. They clearly count as social infrastructure because of their capacity to sustain social connections. In light of the importance of the co-presence of different people, it is an interesting question to what extent the squares are inviting to everyone and thus have the capacity to facilitate social connections across difference.

Studying the relationship of the squares' diversity and the neighbourhoods' diversity, meant, on a technical level, that I needed data on both the square users and the neighbourhood's residents. The former was collected in fieldwork, and the latter by the Statistics Office of Zurich. The Statistics Office provided a dataset containing socio-economic and demographic data of Zurich's residents, as well as a rough identification of where they live. This allowed me to avoid the historically grown political delineations of neighbourhoods, and to define them by a 500-meter radius around the square instead.

To collect data on the square users, I carried out an intercept survey between 15 June and 11 September 2021, together with trained research assistants. Each square was surveyed twice at different times of day on a weekday (8–10 a.m., 12–2 p.m., 4–6 p.m. on Tuesday/Thursday) and on the weekend (12–2 p.m., or in the case of Lindenplatz 2–4 p.m., on Saturday). This yielded 1,474 responses in total (Lindenplatz: 492, Hallwylplatz: 464, Idaplatz: 518)⁴⁸ ⁴⁹. The research

⁴⁸ The overall response rate was 36.4%. It was calculated by dividing the number of responses by the total number of people approached. Refusals were recorded by noting apparent gender and age group. Women, and people under 25 tended to participate less frequently, but the differences in response rates were not significant.

⁴⁹ If the sample of square users is limited to those who live in the neighbourhood (i.e. excluding visitors from outside the neighbourhood), the sample sizes are as follows: Lindenplatz: 334, Hallwylplatz: 184, Idaplatz: 319 (total: 837).

assistants and I tried to approach everyone with a researcher-administered questionnaire, asking the participants about their use of the square, their relationship to the neighbourhood, and their sociodemographic data.

Fieldwork took place during the COVID-19 pandemic. To account for differences in the epidemiological situation, the fieldwork was carried out in two waves (June and August/September). The sociodemographics do not significantly differ despite a considerably more relaxed context during the second wave. This finding, the fact that there were no longer any restrictions in place in Switzerland regarding behaviour in open public space, and commuting was up to 80% of pre-covid times again (intervista AG, 2021) suggest that the external validity of the data is not curtailed too strongly.

Sample selectivity is difficult to quantify since the 'true' population of square users is unknown. This is one of the main difficulties in studying the relationship between neighbourhood diversity and the square users' diversity. However, the composition of the dataset in terms of apparent gender and age was compared to structured observation data (Public Life Data Protocol, Gehl Institute et al., 2017). There are no significant differences between the two methods, suggesting that the survey sample adequately represents the square users.

Not all variables covered in the intercept survey can be treated in this chapter. The main focus lies on the variables *country of birth* and *main language* as they indicate an immigrant background, even if only roughly⁵⁰, and *income* as an indicator of social status. *Occupation* is brought in to complement. Table 10 gives an overview of the variables and their categories. Age and education were added to the book chapter for this thesis. Categories of course mask differences within them, but they let us approximate diversity statistically.

The intercept survey data is compared to the data on the neighbourhood population by means of an index of diversity. Different indices (Fossett, 2017) were tested. Since they yielded similar results, I used the Shannon-Wiener diversity index (Shannon, 1948). It is applied in ecology as a measure of biodiversity, and also used to measure functional diversity in urban studies (Bernabeu-Bautista et al., 2023; Lu & Giuliano, 2023; Yuo & Tseng, 2021). The index takes the value of 0 for a perfectly homogeneous population (one group). It increases with an increasing number of groups and with a more even distribution of individuals across these groups⁵¹.

⁵⁰ Due to time constraints of the intercept survey, collecting more detailed data was not feasible. Nevertheless, in the context of Switzerland, it is important to have both variables since people may have been born in Switzerland but do not speak German as their main language if they grew up in other linguistic regions, or they speak German but originate from other German-speaking countries.

⁵¹ $H' = - \sum_{i=1}^n p_i \cdot \ln(p_i)$, where p_i is the relative frequency of group i and n is the number of groups.

The absolute value depends on the number of groups which is arbitrarily set by categorization. For the same variable, however, the index values allow determining whether diversity in the square is greater or less than in the neighbourhood. Even though the index compresses data and loses information, it enables testing differences in index values for statistical significance. To that end, Hutcheson's t-test was used (Hutcheson, 1970). In a second step, I look at frequency distributions to detect which groups are under- or overrepresented.

Table 10: Variables used and their categories.

Variable	Categories
Country of birth	Switzerland, Northern/Western/Central Europe, Southern Europe, Eastern Europe, other countries
Main Language	(Swiss) German, English, Italian, French, Spanish, Portuguese, Serbo-Croatian, Albanian, other languages
Income	Equalized income, classified based on the median: low (less than 0.5 * median), average (between 0.5 * median and 1.5 * median), high (more than 1.5 * median)
Occupation	full-time, part-time, retired, other (= in education, looking for employment, housewife/househusband, other occupations)
Age	15-24 years, 25-44 years, 45-65 years, older than 65
Education	Highest completed education: no formal or only compulsory education, secondary, i.e. vocational education and training, general education, tertiary, i.e. university degree or equivalent

7.6. Comparing Square Users to the Neighbourhood

7.6.1. Age⁵²

Looking at age, the square users show a diversity that is slightly higher than the neighbourhood's diversity in all the cases (Figure 43). This can be attributed to the finding that in the neighbourhood, people between 25 and 44 are the most frequent age group, while in the square, this group is slightly underrepresented. Correspondingly, most other age groups are somewhat overrepresented (except for 15-24 year olds in Lindenplatz and people older than 65 in Hallwylplatz; Figure 44). However, the differences in diversity are not significant, and therefore, overall, the age distribution of the square users more or less reflects the neighbourhoods' composition in terms of age.

⁵² This section was added for this thesis.

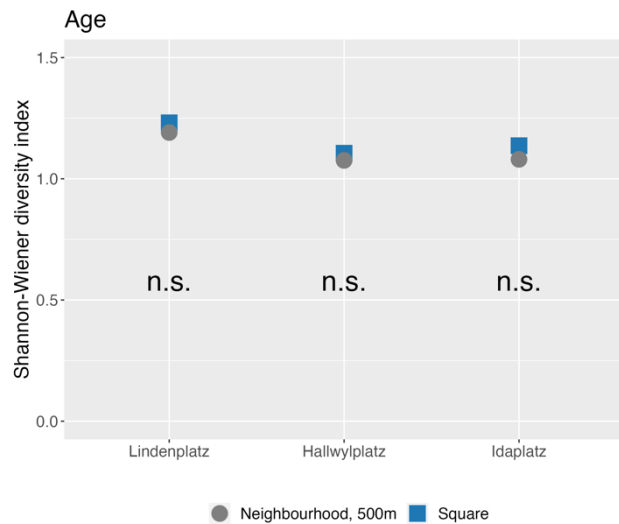


Figure 43: Age diversity of the neighbourhood population and the sample in the squares. Significance of the difference between the two values: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

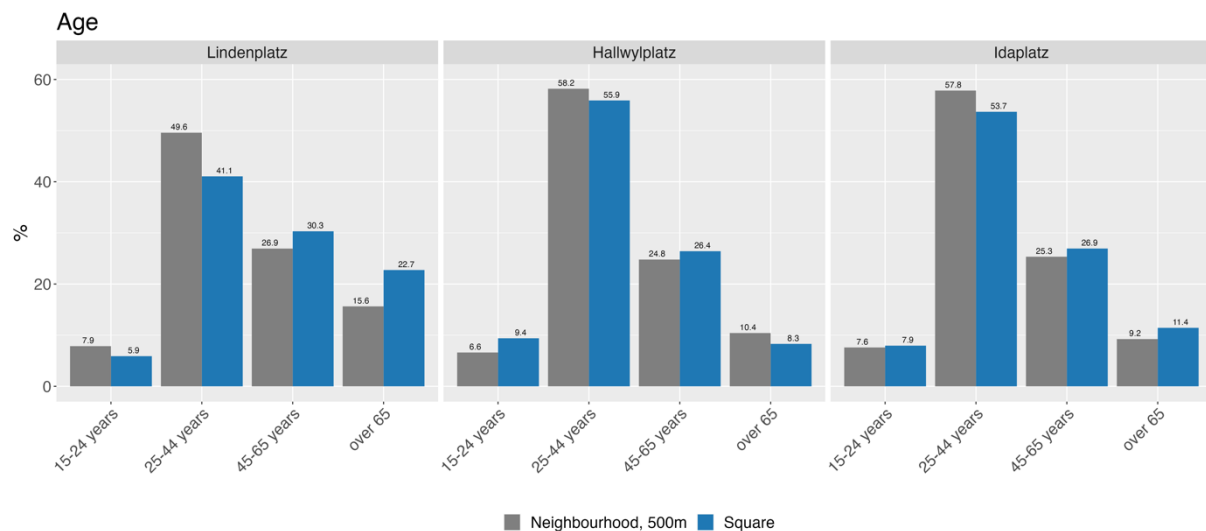


Figure 44: Frequency distribution of age categories.

7.6.2. Migrant Background

Considering the country of birth, diversity in the squares is lower than in the neighbourhood population in all three cases (Figure 45). This difference is not significant in Lindenplatz, however. The frequency distributions of this variable (Figure 46) show that in all three cases, the majority group (Swiss-born) has a larger share in the square than in the neighbourhood. There is a considerable under-representation of people born in Southern European countries. Combined, this under- and over-representation lead to a more uneven distribution among the square users and consequently to a less diverse population. In Lindenplatz, however, the shares of people born outside of Switzerland differ less from their respective shares in the

neighbourhood than in the other squares, explaining why the difference between the two index values (Figure 45) is not significant.

Interestingly, both in Lindenplatz and Idaplatz, the share of people born in non-European countries is slightly higher in the squares than among the residents. The difference in the percentages is small and could therefore also be coincidental. Nevertheless, interestingly, the general under-representation for non-Swiss born people does not seem to include people born in non-European (and therefore, presumably, geographically and culturally more distant) countries.

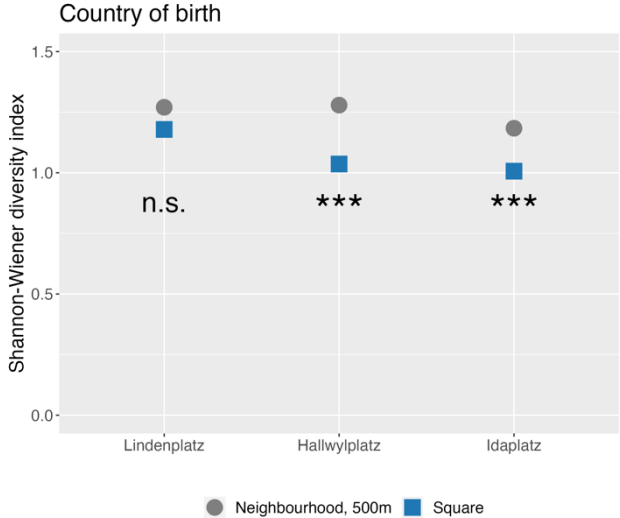


Figure 45: Country of birth diversity of the neighbourhood population and the sample in the squares. Significance of the difference between the two values: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

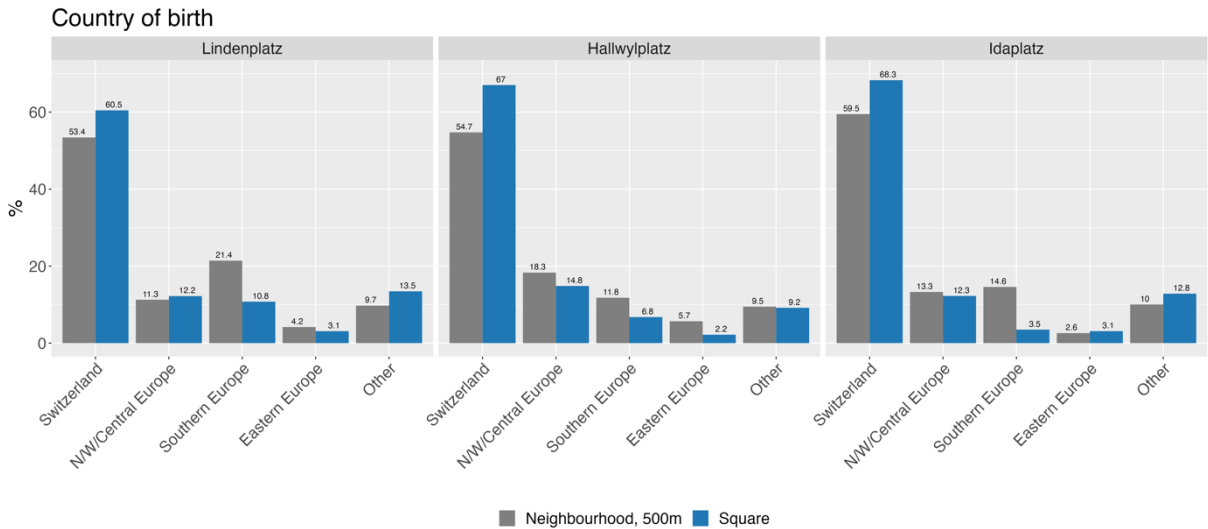


Figure 46: Frequency distribution of the country of birth.

The diversity indices based on people’s main language paint a similar picture. The diversity is lower in all of the squares compared to the neighbourhood’s diversity (Figure 47), but the difference between the two values is not significant in Idaplatz. Again, in the frequency distributions (Figure 48), we see that the majority group (German-speaking) is larger in the squares than in the neighbourhoods. Generally, people speaking other main languages than German are underrepresented in the squares, except for Lindenplatz, where people in the category ‘other languages’ can be found more frequently. Only in Idaplatz the differences are small enough so as not to amount to a significant difference in diversity.

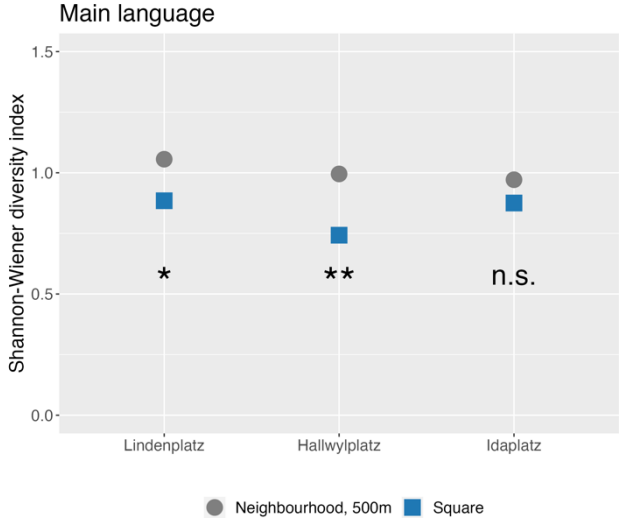


Figure 47: Main language diversity of the neighbourhood population and the sample in the squares. Significance of the difference between the two values: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

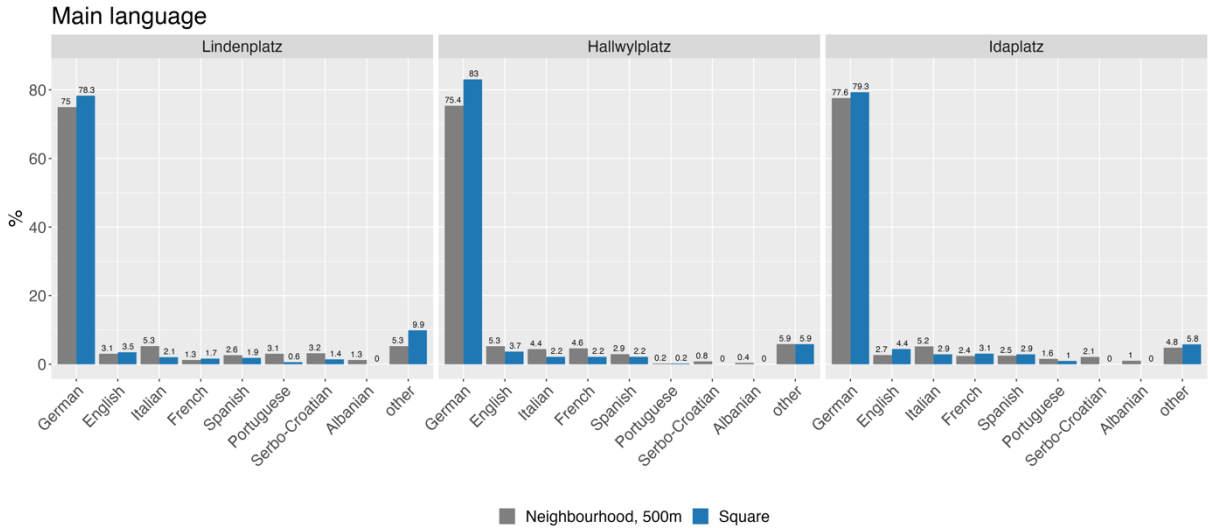


Figure 48: Frequency distribution of the main language.

The diversity gap between square and neighbourhood in the two variables used as proxies for migrant background means that, overall, people from a different cultural background are less frequently encountered in the squares than in the neighbourhood. Correspondingly, the proportions of German-speaking people and people born in Switzerland are out of line with their proportion in the neighbourhood in the opposite sense: they are overrepresented.

Part of this result may stem from sample selectivity due to language difficulties. Since we do not know the 'true' population of square users, it is hard to estimate how much this impacts the results. However, the distributions of the three squares are distinct – and especially in Lindenplatz, the proportions of people not born in Switzerland and not speaking German as a main language are higher than in the other squares and therefore likely to be not solely a result of the method used.

There are two potential explanations for this. First, the 'missing part' of the migrant population might have preferences for recreation which are not afforded by the squares but offered by alternative open spaces. For example, people from the Latin community can often be found barbecuing in large groups in a park close to Idaplatz. Idaplatz does not have the affordances that allow such gatherings. Second, the atmosphere exuded by the squares, the artefacts within them, and the people using them might signal (unintentionally) that these places have originally been created by and for the mainstream society. Such an atmosphere may instil feelings of non-belonging to those who are not part of this mainstream society and do not share their common practices of public space use, or might restrict the use to close neighbours who have more agency in determining what happens in the square.

7.6.3. Education⁵³

Regarding the highest level of education, the composition of the square users is less diverse than that of the neighbourhood residents in all of the cases (Figure 49). People with a tertiary degree are overrepresented in the squares compared to the neighbourhood (Figure 50). People with compulsory (or no formal) and secondary education are less frequently encountered in the squares than their share in the neighbourhood would suggest. Quite remarkably, the over-representation of people with tertiary degrees is so strong in the case of Lindenplatz that they become the majority group among the square users despite people with a secondary degree being the largest group in the neighbourhood.

The over-representation of people with a tertiary degree could be due to a difference in time budget. Having higher salaries maybe allows for more part-time work, and therefore might

⁵³ This section was added for this thesis.

increase the time budget available for visiting the squares (at least during the time of day when data collection took place). In the next section, a related pattern can indeed be found looking at incomes and occupation. The over-representation could also stem from an influx of people with tertiary degree from outside the neighbourhoods, e.g. as employees. I will briefly touch on this in Section 7.6.5, and in more detail in the additional Section 7.7. The methodology used here provides yet another hypothesis: perhaps people with a tertiary degree feel more inclined to participate in a survey than others? Since we do not know the ‘true’ population of square users, there is no answer to this question. This, again, points towards the many difficulties in measuring diversity.

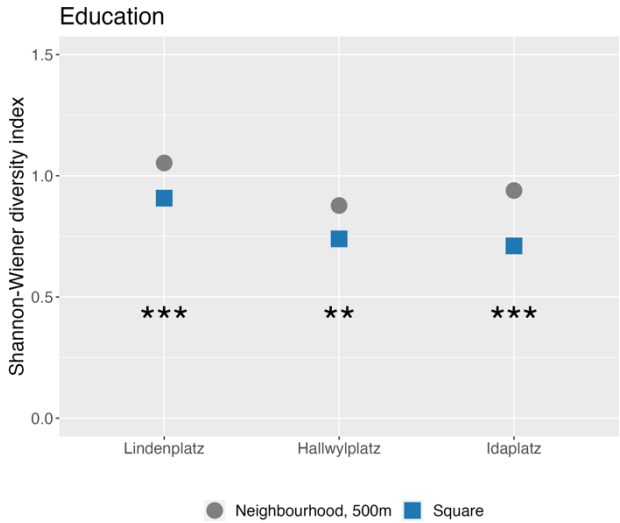


Figure 49: Educational diversity of the neighbourhood population and the sample in the squares. Significance of the difference between the two values: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

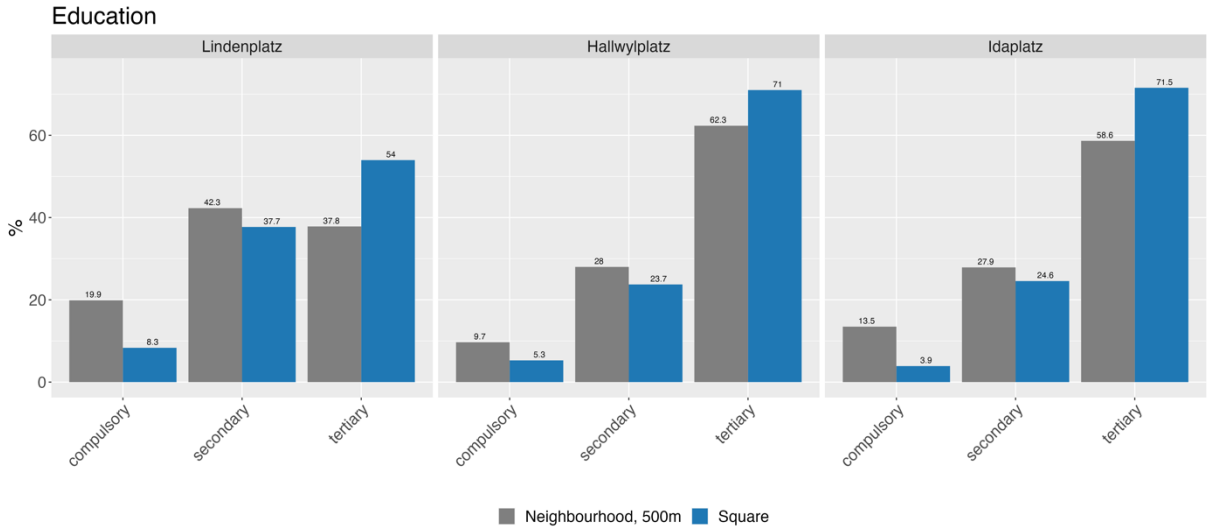


Figure 50: Frequency distribution of the highest levels of education.

7.6.4. Income

Taking people's categorized (and equivalised) household income, the data shows again that the diversity among the square users is significantly lower than among neighbourhood residents in all three squares (Figure 51).

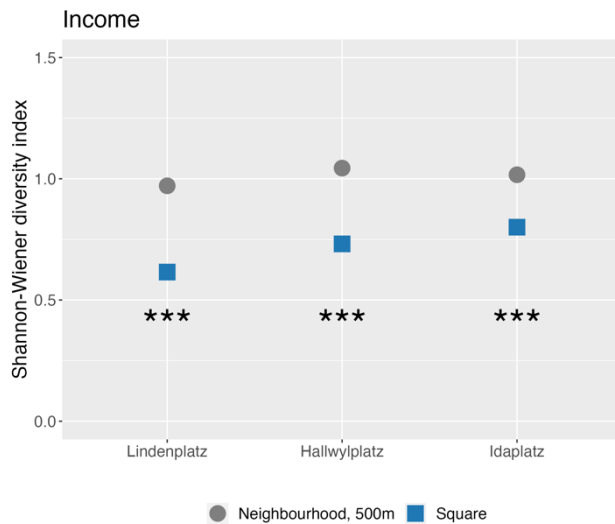


Figure 51: Income diversity of the neighbourhood population and the sample in the squares. Significance of the difference between the two values: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

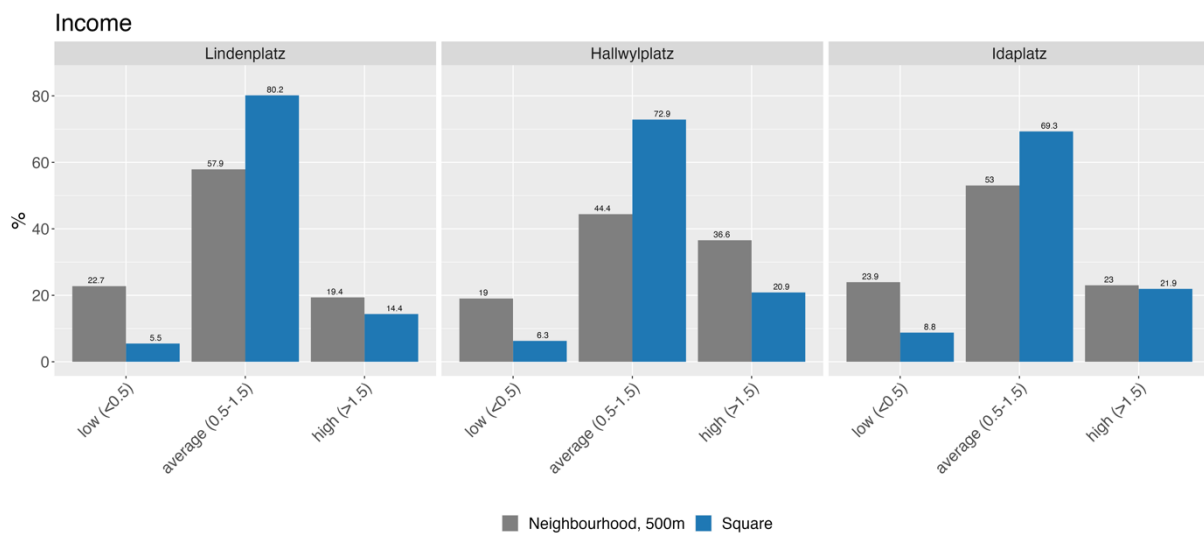


Figure 52: Frequency distribution of incomes.

This result stems mainly from the group of people with average incomes that exceeds its shares on a neighbourhood level in all cases by at least 16 percentage points (Figure 52). Correspondingly, people with incomes that are much lower (less than 50 % of the median), or much higher (more than 150 % of the median), are encountered less frequently in the squares. The share of people with lower incomes in the squares is at least 10 percentage points below

their share among the neighbourhood residents. When looking at the shares of people with higher incomes, the three squares differ. The gap between the representation of square users and residents is relatively large in Hallwylplatz and less pronounced in Lindenplatz. In Idaplatz, the proportion of high-earning individuals in the squares is almost as high as in the neighbourhood so that statistically speaking, there is no real difference between the two percentages.

Here again, one of the problems with measuring diversity becomes obvious. Income diversity in Idaplatz is the highest out of the three squares, which can be attributed to the high share of people with high incomes. When the goal is to make public space and social infrastructures accessible to all, do we – as researchers, policymakers, designers – think of this group as well? Or, given that they presumably have enough resources to cover their spatial needs, do we care more about providing spaces for people who earn less?

In any case, the middle classes seem to be much more present in the squares than people towards both ends of the income scale. Why is this? We might hypothesize that people with incomes at the top and bottom end of the scale work more and therefore have less time at hand to spend in the squares. Indeed, people working part-time are overrepresented in all the squares, and the opposite is true for people working full-time (Figure 53).

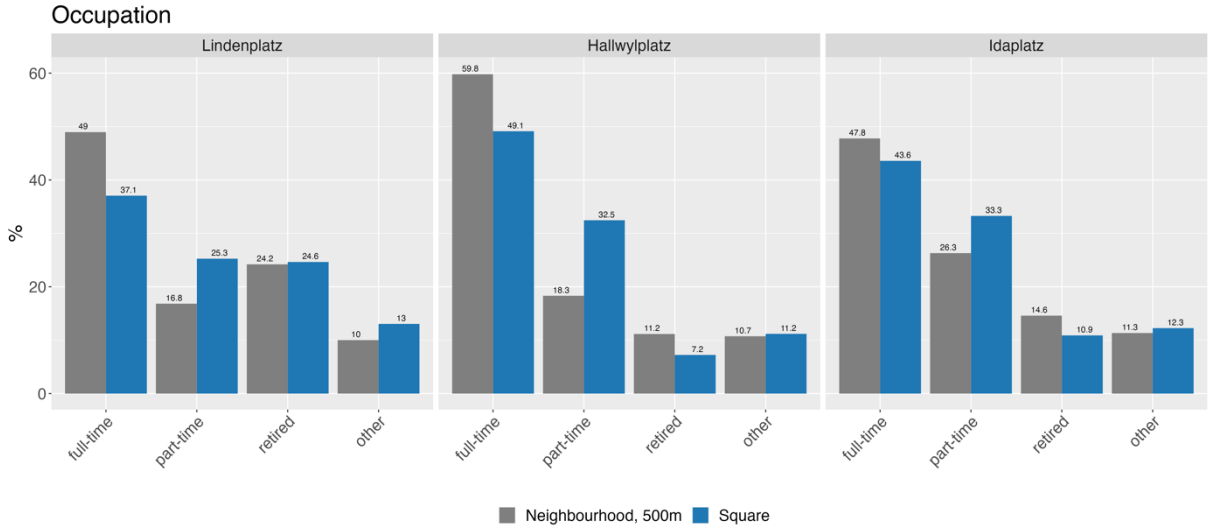


Figure 53: Frequency distribution of occupation.

Nevertheless, there are two reasons to doubt that the diversity gap in terms of income is simply a matter of free time. First, as the survey also took into account passers-by, recreation is only one of the reasons why people are found in the squares, and in fact around half of the users are just crossing the squares (Widmer, 2023). Second, people who are (self-)employed are more likely to use the squares for recreation than those who are not employed (Widmer, 2023), and

therefore supposedly are encountered more frequently in the squares. A comparison of the share of people living in households with or without children also does not show any specificities that would explain the middle-class over-representation.

An alternative explanation is needed. What could account for the general over-representation of the middle classes is that people with lower incomes feel out of place (Trawalter et al., 2021), whereas people with higher incomes have more resources to shield themselves from public life (Atkinson, 2016) or to carry out outdoor activities in private open spaces (Trawalter et al., 2021).

Environmental qualities could account for local specificities. Why, for example, is the under-representation of people with high incomes stronger in Hallwylplatz? One potential explanation can be found in the longstanding tradition of ‘upgrading’ Hallwylplatz by neighbours who add furniture that gets intensely used (Figure 54). These artefacts create an atmosphere that, in the eyes of some, marks the square as the partly privatized space of those invested in the square (Widmer & Rérat, forthcoming). The neighbourhood has undergone gentrification in recent years, so newer residents tend to have higher incomes, and at the same time might feel less invited to use the square.



Figure 54: Additional furniture (chairs, toys, slide). Not pictured here are tables and a barbecue grill. Source: author's own.

In Idaplatz, another hypothesis may account for an almost equal share of people with high incomes in the square and in the neighbourhood. The neighbourhood around Idaplatz has been gentrified in the last ten years or so. This is not only apparent in the rents, but also in the predominantly high-priced supply structure in the vicinity of Idaplatz. Those who have recently moved to the neighbourhood are not pioneers anymore, but high-status individuals whose

preferences might be perfectly met by Idaplatz with its cafés and bars, the beautiful facades, and the relaxed vibes. On the other hand, the consumption opportunities for those with fewer resources are rarer, and even though a large area of the square allows non-commercial sitting, the presence of hipsters and the symbolic territorialization by the sidewalk cafés could create an atmosphere that may make people with lower incomes feel out of place.

7.6.5. Intersectionality, Visitor Effect, and Neighbourhood Effect

Having individual data at hand allows considering the intersectionality of these patterns. Are people with a migrant background and low incomes even less likely to be found in the squares? This question is particularly interesting because in Zurich, different waves of immigration led to a situation where a migrant background is not to be equated with low social status. Creating four categories (average/high income⁵⁴ & no migrant background, average/high income & migrant background, low income & no migrant background, low income & migrant background) and looking at their frequency distribution suggests that it is foremost people with average/high incomes and no migrant background that are overrepresented, and to a lesser extent (and only in the case of Lindenplatz and Idaplatz) those with average/high incomes and migrant background (Figure 55).

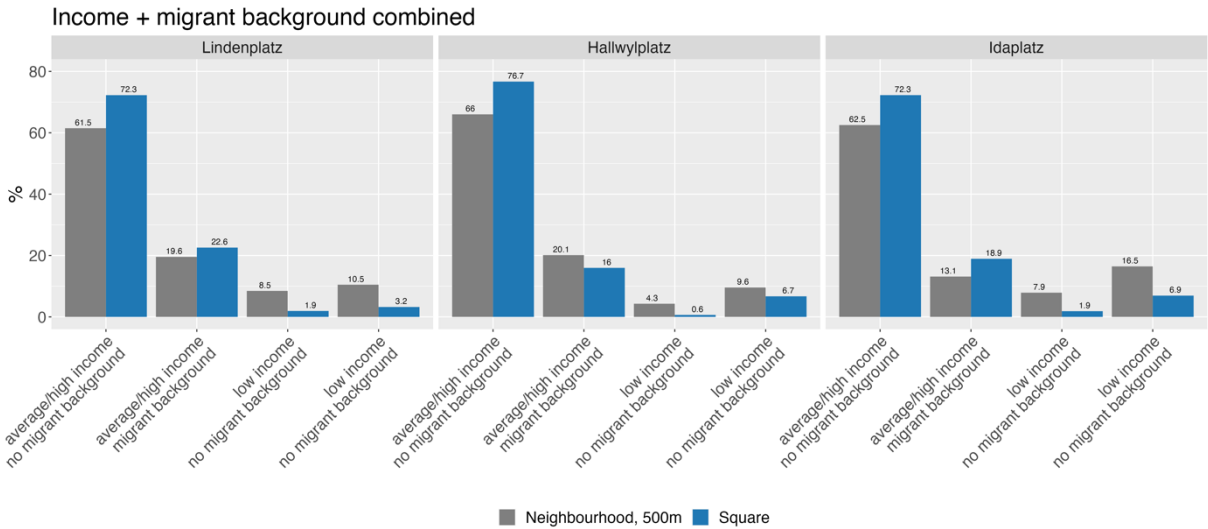


Figure 55: Frequency distribution of combined categories (income and migrant background).

⁵⁴ To avoid multiplying the number of categories, the average and high incomes have been aggregated into one category, with the idea of focusing more on groups that might be less privileged. This decision again foregrounds the ambiguities of defining diversity.

From the survey data at hand, it cannot be conjectured whether this over-representation is due to Swiss middle classes using the squares more, or due to the other groups using them less. However, as the survey data contains information on participants' place of residence, I excluded visitors from outside the neighbourhood (i.e. employees, visitors from other parts of the city, tourists, etc.) from the sample. I reran the analysis to determine whether there is a visitor effect, i.e. Swiss middle-class people visiting from outside the neighbourhoods, that would explain their over-representation. However, the distribution of the four groups does not substantially change when only looking at those square users who live in the neighbourhood, suggesting that no visitor effect is at play that would alter the square's diversity (see also the next section which looks at the visitor effect in more detail).

Conversely, the neighbourhood effect, i.e. the finding that diversity on the neighbourhood level has an impact on the composition of park users (Reichl, 2016), can indeed be observed in the three squares. Although there are not enough cases to statistically prove or quantify it, the square's diversity index tends to be higher in cases where the neighbourhood diversity is high. In the absence of a strong visitor effect, this might seem a logic outcome. However, the square's diversity does not necessarily depend on the neighbourhood diversity (imagine only one group of residents using the square). Accordingly, finding a neighbourhood effect suggests that even if not everyone from a neighbourhood is equally drawn to the squares, the extent of over- and under-representations is not extreme.

7.7. Decoupling Neighbourhood Residents' and Visitors' Diversity⁵⁵

This section takes a closer look at the diversity gap and explores to what extent it can be attributed to visitors from outside the neighbourhood. I do this by restricting the sample of square users to those who live either directly on the square or in the immediate neighbourhood ($n = 837$) and calculating the diversity indices of this population (Figure 56). This gives us an idea of what the diversity in the square would hypothetically look like if no one from outside the neighbourhood were there.

While the overall diversity in the sample containing only residents differs slightly from the whole sample of square users in some of the combinations of variables and squares, these differences are too small to be significant. The data therefore suggests that the visitor effect is unimportant (Figure 56). The overall conclusion that the diversity of country of birth, main

⁵⁵ This section was added for this thesis.

language, income, and education is lower in the squares than in their respective neighbourhoods is further supported.

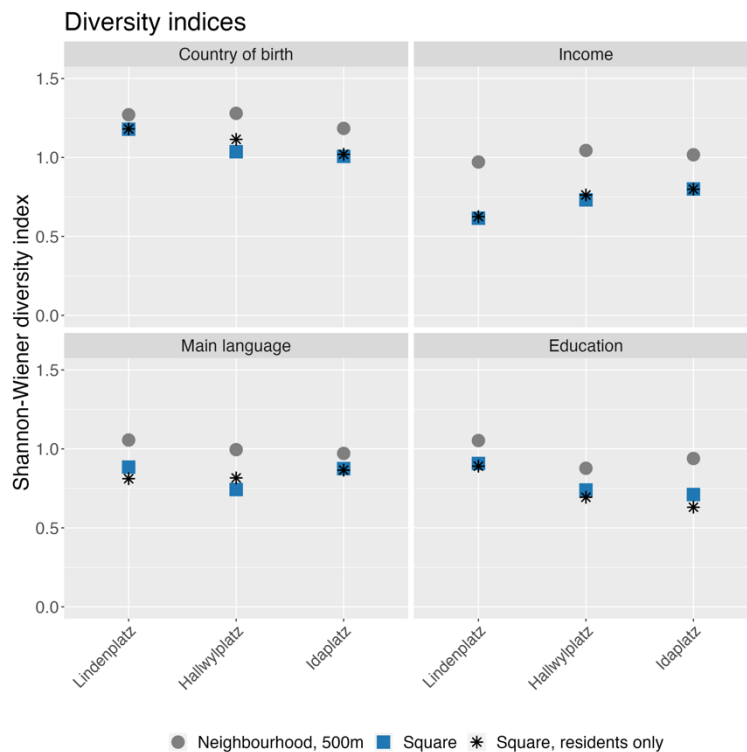


Figure 56: Diversity of the neighbourhood population, the whole square user population, and of the square users who live in the neighbourhood (variables: Country of Birth, Main Language, Education, Income).

7.8. Diversity Throughout the Day⁵⁶

We might speculate that because a large proportion of the population is part of the labour force (71 % in Zurich in 2021/2022; Stadt Zürich, 2023b), diversity in the squares depends on the daily rhythm of a workday. Who is on their way to work (morning), who is having lunch at the square near their workplace (lunchtime), and who is meeting friends after work (late afternoon)? In other words: is diversity partly a function of the time of the day or the weekday?

For each of the three squares, this has been analysed by comparing the diversity indices of the square users during the four timeslots to the ‘baseline’ diversity of the neighbourhood population. When the timeslots are considered separately, the sample size is quite small. Minor differences between the timeslots and the neighbourhood index tend to be not significant. Conclusions cannot be drawn on this basis, but the data still gives interesting insights in those cases where there are significant differences. They point to possible directions for further research. This would need more data to get a reliable analysis of the rhythms of diversity.

⁵⁶ This section was added for this thesis.

7.8.1. Lindenplatz

The overall square index does not seem to mask any differences between the timeslots (Figure 57). In effect, if the square's diversity index is lower (higher) than the neighbourhood's index, the indices for the separate timeslot are lower (higher), too.

The only variable where significant differences are observed between the timeslots is education. Educational diversity is significantly higher in late afternoon than at the other times of the day. A similar pattern can be found in the other squares and could be linked to a stronger presence in the afternoon of those groups that are not in formal employment, i.e. people who tend to be older and of generations where tertiary education is not as prevalent.

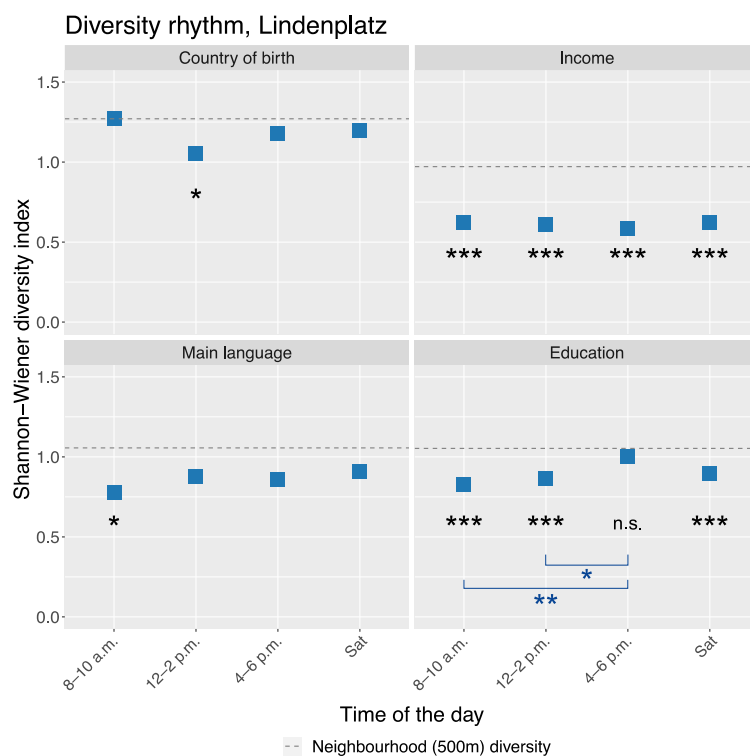


Figure 57: Diversity of the population of square users at different times of the day in Lindenplatz, compared to the neighbourhood diversity (dashed line). Black asterisks indicate the significance of the difference between the neighbourhood diversity and the diversity at that time of the day. Blue asterisks mark significant differences between the different times of the day.

Significance: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

7.8.2. Hallwylplatz

Also in Hallwylplatz, the timeslot's diversity indices are below the neighbourhood's diversity index (with one exception: education, 4 – 6 p.m.), i.e. the overall index of the square users – the different timeslots taken together – does not conceal fluctuations that would go above the neighbourhood's diversity (Figure 58). The 'lunch eaters' seem to have an effect on the migrant background diversity: both, country of birth and language diversity are significantly lower during lunchtime. Also, just as in Lindenplatz, educational diversity is significantly higher in late afternoon than at other times of the day and on Saturday.

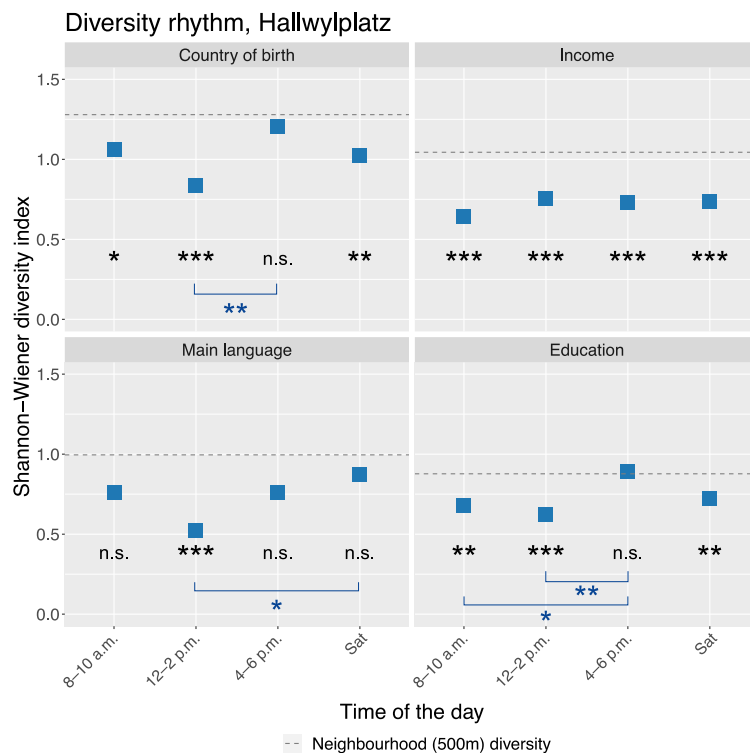


Figure 58: Diversity of the population of square users at different times of the day in Hallwylplatz, compared to the neighbourhood diversity (dashed line). Black asterisks indicate the significance of the difference between the neighbourhood diversity and the diversity at that time of the day. Blue asterisks mark significant differences between the different times of the day.

Significance: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

7.8.3. Idaplatz

Coinciding with the finding in Lindenplatz and Hallwylplatz, also in Idaplatz the timeslots' diversity indices do not greatly deviate from the general tendency of being lower than the neighbourhood's diversity (Figure 59). In consistence with the two other squares, educational diversity is also highest in late afternoon (and significantly so compared to the morning hours).

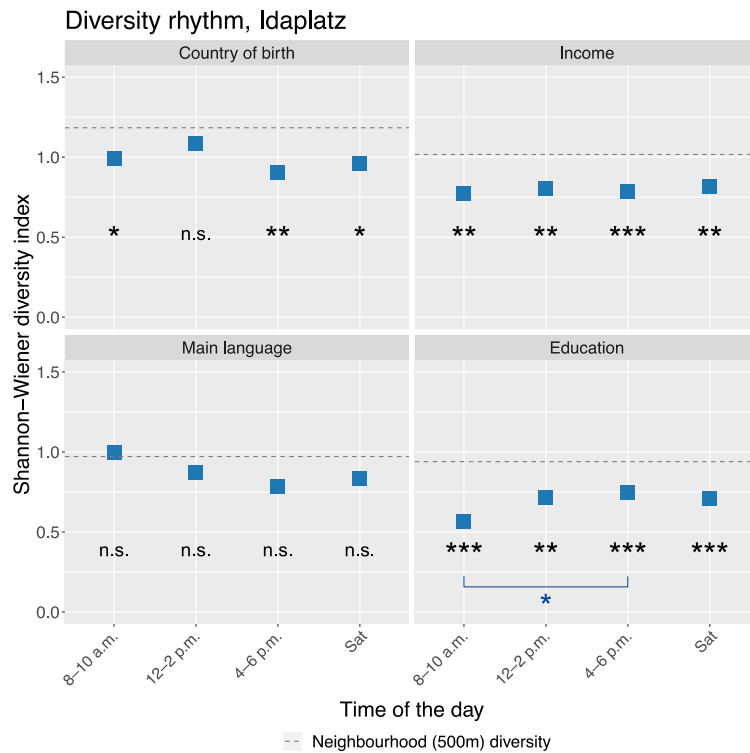


Figure 59: Diversity of the population of square users at different times of the day in Idaplatz, compared to the neighbourhood diversity (dashed line). Black asterisks indicate the significance of the difference between the neighbourhood diversity and the diversity at that time of the day. Blue asterisks mark significant differences between the different times of the day. Significance: not significant (n.s.), * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

In summary, the results show that with regard to the variables country of birth and main language, there are no significant differences between times of the day, except in Hallwylplatz. There, a 'lunch eater' effect can be observed with the tendency to homogenize the square users.

Quite consistently over all squares, educational diversity tends to be lower in the mornings and higher in late afternoon. This is not mirrored by income diversity which seems fairly consistent – consistently low – throughout the day. The connections between income diversity, educational diversity and time budget remain somewhat puzzling and would require further research. Attempts to analyse this further have shown that the frequency of visit does not differ between different levels of education and income, but with regard to employment status (Table 15 – Table 17 in Appendix I). However, to find out more about the reasons why some groups use the squares and others use them less, we would need data on practices of public space use of all

neighbourhood residents, not just of those who use the squares. With a quantitative survey on the neighbourhood level, the links between employment status, socio-economic status and square use could be further investigated.

7.9. Conclusion

Social infrastructures facilitate social connections across differences, and be it only via fleeting encounters. This study chose small neighbourhood squares in Zurich as social infrastructures to study the diversity of their users and hence also their capacity to afford encounters across differences. It did so by comparing the composition of square users to that of neighbourhood residents.

The analysis suggests that ethnic and socio-economic diversity in the squares is lower than in their immediate neighbourhoods. Among the square users, the proportions of the middle classes, and people belonging to the mainstream society (speaking German, born in Switzerland) exceed their respective proportions in the neighbourhood. Visitors to the squares that come from beyond their immediate neighbourhoods do not seem to substantially change the sociodemographics of the square users, so there is no visitor effect that would increase or decrease the diversity gap.

However, I have also shown that studying diversity empirically is not straightforward. As we do not know the ‘true’ population of square users, it is difficult to estimate the extent to which the data collected by the intercept survey might be biased by, e.g., language barriers, or a stronger inclination to participate among highly educated people. On the other hand, the intercept survey data allows to not only analyse apparent age, gender and ethnicity as studies relying on observational data do (e.g., Huang & Napawan, 2021; Reichl, 2016), but also socio-economic diversity and variables related to migrant background.

Another difficulty lies in defining diversity. The question of diversity is always normative and political (E. van Eck et al., 2020). How much diversity and diversity *of what* do we want? This also applies to research: I as a researcher decided what variables and categories I deemed relevant. These are not necessarily the same dimensions of diversity relevant for square users.

The example of Idaplatz illustrates the ambiguity of defining diversity. Usually, thinking about diversity implicitly means counteracting the absence of minorities and underprivileged groups – and not the absence of the well-off. And yet, in Idaplatz, income diversity is higher than in the other squares because people with high incomes are better represented. However, in times of growing social inequality, the upper classes’ capacity to evade public life and experience only a ‘sanitized and domesticated impression of the social life of the city’ (Atkinson, 2016) may be

problematic as well. What physical and virtual spaces offer a place for the ‘rubbing along’ (Wise & Noble, 2016, p. 425) of people from all walks of life, if not places of social infrastructure?

On the other hand, it could be argued that not every type or space of social infrastructure needs to be for everyone. After all, people might just have preferences that are not met by the affordances of the public squares. However, there may also be formal processes (Litscher, 2013) and ‘soft policies of exclusion’ (Thörn, 2011) at work that hinder people from using a space. Careful empirical studies like the one presented here can contribute to more nuanced discussions about the accessibility and the potential for social cohesion of public spaces, and social infrastructures in general. This study shows that the researched squares do not facilitate social connections across difference as much as they could. The precise reasons for the over- or under-representation of certain groups will have to be examined in further research: Is it a matter of time, are they drawn to other places, do they feel illegitimate or out of place? How do people experience diversity in the squares? A survey targeted at the neighbourhood residents could also produce interesting insights into how prevalent the practice of using the squares is among different groups.

The squares studied here are accessible all day and at no cost. They are embedded into pedestrian networks so even people who cannot or do not want to spend time in them might pass by from time to time. The squares are thus relatively unselective, and diversity presumably higher than in other places. This is likely to lead to a conservative estimate of the diversity gap. Future research could establish whether other types of social infrastructure like parks, swimming pools, libraries, or street corners are more selective and show a larger diversity gap.

Some caveats apply to these results. As the fieldwork took place during summer 2021 when the coronavirus was still present, the composition of square users might be affected by a change in behaviour by certain groups. Even though there were no health measures in force at that time regarding outdoors, people employed in the third sector might have been more likely to work from home and in effect have used the squares in their neighbourhood more frequently than others. The squares were also not surveyed in the evening or at night-time. Additional fieldwork during other hours and in other seasons or weather conditions would further enhance our understanding of the diversity gap.

The findings discussed in this chapter could lead to considerations for the planning and designing of relatively unprogrammed public spaces. As the results from Lindenplatz and Idaplatz show, the ground floor uses in the squares or in the adjacent streets are important. Day-to-day facilities like supermarkets and pharmacies attract almost all population groups. Similarly, a commercial offer with high price variety may contribute to a square’s diversity, as in Idaplatz where a newsstand next to high-end cafés sells cheaper drinks. Attention should also

be paid to a strong appropriation by square users as in Hallwylplatz. When appropriation shifts towards territorialization so that to other users, the public space almost seems to be privatized by a specific group, diversity may be compromised.

The findings of this study also are of relevance to policies promoting mixed neighbourhoods, as it shows that a neighbourhood's diversity – and the neighbourhoods studied here indeed are relatively diverse – does not directly translate to a diverse population of square users. This is to be kept in mind when planning mixed neighbourhoods so as to have realistic expectations on what a mixed neighbourhood can and cannot do, and to put extra effort into creating affordances that encourage encounters between strangers (Daly, 2020) where needed, in particular given that not everyone is interested in 'practising diversity' (Blokland & Eijk, 2010; Nielsen & Winther, 2020).

8. Desirable or Unremarkable? Perceiving and Living with Diversity in Public Squares

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8.1. Presentation of the Article

The fourth article of this thesis directly addresses the third research question (How is diversity in public squares perceived and experienced?). I have shown in the book chapter (Chapter 7) that there is a diversity gap. In this article, I therefore consider more closely how people perceive the existing diversity in the squares. I employ a qualitative approach and use semi-structured interviews with potential square users, i.e. people who spend at least part of their day in the neighbourhood around the square, to ask what categories they draw on when they describe other square users, and how they respond to the diversity they find in the public squares. The idea of the sequential explanatory research design of this thesis is to explain the diversity gaps found in Chapter 7. This is only partly possible, however, because of the sampling difficulties encountered (see Section 3.4) and because the sample size does not allow for conclusions regarding sub-populations (e.g. people with lower incomes, or people with a migrant background that were found to be underrepresented, see Chapter 7). Nevertheless, the article provides interesting findings regarding the salience of categories through which others are perceived and described, and the various responses to diversity. Categories such as age, lifestyle, and activities come to mind first, and ethnic or socio-economic categories are used more rarely. The most common response to diversity is not taking any action, and I explain why this is a response in its own right. The other responses identified are ‘adjusting habits’, ‘managing rhythm’, and ‘managing distance’, all of which can be found in diversity-seeking and diversity-avoiding form. I discuss the findings of this article in light of the design and management of public space, and how programmatic approaches, planning for mixed-use, and elements like movable chairs can equip people with leeway to choose an adequate distance from others.

For this manuscript, I have complemented the submitted version with a section on how people assess the social distance between them and other square users (Section 8.7.2), and added some quotes. The additional text and the new section are marked with a footnote.

8.2. Abstract

The city has long been conceptualized as a place where encounters between strangers are the norm, not the exception. In socially mixed neighbourhoods, these encounters potentially happen across differences of many kinds. However, little is known empirically about how diversity in public space is perceived and experienced. Based on a case study on three squares in Zurich, Switzerland, I show what categories people draw on when describing other people in public squares, and the ways in which they respond to diversity in public space. Drawing on 63 semi-structured interviews with people who live or work in proximity of the squares, I find that most people value heterogeneity in the squares, and respond to it with different ways of managing distance, thereby avoiding or seeking diversity. Most often, however, people do not feel the need to take action when encountering diversity. This undergirds the concept of ‘commonplace diversity’ (Wessendorf, 2014a), describing a co-presence of people in which heterogeneity is altogether unremarkable. By discussing the perception and experience of diversity in public squares and its implications for design and policymaking, this paper provides an empirical contribution to literature on urban diversity and geographies of encounter.

8.3. Introduction

Most people we encounter in cities are strangers. Biographical strangers, because we have never met them, and cultural strangers because their symbolic worlds differ from ours (Lofland, 1998). There are myriads of ways in which others can be different, yet some differentiations – class, ethnicity, for example – are more prevalent in urban studies because they fundamentally impact urban phenomenon like gentrification, segregation, and many others (Atkinson, 2015; Wise & Velayutham, 2014b). However, many of today’s cities are hyper-diverse, meaning people not only increasingly differ in their origins, but also ‘with respect to lifestyles, attitudes and activities’ (Tasan-Kok et al., 2014, p. 5). Hyper-diversity is not simply the superlative of super-diversity (Vertovec, 2007) despite factoring in more variables. Rather, it brings attention to heterogeneity within groups and categories, to their connections and intersections (Plüss et al., 2017). Talking of encounters in cities, lifestyles are of particular relevance. Defined as patterns of behaviour and time use, as an orientation consisting of values, attitudes, and preferences, or as combinations thereof (Van Acker, 2015), lifestyles can have an effect on activity spaces and mobility (Götz & Ohnmacht, 2012), and may contribute to ‘parallel lives’ (Valentine, 2008) where different groups live in proximity of each other, but never meet in everyday life.

When these encounters between unknown and different individuals do happen, however, they are typically characterized by a certain unpredictability. While it can be argued that encounters have the potential to ‘make a difference’ (Wilson, 2017), everyday encounters between strangers do not necessarily lead to mutual respect, but can also harden prejudices (Valentine, 2008). In the public realm, where this research is situated, most encounters do not develop into ‘meaningful contact’ (Valentine, 2008), but even if they are only fleeting they are important ‘by sheer volume’ (van Melik & Pijpers, 2017, p. 286) and by creating a feeling of connectedness (Peterson, 2023).

In this regard, also the term *conviviality* offers new perspectives on sociality in public space since it is concerned with ‘affectively at ease relations of coexistence and accommodation’ (Wise & Velayutham, 2014b, p. 407) without negating the possibility of friction and conflict that comes with sharing space (Wise & Noble, 2016). Wessendorf (2014a) uses the term ‘*commonplace diversity*’ to describe how ‘diversity [is] being experienced as a normal part of social life’ (Wessendorf, 2014a, p. 392) and to emphasize that ‘civility towards diversity’ can be both, a way of seeking contact or engaging with diversity, and avoiding it. Despite being contested for its superficiality (Wise & Noble, 2016), *conviviality* is useful in the context of this research exactly for this: the incidental encounters between differences which might not develop into meaningful contact, but which are important for belonging and social cohesion nevertheless (Aelbrecht & Stevens, 2023; Peterson, 2023). Recent research has looked into the experience of diversity and encounters in neighbourhoods (Felder, 2019; Großmann et al., 2019; Nielsen & Winther, 2020), and public spaces and third spaces (Barker et al., 2019; Peterson, 2023; Tuttle, 2020; van Melik & Pijpers, 2017; Zuijderwijk & Burgers, 2015) in different European and US-American contexts. However, there is no recent comparable research in Switzerland focusing on diversity in public space (see Plüss et al., 2017 for diversity more generally) and considering behavioral responses to diversity.

This paper seeks to address this research gap by looking at how people perceive, assess, and live with diversity in public squares in Zurich, Switzerland. Squares are particularly interesting places to study the co-presence of differences because they are not only used for recreational activities, but also as places of passage and are thus open to a wide range of different people. This research aims to contribute to literature on urban diversity and geographies of encounter also by taking co-presence as a fully-fledged encounters since it entails an awareness of the other, and being conscious about being perceived by the other in turn (Goffman, 1963/1969). Two research questions are pursued: I ask 1) what categories (e.g. ethnic, linguistic, socio-economic, etc.) do people draw on when describing other people copresent in the square, and 2) in what ways do they respond to diversity in the squares. I take a constructivist view of

diversity by exploring which dimensions of diversity are relevant at all. Social differences often have ‘unmarked’ and ‘marked’ sides, whereby the marked element is extraordinary, more actively perceived, and usually the politically or morally salient side of a contrast (Brekhus, 1998). According to Brekhus (1998), sociology – or social sciences in general, and studies of urban diversity in particular, one may add – is prone to reproducing this markedness of one side of a social contrast and thus contributing to its disproportionate prominence notwithstanding the best intentions to dismantle stereotypes. I hope to contribute to a less marked perspective on diversity by studying the experience of co-presence in mundane squares and paying attention to any kind of categorization applied to others in public space where the only basis for differentiation are observable and imagined differences.

In the first section of the paper, I review literature on living with diversity in an urban context, and in public spaces specifically, and I propose a framework of responses to diversity that guides the empirical analysis. I then present the case study and the data collected by semi-structured interviews, before turning to the perception of diversity and the responses to it. I conclude by discussing the implications the findings could have for the design and policies of public space.

8.4. Living With Diversity in Public Space: Theoretical Framework

I first consider literature that engages with the way people perceive others in public spaces or in their neighbourhood in general. I then proceed with research that deals with the experience of diversity and different practices people might develop as a response to diversity, developing a framework of responses which guides the data analysis. An important part of literature on the perception and experience of diversity is related to housing (Felder, 2019; Großmann et al., 2019; Nielsen & Winther, 2020). Despite not being concerned with encounters in public space specifically, these studies give insight into the functioning of neighbourhoods and as such are relevant to my case concerning neighbourhood squares.

In a study looking at diverse and disadvantaged neighbourhoods in Leipzig, Athens, and Paris, Großmann et al. (2019) investigate which categories (and combinations of categories) inhabitants draw on in describing the residents of their neighbourhood. The authors find value in applying an intersectionality approach to these questions, since differentiation and stereotyping occurs primarily ‘at the intersection of characteristics (like income, ethnicity, age and gender)’ (Großmann et al., 2019, p. 212). In a study on two districts in Zurich, Plüss et al. (2017) uncover a generally positive assessment of diversity and find that people predominantly use sociodemographic and ethnic or cultural categories when referring to their neighbours.

Zuijderwijk and Burgers (2015) ask whether ethnic designations are a relevant heuristic in perceiving users of a square in a diverse neighbourhood in Rotterdam. They find that indeed, ethnic categories are important. However, categorizations are made based on situations and vary according to activities. Altogether, the authors observe ‘dynamic, multidimensional, relational constructions of ethnicity’ (Zuijderwijk & Burgers, 2015, p. 67) that gain importance especially when it comes to adverse encounters or activities. Their findings resonate with what Nielsen & Winther (2020) report from a study on a neighbourhood in Copenhagen that is diverse in terms of ethnicity, religion, socio-economic status, family situation, lifestyles, etc. While their participants generally appreciate diversity, they encounter situations where they find themselves deviating from this attitude depending e.g. on the degree of proximity or detachment in everyday life. While some are socially disconnected from the neighbourhood’s diversity because they live their lives outside the neighbourhood, others also live in more homogeneous areas and are thus also physically detached.

The spatial proximity of strangers is also the starting point of Felder’s (2019) analysis. He asks how tenants deal with the proximity of strangers they have as neighbours in four apartment buildings in Geneva. They commonly refer to the others in their building by their stage in life course or household type, or by observable ethnic characteristics. Because they usually have scarce knowledge about their neighbours, and because expectations towards them are limited, they often characterize others in terms of friendliness rather than difference or similarity, and their relationship is usually one of civil inattention (Goffman, 1963/1969).

In dealing with the spatial proximity of strangers, civil inattention is not the only option. In particular with regard to public space, people may develop spatial or temporal patterns of sharing space. Tuttle (2020) examines the diversity of streets, festivals, third spaces and amenities in a Chicago neighbourhood. He finds diverse places, but also spaces with ‘integrated segregation’: these spaces are used by different groups, yet they largely avoid each other by designating territories ‘for them’ or ‘not for them’, or by ‘taking turns’ (e.g. one group enters as the other leaves). Similarly, Barker et al. (2019) find a propensity to self-segregate among users of different parks in Leeds, considering not only ethnical and cultural differences, but also social status or activities. They conclude that despite this tendency, the majority of people enjoys coming at least into sight distance of diversity in the parks. People experience a connection with others through the sharing of a space, even if it is alongside each other rather than together. This finding resonates with Peterson’s (2023) notion of ‘micro connection’ which highlights that ‘light connections’ and fleeting encounters in public spaces such as libraries matter because through them, people feel connected to the world and the diversity around them. Fleeting encounters are also crucial in older people’s lives, as they seek diversity in their everyday

encounters, while at the same time avoiding spaces with too much heterogeneity, feeling ambiguous about being in the presence of young people, or anxious about encounters with immigrants (van Melik & Pijpers, 2017).

From this brief literature review it is apparent that ‘others’ in public space are perceived in intricate ways depending on the social and physical proximity between (familiar) strangers. Likewise, people feel differently about diversity, and importantly, their feelings may be specific to different types of diversity. Whether they avoid diversity or seek it (but maybe only up to a certain point), in navigating public space, people are creating or maintaining a tolerable distance to others, ‘symbolically or spatially’ (Lofland, 1998, p. 240). In the following section, I develop a conceptual framework of responses to diversity that facilitates the analysis of the experience of diversity in public space.

8.4.1. Responses to Diversity

The ways in which they manage their distance to others can be categorized in four types of responses: *adjusting habits*, *managing rhythm*, *managing distance*, *not taking action*. It should be noted that attitudes are not predictive of the type of response, nor of the form it occurs in, i.e. avoiding or seeking diversity, or anything in between. It is easily conceivable that people who generally approve of diversity in public space might manage their distance to certain people anyway, or that those with a more skeptical attitude still refrain from taking any action.

Ways of using public space – including walking through – can be seen as practices connecting the material base of public space, knowledge about proper behaviour, and symbolical meanings (Shove, 2012). Practices, or ‘time-space routines’, may blend into ‘place ballets’ whereby people (or specific groups of people) regularly meet in the same spot, at the same time (Seamon, 1979; D. van Eck & Pijpers, 2017). It follows that individuals may also adapt their routines. When they do this to avoid diversity, i.e. a specific space is no longer part of the practice, or to seek diversity, i.e. a space becomes part of it in the first place, I call this *adjusting habits*.

For the response *managing rhythm*, individuals adapt their habits’ temporal dimension so as to avoid or seek diversity. Importantly, individual time-space paths are not isolated, but connected to various other rhythms: natural rhythms (change of season, daylight), the socio-cultural rhythms of practices, institutions, working life and many more, and the spatial rhythm of people circulating in the city (Charbgoon & Mareggi, 2020; Lefebvre, 1992/2013). Rhythms of everyday life differ individually, and may vary according to different groups (Nash, 2021), and managing one’s own rhythm is therefore an effective way of evading people (or their behaviour), or looking for their company.

At the latest since Hall's (1966/1990) work on distances which individuals distinguish in interacting with others (intimate, personal, social, and public distance), it is clear that physical distance plays a crucial role in how we encounter others in public. It underscores the corporeality of being in public space. Any encounter is therefore also an 'intercorporeal encounter' (Seamon, 2018) that entails the shifting and positioning of bodies according to the desired distance and orientation. *Managing distance* is therefore a response to diversity that applies to situations where an individual finds itself in the presence of others and chooses to go closer to them (seeking diversity), move away, or leave entirely (avoiding diversity).

These three types of responses to diversity typically entail actively adapting one's behaviour. However, individuals may just as well choose to respond to diversity in a way that is not observable⁵⁷, either because they are perfectly at ease with the level of diversity, or because they adapt internally. This response of *not taking action* is reminiscent of non-engagement (Blonk et al., 2022) and civil inattention (Goffman, 1963/1969). However, encountering others in public space may happen at a distance that does not require civil inattention nor lend itself to engagement in personal interaction. I therefore prefer to speak of not taking action to refer to situations where people are either indifferent to the differences around them, or where they assess objects of tolerance (i.e. social groups, cultures and beliefs, lifestyles, or conduct, Bannister & Kearns, 2013) negatively, but still show tolerance, i.e. 'non-intervention about those things [they] do not agree with' (Bannister & Kearns, 2013, p. 2710). This point is crucial since it underlines that civilities should not be considered as expressions of respect for difference (Valentine, 2008).

In principle, intolerant attitudes and reactions to objects of tolerance are more likely to occur the more one is exposed to it, and the more serious its impact (Bannister & Kearns, 2013, p. 2707). In assessing an object of tolerance, the question whether exposure is high or whether there is much at stake is not only an individual and objective matter, but often also has a political or moral dimension, linking it to markedness (Brekhus, 1998).

Marked social contrasts attract a disproportionate amount of attention, and intergroup differences appear more important (Brekhus, 1998, p. 36). Marked groups or individuals can also be called hypervisible (Brighenti, 2010), if they exceed the 'correct visibility' that allows one to pass relatively unnoticed in public space. They are therefore much more likely to be perceived (at all), and their presence to be felt as more imposing, increasing the (perceived) exposure to marked people or behaviour.

⁵⁷ Individuals who do not adjust their habits, manage their rhythm or distance may nevertheless display micro-responses to diversity like avoiding eye-contact or showing a friendly smile. Given the method of this research (interviews), these kinds of responses are not taken into account.

The social marking process makes extremes stand out, but also marks people or behaviour that are particularly salient in current debates. Individuals or groups can thus become connected to a political issue. The impact that generates intolerant attitudes does not necessarily have to be felt or feared directly but can also come about via a symbolic link between issues and people. Take symbolic displacement, whereby people feel out of place in their own neighbourhood because they are surrounded by people and businesses that symbolize the change in the neighbourhood (Atkinson, 2015). The stakes are high in such a situation and intolerant attitudes are more likely to occur towards groups or people who have been marked as causing the issue.

8.5. Setting the Scene: Zurich and the Three Cases

Zurich is Switzerland's biggest city in terms of population (443,000 inhabitants, Statistik Stadt Zürich, 2023f). Three aspects about its population structure are particularly noteworthy. Firstly, since the 1980s, Zurich's proportion of people with non-Swiss nationality has been higher than the Swiss average (33% as compared to 26%) (Bundesamt für Statistik, 2023; Stadt Zürich, 2023a). Secondly, there is a surplus of people in the age group ranging from 20 to 40, mirroring the city's attractiveness as a place to work and study also for foreigners (Plüss et al., 2017; Rérat, 2019). Thirdly, and relating to the second aspect, there is a very high proportion of people with a tertiary degree (56 %) (Statistik Stadt Zürich, 2023e). This is also reflected by high incomes: in Zurich, the median income⁵⁸ is twenty percent higher than the Swiss average (7,800 CHF vs. 6,500 CHF) (Statistik Stadt Zürich, 2020b). Zurich is less diverse in terms of ethnicity than many of the contexts where diversity has been studied recently, e.g. cities in the United States, the United Kingdom or the Netherlands (Barker et al., 2019; Peterson, 2023; Reichl, 2016; Zuijderwijk & Burgers, 2015). Given that this study is not focused on ethnicity, but on all possible dimensions of diversity, it provides an interesting case nonetheless.

This study is based on a larger mixed-methods research project on diversity in three public squares in different neighbourhoods in Zurich (Figure 60): Lindenplatz (neighbourhood Altstetten), Hallwylplatz (neighbourhood Werd), and Idaplatz (neighbourhood Sihlfeld). The neighbourhoods were selected for contrasting combinations of density, jobs-housing balance, income heterogeneity, percentage of family households, and percentage of people without Swiss nationality (Widmer, 2023). Within each neighbourhood, I picked one square with the intention of having three squares who resemble each other closely in design and function. While a place-based approach has drawbacks (van Melik & Spierings, 2020), it is conducive to this study

⁵⁸ Individual monthly standardised gross income for people employed in Zurich.

because it can draw on previous quantitative research on the square users, including estimations of those *not* present (Widmer, 2023; Widmer, forthcoming). The multiple cases allow to distinguish between specificities and more general tendencies.

In what follows, I concentrate on a few of the most relevant aspects of the squares, and then roughly characterize the neighbourhoods by some of the current issues in housing and neighbourhood transformation.

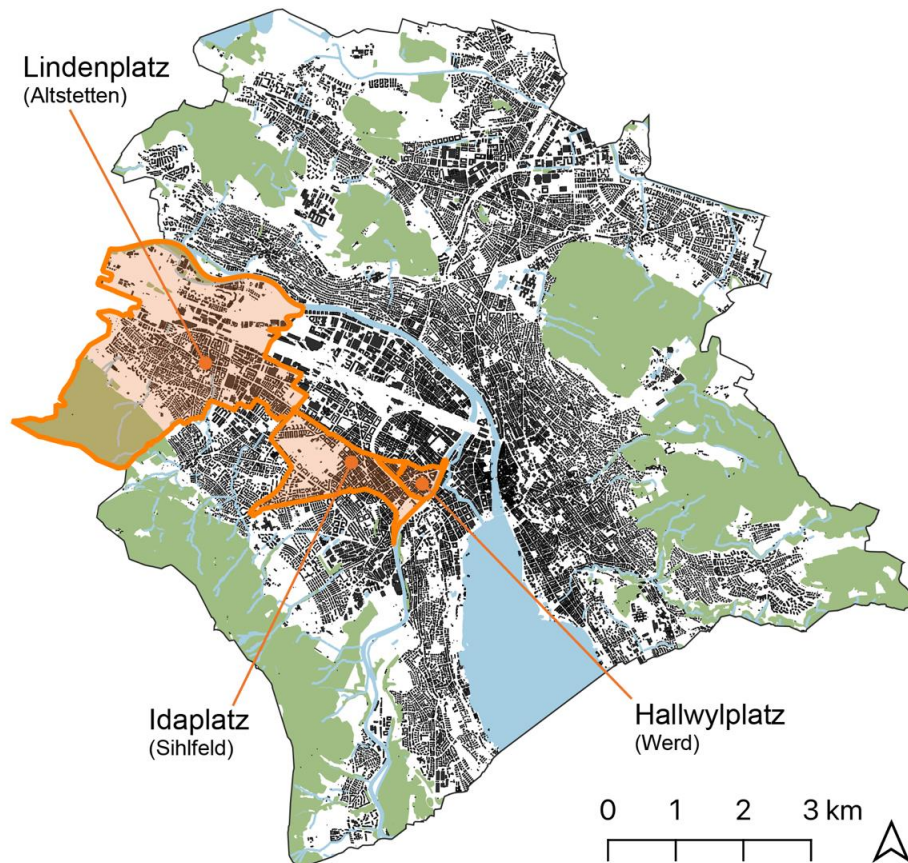


Figure 60: Map of Zurich, showing squares and their respective neighbourhoods. Source: author's own.

The squares are small in size (1,500–2,000 sqm), framed by streets or buildings with some cafés, restaurants, and shops. The squares are furnished with benches, trees, and fountains (Figure 61 – Figure 64). Quantitative research has shown that in all cases, the population of square users is less diverse than the neighbourhood population in many dimensions (notably ethnicity and social status) (Widmer, forthcoming). The squares are less intensely used by people from immigrant backgrounds, and people with lower and higher incomes, whereas Swiss middle-class people are overrepresented in the squares. Generally, the squares are used for transit, shopping, meeting friends and family, being alone in public, and consuming food and drinks. For many people, the squares play an important role for their neighbourhood belonging. A fair share of square users recognize one or more familiar strangers which has been shown to be connected to

neighbourhood attachment (Blokland et al., 2022): 38% in Lindenplatz, 20% in Hallwylplatz, and 24% in Idaplatz (Widmer, 2023).



Figure 61: Lindenplatz. Source: author's own.



Figure 62: Hallwylplatz Source: author's own.



Figure 63; Idaplatz. Source: author's own.



Figure 64: Site plan of the squares Source: author's own.

Altstetten, situated on the north-eastern edge of Zurich and home to the square Lindenplatz, is Zurich's largest neighbourhood in terms of surface and population, but less densely populated than the other selected neighbourhoods. In the municipal structure plan defining the future spatial development of Zurich (Stadt Zürich, 2019b), significant parts of Altstetten are designated zones for densification. This spurred debates about whether Altstetten carries too heavy a load in terms of densification, and promises of a new vibrant urban center (Statistik Stadt Zürich, 2020a) also raise concerns over gentrification. The neighbourhood boasts a lot of green spaces as well as short distances to the woods and the river Limmat running through Zurich, and to many residents, especially long-term residents, it feels very much like the village it used to be.

The Werd neighbourhood, where Hallwylplatz is located, is close to the city center. Werd is one of the densest neighbourhoods in Zurich in terms of inhabitants and employees. It is built mostly of perimeter blocks from the turn of the last century. In close proximity to Hallwylplatz, Google holds its largest development center outside the United States. In recent years, there have been fears about Google employees with high disposable incomes entering Zurich's housing market and driving up rents. This is a fiercely debated issue against the backdrop of an overheated housing market, and is particularly relevant to the area around Hallwylplatz.

But also Sihlfeld, the neighbourhood in which Idaplatz lies, is part of these debates. The neighbourhood has been undergoing gentrification since traffic calming measures were implemented on one of the main transport axes in 2010 (Feller, 2018). The residential neighbourhood consists mainly of perimeter blocks dating from the end of the 19th or the early 20th century, many of them being social housing estates (for the working class) or part of cooperative housing projects. Next to Idaplatz however, the perimeter blocks are more refined and upmarket (Statistik Stadt Zürich, 2015), and as such particularly prone to gentrification.

8.6. Data and Methods

This paper is based on 63 semi-structured interviews that took place between May and November 2022. Twenty interviews were conducted with people living or working close to Lindenplatz, twenty-one interviews for Hallwylplatz, and twenty-two for Idaplatz. When the weather allowed, the interviews were conducted in the squares, sitting on a bench. Sixteen interviews were conducted at people's homes or workplaces, either on the participants' request, due to bad weather, or because it was the place where people were approached (i.e. in their workplaces around the squares). One interview took place online.

On average, interviews took 45 minutes. Interviews with people who had been recruited on-site were usually shorter than pre-scheduled interviews. The interview guide covered the use of

the square, the perception of other people and the cohabitation of different users and activities. Being in the squares had the advantage of supplying prompts on the built and the social environment similar to walking interviews (J. Evans & Jones, 2011). It should be noted that responses to diversity as they will be discussed in the next section are what people were able and willing to report. They are not based on observed actions, and micro-responses such as avoiding eye-contact, for example, might not be revealed.

Since diversity is usually framed as positive, social desirability could sometimes be sensed during the interviews even though I did not mention the word itself unless participants used it themselves. Many were cautious in describing others, particularly when referring to ethnicity. To mitigate social desirability effects, participants were simply asked to describe who else is present in the square, and I probed when needed. Reassuring participants that I was indeed interested in their views and would not think of them as being judgmental or politically incorrect also helped. Nevertheless, it cannot be ruled out that some participants might not have recounted negative feelings about others or diversity in general to their full extent.

A purposive sampling strategy (Robinson, 2014) was developed to ensure that less approachable, underrepresented or people less familiar with research could be interviewed, too. The strategy defined quotas for different population groups, and outlined the steps of the recruiting process. First off, some contacts from previous quantitative fieldwork⁵⁹ were asked to participate. New participants were approached in the squares and in public spaces around the squares. I also applied snowball sampling, and distributed posters and leaflets in supermarkets, shops, cafés, libraries, noticeboards of neighbourhood organizations and housing developments, to also reach those who do not use the squares.

Despite considerable sampling efforts, the quotas could not be reached for all groups. Table 11 gives an overview of the quotas and the number of actual interviews. Overall, less men than women participated (38% vs. 62%). However, the sample comprises people of various age groups and different life stages including students, parents, people living in single households, pensioners, etc. Additionally, the sample has a relatively balanced distribution across educational levels, and it also includes individuals of low and high socio-economic status, though the quota was not attained in the latter category. Roughly a third of the participants have a migrant background, mirroring the share of foreigners in Zurich.

⁵⁹ In summer 2021, a quantitative intercept survey was carried out (Widmer, 2023, i.e. Chapter 5 of this thesis). When interesting conversations with square users occurred during the survey sessions, participants' contact details were registered.

Table 11: Number of interviews per group. For categories with a quota, bold numbers indicate that the quota has been reached.

		Quota	Lindenplatz	Hallwylplatz	Idaplatz
Total			20	21	22
Gender	Female		10	13	16
	Male	8	10	8	6
Age	below 25	2	1	2	0
	between 25 and 65		14	15	15
	above 65	3	5	4	7
	above 75	1	4	2	1
Household type	Family with (small) kids	4	5	7	5
	Couple		2	2	5
	Single		6	8	11
	Flat share		4	4	1
	Other		3	-	-
Socio-economic status	Low	3	8	6	5
	Average		12	13	17
	High	3	-	2	-
Education	Compulsory	2	2	2	1
	Secondary	3	9	5	4
	Tertiary		9	14	17
Migrant background	Yes	6	5	8	5
	No		15	13	17
Living in the neighbourhood	Yes		15	12	19
	No		5	9	3
Use	Users		15	14	18
	Necessary only	3	5	2	2
	Non-users	6	-	5	2

For the quotas, crude categories of users, non-users and users that use the square only for necessary activities like grocery shopping and passing through were defined. In Lindenplatz, due to the numerous day-to-day facilities, all participants reported at least some use of the square. In the course of the research, I refined the user categories by adding the dimension of the symbolic value of the square to their actual use patterns. This resulted in three user types. *Invested users* are people for whom the square plays an important role, either because they use it often and savour its qualities, or because they use it only rarely but still consider it to be an important element of their neighbourhood. *Casual users* are characterized by a utilitarian use of the square. They either live close and cannot help passing it, or they use the amenities it offers, but would not go there otherwise. Lastly, *indifferent users* use the square only occasionally. They consider the square as irrelevant to them because their lives take place in different parts of the city.

Participants were asked to give informed consent, and interviews were then audio-taped and later transcribed. For use in this paper, quotes were translated from German, and I use pseudonyms to respect anonymity.

Descriptions of others and reactions to people or behaviour were defined as the unit of analysis for a 'structuring content analysis' (Mayring, 2014) for which I used *ATLAS.ti*. Descriptions of square users were coded with predefined codes referring to the categories people use to describe others. The code book was refined inductively, and then structured into overarching categories (e.g. references to clothing, activities, or supposed attitudes were combined to the category 'lifestyle'). To analyse people's reactions and behaviour regarding diversity, once the units of analysis had been identified, they were coded according to the theory-based framework of responses (see section 8.4.1). The cross-sectional material per type of response was then interpreted, paying particular attention to diversity-seeking and diversity-avoiding forms.

8.7. Perceiving Diversity and Responding to it

8.7.1. Perceiving: Descriptions of the Social Micro-Environment

To answer the first research question, I discerned the categories participants used when describing other square users. Catherine, a 29-year-old casual user (Idaplatz), emphasizes that the composition of square users changes throughout the day, and that it is quite diverse, but in a way also very homogeneous:

'Well, I mean, it varies, but it also depends very much on the time of day. At noon, there are people who meet for lunch, and these are very different – what they work and also different ages, and so on. But I feel that in the evening, when it's time for beer, aperitif and so on, most of the people are my age, in their early thirties, who also live here. And well, it's completely gentrified, and... totally, yuppie-like, and you can see that here.'

Catherine's account is typical for many of the descriptions of the social micro-environment of all three squares in many ways. Categories of age are the most prevalent. 56 participants mention age or the stage of life course people are in e.g., 'families', 'mothers and their children', 'pensioners'.

Like Catherine, more than half of the participants (38) combine age with lifestyle categories. Under these categories, I subsumed descriptions based on activities, behaviour, and (supposed) attitudes, but also references to, e.g., style of dress, or identification with a soccer club.

Sometimes, activities are descriptive only: ‘people eating lunch’, ‘guys meeting for a beer’, ‘children paddling in the fountain’. In many cases, however, activities are cited in a way that also insinuates more – values, attitudes, or consumption preferences. When Monica, a 74-year-old invested user (Hallwylplatz), states that the square is ‘a place for cyclists and pedestrians’, for example, she soon after explains that ‘it’s rather urban people who come here, with a rather green political attitude, so of course no one turns up dressed up or in high heels’. Descriptions such as ‘alternative folks’, ‘yuppie’, ‘hipster’, or ‘DINKs’ are quite common, and show that lifestyles are tightly interwoven with elements of social status.

44 participants refer to other’s perceived socio-economic status. Sometimes they refer to social class upfront when using terms like ‘of the same social class’, ‘working-class’, ‘middle-class’. Others employ more implicit, and often quite cautious descriptions like ‘people who work for Google’⁶⁰, ‘less educated social strata’, or ‘those who buy their beer at Denner’⁶¹.

Another way of differentiating square users is referring to their migrant background. Terms like ‘different cultures’, ‘not only White people’, ‘foreigners’ invoke different aspects of having immigrated or being of second generation origin. These categorizations are also often combined with mentions of length of residence in the neighbourhood. In Idaplatz and Hallwylplatz in particular, ‘expats’ or ‘Googlers’ are mentioned as one group that uses the square. These terms are employed to talk about rising rents, but also to express symbolic displacement because they have been ‘marked’ by media as causing gentrification.

Despite all neighbourhoods having considerable shares of people without Swiss nationality⁶², ethnicity or migrant background is used only by roughly half of the participants. One reason for this is undoubtedly the fact that ethnic heterogeneity in the squares is lower than in the neighbourhoods (Widmer, forthcoming). However, also in Lindenplatz, where the ethnic mix is the highest, people refer to it only occasionally. Presumably, the category is less salient when thinking about the square users, usually a matter of everyday encounters and mere co-presence, as opposed to thinking about neighbours and housing where fears of (symbolic) displacement may be connected to immigration.

There are other categories that are applied much less frequently. Gender, language, political opinion, religious beliefs, sexual orientation, or disabilities are each mentioned by less than 10 people. Gender is used almost exclusively in intersections with other categories, for example ‘men with alcohol problems’, ‘mothers with children’, ‘young men with beers cans’.

⁶⁰ Google has its largest development centre outside the United States in Zurich. The term ‘Googler’, has come to mean highly skilled Google employees with staggering incomes.

⁶¹ Denner is a Swiss discount supermarket chain, the reference thus implying lower incomes.

⁶² In 2022, it ranged between 32% and 37% (Stadt Zürich, 2023a).

In general, concurring with the findings of Großmann et al. (2019), the more categories are combined, the more stereotyped the descriptions of groups or individuals are. However, participants very often expressed an awareness of their stereotyping and indicated that this was not necessarily reflecting their opinions. While interrelated categories are mostly used to describe others that are different from oneself, they are occasionally also used to self-critically reflect on one's own role in the social mix. When asked how many people are similar to him, David, a 42-year old invested square user (Idaplatz) explains:

'90%. [...] Quite a few men with alcohol problems live here [points to a building], and they are also in the square. But that's not a problem, and children play in the square, and then there's quite a few Spanish and South American people, they are a certain percentage. But all these people in their mid-thirties playing pétanque here, I consider them to belong to the same 'clientele' [as me].'

Interrelating categories are also frequently used when groups of others are attributed to specific places within the squares. This happens quite often with relation to the restaurants and cafés that have their distinct clientele which participants caricature: 'families, parents, and hipsters – if I may – who love to drink overpriced coffee', or 'older men, and ladies, too, who drink their beers and who rate quantity higher than quality, perhaps'. Invested square users' descriptions of others on average included more interrelating categories and more detailed descriptions of territories than casual and indifferent square users', presumably because they have more opportunity to and are more interested in observing others.

8.7.2. Assessing Social Distance⁶³

Engaging in one way or the other with difference in an urban context first of all means perceiving difference and assessing the social distance. One of the questions asked in the interviews aimed at knowing how participants positioned themselves in relation to others. Even though at first many were puzzled by the question, when given time to think about it, many had something to say about how they positioned themselves in relation to the other people using the square at the time of the interview or in their experience outside the interview.

Generally, people recognize that there are at least some people like themselves, but most people say that 'the majority', 'almost everyone' or 'many' are different from them. However, there is also a considerable number of people who feel that many people are similar to them, that they recognize a 'vibe', a certain 'like-mindedness' in others, or they assume others to be in

⁶³ This section was added to the article for this thesis.

a similar stage of the life course. Evelyne, a 38-year-old invested square user (Hallwylplatz), perceives the other square users as a relatively homogeneous crowd:

'Well, you notice now when children start playing together, then you also start talking to each other. [...] And they [other parents] are really similar. They are similar in age, usually they both work, two children.'

Also Barbara, a 53-year-old invested square user (Idaplatz) feels she is part of group of square users with similarities:

'I don't feel like I'm unusual. Like, having a creative job... [...] I do feel like it's become very middle-class here. Not just blue-collar, but people who also work in creative jobs, graphics, maybe even with computers, I don't know if those working for Google are also attracted here? Well, yeah, but of the others [creative jobs], there are many. And that's me, too.'

Broadly speaking, however, participants do experience difference in the squares as they not only encounter or see biographical strangers, but also cultural strangers. But what categories are used to differentiate between oneself and those who are different? By far the most prevalent category used was age, again, and often combined with life course descriptions such as 'parents' or 'residents of the care home'. On a similar scale, lifestyle descriptions are used to express differences. This sometimes takes the form of concrete examples like 'they work in a different field', but are also often expressed somewhat vaguely, presumably out of an uneasiness with stereotyping others. Erika, a 72-year-old invested square user (Idaplatz), explains:

'The young people are simply – well. It's not judgmental. They are a bit different. They are perhaps a bit – well, a bit green [in their political opinion], I'd say, in the way they present themselves.'

Aspects of ethnicity, nationality or immigrant background are only mentioned very infrequently. Also differences in socio-economic status are evoked very rarely, neither in terms of economic resources nor educational achievement.

There were also some people who do perceive differences but find them irrelevant. Maurus, a 43-year-old invested square user (Idaplatz), who states:

'It's as if you were to ask me if I could say something about the trees. Then I would say, yes there are maples and sycamores. They are here, yes, but I would not reflect on that for a second. And in the same way, I don't reflect on the mix of people.'

8.7.3. Responses: From Avoiding to Seeking Diversity

Before delving into people's responses to diversity, a brief remark on attitudes is required. Attitudes towards diversity vary among the participants and depend on the dimension of diversity. Most participants spontaneously praise a heterogeneity of ages, and overall, the majority of participants seems to value also the cultural and socio-economic diversity found in the squares.

Quite often, however, people also display a distanced attitude towards diversity. When asked about how they feel about the mix of people, they seem almost perplexed and respond with statements like 'the mix is not a criterium' or 'I don't even pay attention to that', echoing the concept of 'commonplace diversity' (Wessendorf, 2014a).

Participants also talk about negative views of diversity. On closer inspection, these are predominantly negative assessments of particular differences, and not of diversity per se. Here, Bannister and Kearns' (2013) framework of tolerance and intolerant assessment proves to be valuable. High exposure to certain differences, or the fact that a lot is at stake may lead to a negative assessment even for people who generally have a favourable view of diversity. Examples of particular differences are not speaking Swiss German, consuming alcohol or noisy behaviour, all discussed below. I will now turn to the responses to diversity, which, as we will see, are not necessarily matching the attitudes.

Not Taking Action: A Response in Its Own Right

For people who have a distant attitude towards the square users' diversity, not taking any action to cope with diversity seems to be a logical consequence of their attitude. However, it is not uncommon for participants to assess certain aspects of diversity negatively but still not feel the need to change their behaviour. In fact, this type of response accounts for roughly half of the responses and is the most frequent for all user types. While such responses can be classified as tolerant (Bannister & Kearns, 2013), they are not necessarily signs of respect (Valentine, 2008), but perhaps typical for the 'rubbing along' (Wise & Noble, 2016) that is life in public space.

Elsbeth, for example, an invested square user in her sixties who has been living close to Idaplatz for more than twenty years, explains that she had recently been in one of the cafés in the square and had been the only one speaking Swiss German. She disapproved of that but struggled to admit these feelings. Attributing the high share of foreigners to the rising rents in the neighbourhood that are unaffordable unless your company pays for it, she feels as if the neighbourhood has been invaded by expats. Because this group has been marked as causing gentrification, and their only observable characteristic is different languages, her hearing a lot of foreign languages in the square is connected to feelings of symbolic displacement (Atkinson,

2015). This negative assessment is comprehensible since a lot is at stake – her home and the neighbourhood where she belongs. And yet, she reported that she had not changed her behaviour and would not mind talking to people in other languages.

A similar response can be found with Herbert, an 88-year-old casual user, who talked about a group of people, some more loosely, others closely connected, who spend long hours on the benches in Lindenplatz. To many participants, they are ‘marginalized people’ or ‘alcoholics’ because they can often be seen with a can of beer in hand, but I will refer to them as ‘bench sitters’. When asked whether these people and their behaviour affects his use of the benches, he explained that for him, there is no need to change his behaviour: ‘You know, the benches’ occupation changes. Sometimes it’s mothers with prams, and I would imagine they don’t think it positive when alcoholics are here. But I myself, I’m not concerned.’

Similarly, Maria, a 42-year old casual square user (Lindenplatz) says: ‘No, I haven’t changed anything specific about my behaviour or anything like that. You know, I’m not taking a different route when I have to go shopping, I just take the shortest route’.⁶⁴

Adjusting Habits

The second-most important response (about a quarter of the responses) is developing or adjusting habits, mostly in its positive form, i.e. diversity-seeking. About one third of the invested square users mention this active diversity-seeking. Isabella, a 31-year-old invested square user who has recently moved close to Idaplatz, says she really enjoys the crowd at that square. She likes to watch people, and upon discovering the square on one of her first walks in the neighbourhood, she has developed the habit of going there regularly to read. Isabella could also use her balcony or the courtyard of her apartment block, yet she prefers the square:

‘[In the courtyard], I see my neighbours, but it’s not like coming here and seeing a variety of the city, [...], get to know what people are doing, and I like to come here and see how they behave or how they are dressed or whatever.’

The same attitude of seeking diversity can also lead to the opposite result – i.e. avoiding the square – if the diversity in the square is perceived differently. This is the case for Catherine, whom we have met before:⁶⁵

‘Sometimes I need to force myself to acknowledge that I’m simply also part of this hip group. Because I actually live here. So just because you live here doesn’t necessarily mean you have to be hip. But I still do many similar things. Sometimes

⁶⁴ This quote was added to the article for this thesis.

⁶⁵ This quote was added to the article for this thesis.

you look at groups from the outside and you think, wow, that's so typical, so full of clichés and all – everyone has a dog and everyone now has a baby, and then they walk around and meet here [...] and play pétanque – do you know what I mean? [...]

I: So is it sometimes a reason for you to think, I don't want to join in?

Exactly, then I go somewhere else, I don't know. For example, in Fritschiwiese [green space closeby] there are also many more people with a migration background. It's much more diverse.'

However, also negative assessments of diversity can lead people to adjust their habits displaying so-called 'avoidance tactics' (Bannister & Kearns, 2013, p. 2710). After having witnessed a conflict between alcoholized 'bench sitters' in Lindenplatz, two participants have changed their habits: one does not go to the square anymore, and the other sits rarely on the benches anymore. The bench sitters are clearly hypervisible (Brighenti, 2010) and the marked side of a social contrast ('alcoholics' vs. 'normal' people, Brekhus, 1998). As such, they receive attention that is out of proportion to their actual number, frequency, and duration of being there. This contributes to a (perceived) high exposure which then leads to negative assessment. This assessment results in changing habits, but also in spatial responses, as I will show below. However, since the benches in Lindenplatz are clustered together, there is not much leeway for spatial responses if one wants a place to sit.

Feeling uncomfortable around other people is the main reason to negatively adjust habits. Sometimes, it is a specific group or their behaviour, sometimes it is also the sheer number of people (creating too much noise, for example). And sometimes also one individual is enough to create a feeling of being out of place, as Georg, a 64-year-old indifferent user (Hallwylplatz), indicates when talking about one specific square user: 'He was there [...] with his mates. Maybe that was one of the reasons why I didn't come here anymore. I felt like a foreign body... like someone who is not welcome here.' This experience has turned Georg into an indifferent user. Even if he might have liked things to be different, he does not really resent others territorializing the square. Because he has not been heavily invested in the square in the first place, not much was at stake.

Other people who apply avoidance tactics report that they feel a bit disappointed, and especially those who live directly in the square and felt (or still feel) attached to the square also experience a deep loss when feeling forced to apply avoidance tactics.

I now turn to the two last and less frequent responses to diversity: managing rhythm and distance. Both are mentioned infrequently, roughly by 10% of the participants. The responses

are almost exclusively found among invested square users, among which about one third report these kinds of responses.

Managing Rhythm

For people trying to engage with diversity, managing rhythm can mean going to the square when ‘there’s a lot going on’ or ‘it’s animated’. When avoiding diversity, it can mean avoiding the square at certain times of the day. Hallwylplatz usually gets packed during lunch hours, and some residents feel less comfortable at that time of day because they perceive a difference between them and the lunch eaters: ‘these are people from the office world [...], they’re just consumers’. A similar distinction between insiders and outsiders, or residents and visitors from outside the neighbourhood, is made at Idaplatz. Since its last redevelopment, noise levels are high on pleasant summer evenings. There have been various attempts to find solutions with the city administration and the owners of the bars and restaurants in the square, but to the people who live directly at Idaplatz, these have failed. Many of these residents therefore avoid the square in the late afternoons and evenings when the crowd gets too noisy, like Martin, a 69-year-old invested square user, who has adapted his rhythm:

‘I use Idaplatz in a peculiar way [...]. Idaplatz is most attractive in bad weather, then it’s quite pleasant throughout the day. Also then, it’s not empty, and it’s pleasant maybe until about nine-thirty or ten, then it gets louder with the consumption of alcohol, the noise level also increases, and then it’s not as attractive anymore.’

Peter, an invested square user of similar age has adjusted his rhythm of spending time in Idaplatz in much the same way as Martin. He additionally sees a challenge in the distance he feels between him being alone in his flat versus the others, out and about in groups:⁶⁶

‘It started to change in the last few years, I started to think “oh dear, a warm summer evening, it’s just as well if I’m not at home” ... Maybe it’s also specific to living alone. [...] When there are two of you, it doesn’t bother you as much. But alone, I realize I need greater psychological effort – I’m reading a book for myself, but there are five hundred people outside and they’re partying. [...] At the same time, I also realize that that’s my problem, of course.’

⁶⁶ This quote was added to the article for this thesis.

Managing Spatial Distance

Throughout the interviews, one of the recurring topics was that even if people do not approve of or appreciate a certain conduct, they do not mind because they are capable of managing the distance between them and others. They report they either move further away, or place themselves strategically in the first place. Or they react like Marianne, a 82-year-old user (Lindenplatz), who – despite being an invested user – very matter-of-factly explains that ‘if someone sits next to me and starts talking about something that doesn’t interest me, I say fine, I’m in the wrong place. I get up and leave.’ She also adds that she chooses to keep her distance in the case of people who are not native Swiss. She says she does not particularly notice them ‘because they don’t sit next to you if they don’t speak German, do they. And I don’t sit next to them.’⁶⁷ She is not bothered by migrants, and also does not mind them being there, but simply does not see any reason why she should get in contact with them in the square.

Managing distance can also take more affirmative forms, however: it can mean actively seeking a bench with a good view. It can even mean sitting close to people that are different from you because you enjoy the friction in this co-presence, as shown in this quote from Lukas, a 21-year-old casual user, who describes his relation to the bench sitters in Lindenplatz. When asked how this changed the way he moves around, he stated: ‘It doesn’t at all. I like to sit on the benches in between them, it adds a bit of entertainment (laughs).’

Other participants, however, manage their spatial distance to the bench sitters in an avoiding manner. They state they do not go near these benches, or only if the bench sitters are not there.

8.8. Discussion and Conclusion

Encountering strangers in public space is a quintessential quality of urban environments, and in our diversifying societies, this always entails encounters with differences. This paper set out to contribute empirically to the literature on diversity and geographies of encounter by exploring how people live with these differences in the everyday setting of mundane, small-scale neighbourhood squares in Zurich. By adopting a constructivist definition of diversity, I asked how people perceive diversity in terms of culture, status, age, lifestyle, gender, activities and any other dimension they might find relevant, without marking certain differences as particularly noteworthy at the outset, thereby attempting a less marked conception of diversity (Brekhus, 1998). The second objective was to analyse responses to diversity based on a framework of four

⁶⁷ This quote was added to the article for this thesis.

types of responses. Even though the composition of square users differs between the squares, the description of others as well as the responses to diversity are remarkably similar across them. I therefore draw five conclusions from the 63 interviews that are equally valid for all squares.

Firstly, people do perceive differences between them and other square users. Categories like age, lifestyle, and activities seem to be more salient when describing the social mix of people in the square than social status or ethnicity. However, these categorizations are often implicit descriptions of status nevertheless because lifestyle choices often depend on all sorts of capital.

Secondly, people perceive differences but tend to not be judgmental about them. As discussed in the methods section, this study might suffer from a social desirability effect, causing people to judge others only shily. My own positionality as a white, German-speaking woman presumably affected sampling and the interviews, too. However, when it came to who *lives* in the neighbourhood as opposed to who *uses* the public square, participants were much less hesitant to judge. I contend that, because the stakes in public space are usually smaller than in immediate residential settings, and because people can usually find ways to deal with objectionable people or behaviours relatively easily, a different ‘scale of measurement’ is applied to the public squares – except in the case of people to whom the square *is* the residential setting.

Thirdly, most participants generally value diversity in public space, especially with regard to age, but also other kinds of diversity like different cultures, or different socio-economic backgrounds are appreciated. They value diversity in its pleasant manifestations but do not feel particularly strong about it unless it contains objectionable elements. This may sound incoherent but it is more fathomable when considering that it is not primarily people who evoke negative feelings, but certain activities like alcohol consumption, cheering, listening to loud music. The contextual determinants of intolerance (Bannister & Kearns, 2013, p. 2709) seem to be such that most often, there is not enough friction to cause need for action: not much is at stake in these encounters, and usually the exposure to objectionable behaviour is rather low or can be reduced by one’s own means. This result resonates with the notion of commonplace diversity (Wessendorf, 2014a), stating that many people have a way of living and dealing with diversity in everyday life that is relatively unspectacular, without necessarily being ‘affectively at ease’ (Wise & Noble, 2016). It is consistent with Plüss et al.’s (2017) findings that different groups live side by side in public space and see value in this, without having much contact, and reinforces the argument that we should not regard positively framed kinds of sociality ‘as universally valued’ (Middleton & Samanani, 2022, p. 778).

As a fourth conclusion, participants only feel they need to change their behaviour to live with diversity in the public squares when either exposure is high (e.g., alcoholics sitting on the same benches for hours and days), or when a lot is at stake (e.g., the neighbourhood on the verge

of changing). This is very often connected to social marking processes where groups or behaviour are either marked as morally faulty or politically problematic.

It therefore seems apt to conclude, fifthly, that *people value diversity given some leeway to create distance from objects of (in)tolerance*. This can happen either through adjusting one's habits, changing the rhythm of square visits, or by creating physical distance between oneself and the object of intolerance. The sometimes very strong feelings of direct neighbours of the squares towards, e.g., noise in the square, can thus easily be explained by their permanent exposure, by the high stakes that a home represents, and by the lack of options to create distance because the square is their immediate residential setting.

This last conclusion has implications for the design of public spaces and social infrastructures more broadly. Whenever authorities or private owners want to create spaces that can accommodate a wide range of different people, it is important to provide opportunities to manage distance. This means both: creating easily accessible zones where intercultural, intergenerational, and other encounters across categories are encouraged, and providing opportunities to position oneself and to move away if necessary. It is not only for their markedness (Brekhus, 1998) that the bench sitters are mentioned as problematic in almost all of the interviews for Lindenplatz. Since there is almost no other non-commercial seating in that square except other benches close to them, people who would like to sit down do not have much choice. In the two other squares, there are many more sitting opportunities scattered over the square. In the case of Hallwylplatz there are movable chairs offering extra leeway to adjust distance as one wishes. They also let people choose the direction so that diversity-seekers may position themselves to have a good view.

Taking this insight further, this can also have implications on a more policy-oriented level. In their work on urban tolerance, Bannister and Kearns argue for 'policies *for* tolerance', i.e. policies that actively show respect to 'less valued and less visible social groups' (Bannister & Kearns, 2013, p. 2714). In a similar vein, I argue that given the square users' substantial capacity and willingness to show civility towards others, public space policies could be more ambitious in creating spaces that allow distance management and thus fostering places that allow people of all walks of life to be together and experience diversity at an individually adequate distance. Strategies like a programmatic approach to public space design (Aelbrecht et al., 2021) whereby programmed activities for different target groups create opportunities for co-presence and encounter, or a focus on mixed-use and 'mixed-life' on the neighbourhood scale right down to the micro-scale of the commercial and cultural offer in the square (Francis, 2011), could contribute to such efforts.

In conclusion, it can be said that diversity is both, desirable *and* unremarkable. Moreover, the results are remarkably similar for all three squares. This might be related to the context of Zurich, where tensions and residential segregation in terms of ethnicity are low, and where the neighbourhoods that are far from being deprived (Plüss et al., 2017), and to the place-based approach focusing on public squares. Further research could concentrate on other types of social infrastructure (Latham & Layton, 2022), e.g. places where people spend more time or have higher stakes because alternatives are not readily available, and to contexts with higher diversity, or a differently composed diversity. More process-oriented approaches (van Melik & Spierings, 2020) that focus on people's activity-spaces could further explain how living with diversity is experienced by different people and what the role of encounters with unknown others are. For a more detailed understanding of the responses to diversity a more phenomenological approach could be taken by, e.g. group inquiries (Seamon, 1979), or physical distance management could be observed (much like research done during COVID-19 (Mehta, 2020)).

9. Discussion & Conclusion

This thesis set out to explore the diversity of people in everyday life of urban public squares. Public space – and hence also public squares – can be important social infrastructures (Klinenberg, 2018) because they support socialities of different kinds, the most basic one of them being co-presence (Latham & Layton, 2022). Life in public squares can also be seen as the sharing of space between unknown and culturally different others. These encounters between strangers have long been recognized as a quality that is an essential part of urban life (Lofland, 1973), and even though fleeting encounters between people with different backgrounds, values, and practices might not develop into ‘meaningful contact’ (Valentine, 2008), they can contribute to social cohesion and a sense of belonging (Aelbrecht et al., 2019; Peterson, 2023).

Yet, public space is under pressure from many sides: while the privatization and commodification of public space were most prominent in the last decades (and continue to be debated; Carmona, 2010a; Gomes, 2020; A. Smith, 2015; Valli & Hammami, 2021), calls for more green spaces and for the de-sealing⁶⁸ of existing spaces in order to mitigate the effects of climate change have become louder in recent years (Bibri et al., 2020; Samuelsson et al., 2021; Wellmann et al., 2020).

Additionally, trends like diversifying societies, increasing income inequality, and growing residential segregation (Chancel et al., 2022; Tasan-Kok et al., 2014; van Ham et al., 2021) also emphasize the need for a better understanding of the extent to which encounters between strangers take place in urban public space and how social diversity in public space is experienced in everyday life.

To contribute to filling this research gap, this thesis is organized around four questions:

- Q1: What is the extent of diversity in public squares?
- Q2: How does a neighbourhood’s diversity compare to square users’ diversity?
- Q3: How is diversity in public squares perceived and experienced?
- Q4: How does public space design shape diversity in public squares?

The research took the form of a case study consisting of three public squares in Zurich: Lindenplatz, Hallwylplatz, and Idaplatz. I chose a mixed-methods approach to address the research questions and their different objectives. In a preliminary step, and in order to get a deeper understanding of the case study sites, ‘representations of space’ (Lefebvre, 1974/1991), i.e. the ways in which the squares were conceived by planners and landscape architects, were

⁶⁸ I.e. removing impermeable materials like concrete and asphalt.

studied (with archival analysis, semi-structured interviews, and a design analysis). While the first and the second research question called for more quantitative methods (using screening, behavioural mapping, intercept survey, and secondary data analysis), qualitative methods were more adequate to study the third and the fourth question (using semi-structured interviews, and unstructured observations).

In the next section, I foreground the main findings this research design produced (Section 9.1). After the empirical contributions, I highlight the ways in which this thesis also adds to existing literature on diversity in public space both methodologically and theoretically (Section 9.2). In the following section (9.3), I reflect on the limitations of this research and discuss how the shortcomings could be addressed in future research. I conclude by sketching out policy implications in the domain of planning and designing public space and of housing (Section 9.4).

9.1. Main Findings

The main findings of the articles and the book chapter give a coherent picture of the use of the three public squares, the diversity of users, and the experience of encountering strangers. I discuss them in relation to the four research questions (Sections 9.1.1 – 9.1.4) and to the overarching theme of distance (Section 9.1.5).

Since there is no recent scholarly literature on the diversity of public space users in Switzerland, and existing literature on public space use is sparse and not dealing with the same issues (Bassand et al., 2001; Bühler et al., 2010; Seeland et al., 2009), it is not possible to contextualize the results of this thesis within the common culture of using public space in Zurich or Switzerland. This thesis therefore not only adds to international academic debates but should also be seen as an empirical contribution to a branch of research that is not very strongly developed in Switzerland.

9.1.1. Extent of Diversity in Public Squares

The additional section on the everyday use of the public squares (Section 4.6) as well as the third publication, the book chapter (Chapter 7), show that, overall, there is a diversity of users to be found in the squares.

The population of square users is balanced in terms of gender, with the percentage of women fluctuating around fifty percent throughout the day (see Figure 22). There are also people of all ages to be found in the squares (see Figure 23), with Lindenplatz being particularly inviting to older people who live in the care home close to the square. Even though the focus of the third publication of this thesis is on the diversity gap, i.e. the weaker presence of some population

groups in the squares compared to the neighbourhood, the results also show that there *is* diversity in the squares – it is simply not as high as it could be, given the diversity in the neighbourhood (see also Section 9.1.2). As an answer to the first research question (What is the extent of diversity in public squares?), the figures in Section 7.6 show that there *are* groups of different cultural backgrounds, incomes, educational levels, and employment status present in the squares.

The further analysis of the intercept survey data also shows that among the different people who use the squares, there are individual factors (as well as environmental factors, see Section 9.1.4) that make it more likely that someone is engaged in an optional activity, i.e. not just passing through or shopping. Men are more likely to carry out optional activities than women, supporting previous work that has found gendered use patterns in public space (Baran et al., 2014; Huang & Napawan, 2021; Ostermann, 2009; Shaikly & Mella Lira, 2022). While the quantitative approach chosen in the first article (Chapter 5) does not allow to ponder the reasons for this difference, we can rule out that these findings result from being attracted to different degrees by the square (since only people who are already there are part of the sample) or from having to care for children (since a dummy variable ‘accompanied by children’ was included in the logistic regression, and therefore separated from the gender effect).

Apart from gender, none of the other individual characteristics (age, migrant background, income, highest level of education) was found to have a significant relationship to optional activities. This suggests that people feel invited to engage in optional activities irrespective of their cultural background, age, or socio-economic status, and that there is no systematic difference in how people who visit the square use it. However, there *is* a diversity gap in who visits the square in the first place (see the next section on the second research question). There are also differences in the propensity to carry out optional activities between people with a different relationship to the neighbourhood. This, and the temporal dimension of the propensity to carry out optional activities will be further discussed in Section 9.1.5 (‘Distance matters’) because it relates to distance. Lastly, there is evidence that optional use hinges on the design of the squares. This aspect is discussed in relation to the fourth research question in Section 9.1.4.

9.1.2. Comparison of Neighbourhood Diversity and Square User’s Diversity

The second research question, how does a neighbourhood’s diversity compare to square users’ diversity, was explored by comparing two sets of data, one on the square users and one on the neighbourhood residents. I examined which groups are overrepresented or underrepresented in the squares (Chapter 7). It is important to bear in mind that the ‘true’ population of square users remains unknown due to potential non-response biases in the intercept survey. Consequently,

the extent of over- or under-representation cannot be precisely specified. However, the findings can still inform us about general tendencies and patterns.

As pointed out in the previous section, men and women are equally represented in the squares, and although the distribution of age groups in the squares does not correspond one-to-one to the distribution in the neighbourhood, the shifts do not add up to a significant diversity gap. This contrasts slightly with findings in other settings: in public squares in Montréal, women were found to be underrepresented (Paré & Mounier, 2021), and in parks in Zurich, women and older people were less frequently encountered than their proportion in the neighbourhood would suggest (Bühler et al., 2010). This can possibly be explained by the fact that the three squares studied here are characterized to a large extent (more so than the aforementioned squares and parks) by people who pass through (40 % to 60 % of users, see Section 4.6.1), a relatively unselective activity. When only stationary activities are considered, a gender effect can be observed, as discussed in the previous section.

In terms of employment status, diversity is slightly higher in the squares than in the neighbourhood due to more people who are employed part-time and less who are employed full-time. While this might suggest that those working part-time have more time at hand to spend in public squares than those working full-time, it can only be a partial explanation since people in retirement are not overrepresented. However, since the difference in diversity is significant only in Lindenplatz, we can assume that overall, people are attracted to the squares regardless of their employment status.

Diversity in the squares is considerably lower than in the neighbourhoods in terms of ethnicity, income, and education, and this is not due to visitors with different sociodemographic characteristics from outside the neighbourhood. Regarding ethnicity, this finding is consistent with several previous studies that found minorities to be underrepresented in public spaces (Paré & Mounier, 2021; Reichl, 2016; Zaidi & Pitt, 2022). The diversity gap shows a consistent pattern that also applies to income and education: it is the mainstream society that is overrepresented. People with an average income are overrepresented. Their share among the neighbourhood residents is 58 percent (Lindenplatz), 45 percent (Hallwylplatz), and 53 percent (Idaplatz), whereas of the square users, 80 percent (Lindenplatz), 73 percent (Hallwylplatz), and 69 percent (Idaplatz) have an average income. People whose highest level of education is a tertiary degree – who are a majority in Zurich (56 %, Statistik Stadt Zürich, 2023e), and whose share in the neighbourhoods of the squares is 38 percent (Lindenplatz), 62 percent (Hallwylplatz) and 59 percent (Idaplatz) – are overrepresented in the squares. Among the square users, 54 percent (Lindenplatz), 71 percent (Hallwylplatz), and 72 percent (Idaplatz) have a tertiary degree.

The quantitative finding that for some variables, diversity is lower in the squares than in the neighbourhood does not tell us anything about the reason for the under-representation or over-representation of some groups. However, some findings from the qualitative analyses carried out for the second and the fourth article (Chapter 6, 8) can shed further light on this.

The strong appropriation of Hallwylplatz (Section 6.6.5), the festive atmosphere that sometimes captures Idaplatz (Section 8.7.3), or the fact that the bench-sitters in Lindenplatz not only sit on one or two benches, but also have an impact on the benches nearby through their presence (Section 6.6.5), can be part of an explanation of why some people do not use the squares. These explanations rely on the notion of atmospheres (Löw, 2016, p. 181), i.e. the intersubjectively shared feelings towards a space, its users and its physical environment.

The fact that the mainstream society is overrepresented hints at a potential bias in the design of these spaces. The squares' design, including the activities they afford, are possibly shaped by preconceptions of how Swiss middle-class people would use the squares. Given the policy that Zurich is pursuing with regard to social mix (see Section 4.2), this bias probably occurred inadvertently. Moreover, it has to be taken into account that there is at least one decade between the planning of the squares and the current practices of use, meaning that during this time span, there could have been changes that were not anticipated – e.g. changes in the culture of public space use, lifestyles, migration patterns, and neighbourhood change such as gentrification – that could account for this partial mismatch. If public space was to foster encounters between strangers more actively, planners and designers would need to be more aware and have more expertise in how to design for the co-presence and encounters across differences, which is – at least in the case of intercultural encounters – often lacking, as research shows (Aelbrecht & Stevens, 2023). On the other hand, it may just as well be that the over-representation simply stems from these groups being more inclined to use this specific type of space – squares – than other groups. In any case, it would be interesting to further explore the role of different types of horizontal differentiation, ethnicity and others, in shaping feelings of belonging, preferences, and ultimately the use and appropriation of public spaces (Bourdieu, 2018).

While it is not possible to delve more into causality (is it the design or preferences that explain different use patterns?) with the research design used here, these findings emphasize that the Lefebvrian interplay between space as it is conceived by planners and designers, the lived space of social meanings that the squares are impregnated with, and the spatial practice of everyday life in the squares is crucial to understanding diversity in the squares (Lefebvre, 1974/1991).

As an answer to the second research question, I conclude there is a diversity gap between the square and the neighbourhood in terms of ethnicity, income, and education. In view of the

City of Zurich's commitment to securing residential diversity (Stadtrat von Zürich, 2017, p. 5; see Section 4.2.2), the diversity gap raises an important question: if this 'diversity advantage' (Landry & Wood, 2007) of socially mixed neighbourhoods relies on actual encounters across differences in public space, is aiming for residential diversity maybe not enough? The implications for policy are discussed in Section 9.4. The diversity gap also affects the way scholars could think about diversity in public space and is thus one of the theoretical contributions of this thesis (Section 9.2.2).

9.1.3. Perception and Experience of Diversity

The diversity of square users as identified in Section 9.1.1 is not just found in research, it is also perceived by the square users themselves. The analysis in Chapter 8 gives interesting insights into which dimensions of diversity matter and which are perhaps regarded as commonplace and unremarkable. Categories of age, lifestyle, and the type of activity people are engaging in are cited spontaneously as the first characteristics when describing other square users. Ethnicity and social status are generally less salient in these accounts of others, although descriptions referring to lifestyle often also carry implicit reference to social status.

Most people feel that most other square users are different from themselves, i.e. they note a certain diversity in the squares. The social distance between oneself and the other square users turns out to be perceived mostly in terms of age (younger/older) or life course stage (still in education/parents/in a care home). However, there are also people who feel quite strongly that they belong to a rather homogeneous group of square users. They associate this homogeneity with a similar life course stage and lifestyle. This feeling of belonging to a homogeneous group of square users, is, perhaps, a trace of the over-representation of mainstream society described above.

People perceive diversity in the squares, and they generally value it, at least on an abstract level. In their practices, they have a relatively distanced attitude towards it, meaning they usually do not engage much with others beyond superficial contact, or at a distance. If people object to the diversity they find in the squares, it is usually not people who evoke negative feelings, but activities like alcohol consumption, cheering, or listening to loud music. In most cases – and regardless of whether people have more positive, neutral or negative feelings towards the diversity in the squares – they respond to diversity with no particular change in behaviour (i.e. with what I termed '*not taking action*'). The findings suggest that the stakes in public space are lower, and people are therefore more tolerant of others and of deviant behaviour than they would be if it concerned their close neighbours, for example. I have shown that this *not taking*

action is a response to diversity in its own right and indicative of the ‘rubbing along’ (Wise & Noble, 2016) that is characteristic of life in public space.

While *not taking action* seems to be the most common response to diversity, there are responses that do entail a change in behaviour: *adjusting habits*, *managing rhythm*, and *managing spatial distance*. It is important to note that these responses can be found in diversity-seeking and diversity-avoiding form. Some take a book to the square to read in order to have a reason to sit on a bench and watch a more diverse crowd than they would find in their semi-public courtyard, while others avoid going to the square because they feel out of place faced with the mix of people found there (*adjusting habits*). Some square users seek out the hours when the square is most busy for their visits, while others avoid warm summer evenings for the same reason (*managing rhythm*). Some actively choose a bench close to (or with a good view of) people who are different from them, while others prefer to keep a distance or move further away (*managing spatial distance*).

Overall, I conclude that people do have the impression that they are seeing, meeting, and perhaps even interacting with strangers, i.e. others who are unknown, and also cultural strangers in the sense that they belong to a different symbolic world (Lofland, 1998). The way people experience and live with diversity in the public squares is mostly uneventful and echoes the commonplace diversity identified by Wessendorf (2014a). However, these results may be somewhat limited by the fact that the perceptions and experiences are based on users of the three squares which, as shown above, exhibit a diversity gap in certain aspects.

9.1.4. Role of Design in Shaping Diversity in Public Squares

Affordances matter as a tool to better understand public spaces (see Section 9.2.2), because they link the built environment with the people who use it. Bodies that find themselves in an environment relate differently to the designed elements and therefore perceive – with all their senses, and in an operation of synthesis (Löw, 2016) – different affordances. The concept of affordances reminds us that space is always practised via the body (Lefebvre, 1974/1991, p. 40), and therefore the affordances of the squares’ designs have consequences on how the squares are used (first article, Chapter 5), by whom they are used (book chapter, Chapter 7), and how people can deal with diversity (fourth article, Chapter 8).

As there are considerable differences in the share of optional activities (as opposed to necessary ones, i.e. passing through or shopping) between the three squares (ranging from just under 30 % at Lindenplatz throughout the day to almost 70 % at Hallwylplatz at lunch time), it is reasonable to conclude that the affordances, i.e. what the squares offer to its users in terms of possible behaviours and activities, has a major influence on how the squares are used. It is

important to note that the square not only attracts a crowd that differs in some aspects from the neighbourhood population (i.e. the diversity gap discussed in the previous section and Chapter 7), but for those who choose to visit the square, being in a square with more affordances for optional activities makes it more likely that they actualize the affordances and engage in optional activities (see logistic regression, Section 5.7.2). This corroborates previous research (Gehl, 1971/2011; Lanng & Jensen, 2022; Rishbeth & Rogaly, 2018).

Affordances that encourage optional activities are linked to the robustness of an environment (Bentley et al., 1985), i.e. being suitable for a wide range of purposes and therefore being inviting to a wide range of people. Much of the differences in affordances between the squares can be found in the seating affordances they provide (see Table 6). However, there is also the fact that in the case of Lindenplatz, a lot of day-to-day facilities are located in the buildings on the square. They contribute to its robustness and ultimately to its diversity because they are used by almost everyone in the neighbourhood – all the more so because the commercial offer is diverse. The cafés and restaurants cater to a different clientele, and the supermarkets have different price levels. In Idaplatz, the same holds true (apart from the fact that there are no supermarkets), but in Hallwylplatz, the offer is less diverse.

In Hallwylplatz, however, there is the additional furniture (Section 4.4) that highlights that affordances matter in a number of ways. They can be seen as intentionally shaped affordances that are created by the users of the squares (Section 6.6.4) and as such point to a demand for uses that is not met by the initial design of the square. The chairs and tables, for example, increase the number of seating options considerably and allow for flexible and more sociable settings than the fixed benches alone. They also allow positioning oneself in the desired distance to others, an important asset considering that distance matters (see the following section). On the other hand, they contribute to an atmosphere that makes the square feel like the private front yard of some people. Through this, the additional furniture changes – at least in the perception of some users – the set of social norms guiding behaviour in public based on which we decide whether conduct is appropriate or not. Those who cannot or do not want to behave according to this set of norms, may feel out of place. The furniture is thus caught between territorialisation that may be so strong as to be exclusionary for some people, and personalization that contributes to a sense of belonging to the neighbourhood and being in-place.

In terms of responding to the fourth research question regarding the role of public space design in shaping diversity in public squares, these findings suggest that the role of designing public space, i.e. the creation of affordances, is crucial to the use and the user diversity that ensues. Encouraging public life and encounters across differences can be encouraged by

providing affordances for a wide range of optional activities, the possibility of appropriation and personalization, and by discouraging territorialisation. The insights gained in this thesis support the idea that there needs to be a balance between open and more closed programming in terms of design, but also with regard to the management and the provision of events and activities (Aelbrecht et al., 2021; Daly, 2020; A. Smith et al., 2023).

9.1.5. Distance Matters

After having discussed the results of this thesis in relation to the four research questions, I now turn to the transversal theme of distance. It emerged in all the publications of this thesis in different forms, either as physical distance between two or more people using the public square, as social distance felt between oneself and other square users, or as the distance between the square and one's home or place of work that affects people's relationship to the square.

The analysis of the relationships between individual factors and the likelihood to carry out optional activities in the first article (Chapter 5) has shown that knowing familiar strangers is positively related to the likelihood of carrying out optional activities in the square. This implies that people who are rooted in their neighbourhood and spend more time in public space and thus recognize familiar strangers are more likely to also extend their co-presence beyond necessary activities (or, with inverted causality: with an extended co-presence, they are more likely become familiar with strangers), concurring with research that shows the importance of familiar strangers and invisible ties in neighbourhoods (Blokland et al., 2022; Felder, 2020b). Being familiar with someone's face might reduce the felt social distance between oneself and the other. With regard to geographies of encounters, it can also be argued that recognizing familiar faces in public spaces reduces the unpredictability of encounters between strangers (Wilson, 2017) to some degree. People might therefore be more at ease, and consequently feel more inclined to carry out optional activities.

On the other hand, the same analysis has shown that living in the same neighbourhood in which the square is situated – i.e. living a short distance away from the square – is associated with a reduced likelihood of engaging in optional activities in the square. That, as well as the fact that being (self-)employed also has the effect of reducing this likelihood point to the importance of time in-between for the use of this type of public space. Time in-between, i.e. the time 'during which people are on their way to live the rest of their lives' (Blokland & Nast, 2014, p. 1143) supposedly is time that has not been filled completely with a purpose and thus might be conducive to spontaneous activities like sitting on a bench for a couple of minutes. It might be a potential explanation for both the effects of (self-)employment and of living close to the square. People in employment might have more time in-between (which, importantly, is not the same

as free time), and if time in-between occurs close to people's home, they might tend to spend it at home instead of in the square. Time in-between is also related to the in-betweenness characteristic of fourth places⁶⁹ and conducive to encounters between strangers (Aelbrecht, 2016). Further research could unpack the relationships around time in-between in more detail.

Distance also matters when considering how people perceive and experience diversity, and how they respond to the diversity of the other square users they are faced with (third research question, see above). Most people take the diversity they find in the squares as is, and only change their behaviour in some cases. The responses *adjusting habits*, *managing rhythm* and *managing spatial distance* are more prevalent among people who live in close proximity to the square. Here, distance matters. Since what is going on in the square affects their immediate residential setting, the stakes are higher, and at the same time the exposure is high because it is difficult to escape this setting, making it more likely that people react in intolerant ways to people or certain behaviours (Bannister & Kearns, 2013). Distance also matters in another regard: all of the responses identified in Chapter 8 are ultimately geared at reducing, keeping or establishing a distance: either by adapting one's rhythm and thus creating temporal distance between one's own use of the square and that of others, or physically, by staying away, moving away or going closer (for this purpose, movable chairs are obviously ideal).

9.2. Theoretical and Methodological Contributions

Besides the substantial findings presented in the previous section, this thesis also contributes to research on diversity in public space theoretically and methodologically in three main aspects. The first contribution lies in the mixed-methods approach and the specific methods used (Section 9.2.1). They contribute to public space research by presenting a combination of unique data that is strenuous to collect but offers original possibilities for analysis. Secondly, this thesis contributes to a critical and differentiated understanding of diversity in public space. Empirically, this was done by also attending to differences other than cultural. On a theoretical level, it helps unpacking discourses on diversity, raising questions about which groups are targeted in diversity discourses (and who is not included in this diversity), as well as what diversity serves for (Section 9.2.2). A third contribution is the adaptation of the concept of affordances to public space, including the typology of affordances as a useful tool for promoting liveable, inclusive public space (Section 9.2.3).

⁶⁹ Fourth places denote places that are characterized by in-betweenness, either on a spatial level (thresholds, edges), temporally (events, or human congestion), or between different modes of management. Fourth places are shown to be conducive to social interactions among strangers (Aelbrecht, 2016).

9.2.1. Going Beyond Observations: A Mixed-methods Approach to Diversity in Public Space

The methodological approach of this thesis was mixed-methods (see Section 3.1). The mixture of quantitative and qualitative methods, and the fact that several different quantitative methods were used to study the public squares contributed considerably to the reliability and validity of the results.

In the quantitative part (Part II), different methods were used to examine the extent of the users' diversity and get a better understanding of how the squares are used. One of the major challenges of this research was the fact that the 'true' population of square users is unknown. It is therefore impossible to calculate margins of error for sample data such as the data obtained through the intercept survey. This would, however, be an important step in the analysis of the data and in particular in the comparison with the data on neighbourhood residents done in Chapter 7. The methodological triangulation of screening, behavioural mapping, the intercept survey and the data on refusals⁷⁰ proved to be invaluable in this regard because it would have enabled me to spot any strong methodological biases in one of the methods, had there been any.

The intercept survey provided the empirical core of this thesis. It allowed analysing diversity on different geographical scales, i.e. on the neighbourhood level and in the specific locale of the squares, a key element for a better understanding of urban segregation that is not simply a function of residential sorting processes (Piekut et al., 2019; Wissink et al., 2016). The intercept survey data also allows to discern the effect of individual variables and environmental factors on the use of public space, as demonstrated in the first article (Chapter 5).

Another benefit of the intercept survey is that it produced data that contains information that goes beyond what could be obtained through observations. Research that relies on quantitative observational data is usually restricted to the variables of apparent gender, age, and ethnicity (Bühler et al., 2010; Ganji & Rishbeth, 2020; Reichl, 2016). However, in the Swiss context that is characterized by a long history of migration, especially from neighbouring countries (Piguet, 2013), differences in ethnicity and nationality are not necessarily discernible by observation. Also, there are other dimensions of diversity relevant to the use of public space that are not visible: level of income, level of education, people's main language. These variables can only be collected by asking people. If the survey is to be carefully executed, this is a time-consuming method and therefore used only rarely (or with a small sample size only; Paré & Mounier, 2021).

⁷⁰ Data on refusals, i.e. people who were asked to participate but declined, was collected via a tally sheet where apparent age group and gender was noted.

The innovative sequential mixed-methods design of the research allowed then to go beyond quantitative findings on diversity in the squares. The analysis of the semi-structured interviews with people who live or work in proximity of the squares contributed to a better understanding of how people live with diversity in the squares, an important research gap that so far was only addressed in this way in the context of neighbourhoods, not public space (Nielsen & Winther, 2020), and for Switzerland, studies on these issues lack completely. It shed light on how affordances may cause feelings of exclusion and thus have an influence on the composition of square users (see Chapter 6), and how people respond to being face-to-face with strangers (see Chapter 8).

9.2.2. Having a Close Look: What Does Diversity Mean?

The finding that there is a diversity gap in several dimensions has two important theoretical implications (and is also relevant for policy, see Section 9.4).

As we have seen in the theory chapter, diversity is fundamentally ambivalent (Lees, 2003; Nielsen & Winther, 2020; Piñeiro et al., 2023; Wilson, 2017). Encounters across difference can create micro-connections regardless of these differences, spruce up everyday life and bring excitement, but they can also generate feelings of anxiety (Peterson, 2023; van Melik & Pijpers, 2017). Policies on socially mixed neighbourhoods aimed at promoting social cohesion and better opportunities for lower-income groups and ethnic minorities are often explicitly or implicitly based on the premise that these neighbourhoods provide more opportunities for such encounters across differences (Bricocoli & Cucca, 2016; DeFilippis & Fraser, 2010). I have shown that the fact that social mix in terms of residence does not translate one-to-one to public space. It can therefore be the point of departure for further reflections on what diversity means. The squares studied here are a specific type of public space and diversity gaps found in other types of social infrastructure may be different. Nevertheless, I consider the diversity gap found in the squares to be a conservative estimate (see Section 1.1). Even if we contend that diversity does not need to be representative of neighbourhood diversity, we need to ask what purposes diversity is employed for in housing policy. If they depend on contact in physical public space, there should be further reflection on how to reach these goals more directly, i.e. through promoting encounters in public space in addition to residential diversity.

In the same vein, this research also contributes to literature on diversity in public space by showing that there is a need to further theorize diversity. The diversity gap, the absence of those targeted by social mix policies – lower income groups, ethnic minorities (Hyra, 2015) – and above all the absence of people with higher incomes push us to think about how much diversity of what is meant. These reflections should also touch on the question of who is *not* included in

discourses and collective imaginaries of diversity in public space. Van Eck et al. (2020, pp. 3310–3311) have pointed out for the case of a retail area that efforts to promote diversity may serve ‘a certain “therapeutic”, aestheticized notion of diversity that fits the political goal to secure socio-economic development and security in a super-diverse context’. However, being included in diversity discourses does not necessarily lead to more equity and more actual inclusion (in the sense of participation; Ahmed, 2007; Vertovec, 2012), so reflections should also be extended in this direction (see Section 9.4 for policy implications).

Looking at the other end of the income scale, the absence of wealthier population groups may be more voluntary than that of lower income groups or ethnic minorities, but their presence in public space is important because public space is where ‘people at least partially come to understand who and what constitutes “the public”’ (DeFilippis & Fraser, 2010, p. 143). The absence of people at the top and bottom ends of the income scale may contribute to issues of social inequality being overlooked simply because they are less evident in everyday life.

9.2.3. Considering Affordances: The Role of Design and Atmospheres

An important theoretical contribution of this thesis is the adaptation of Davis’s (2020) framework for the concept of affordance to public space in the second article (Chapter 6).

By showing what the conditions of affordance mean in relation to affordances in public space, and that mechanism of affordance can be thought of as a continuum, ranging from negatively affording (i.e. repelling) to positively affording (i.e. inviting) certain actions, we have shown that affordances are a useful tool in planning, designing, and evaluating public space (see also Daly, 2020; Jensen, 2023; Lanng & Jensen, 2022; Mottaghi et al., 2020; Popovski & Young, 2023, Stevens et al., 2024). They are particularly well suited as an approach to explore diversity in public space because they attend to differences in what the environment offers to whom. The fact that environments are more or less appealing to different people is connected to the diversity of users (via the idea of robustness, see Section 2.3.2).

The typology of affordances developed in the article further theorizes affordances in public space by drawing attention to the role of designers and users in shaping affordances. This contributes to a better understanding of diversity in public space because it encourages us to think about whom and what type of activities the planners and designers of a public space had in mind when planning the square. It also sheds light on the effect of affordances that are brought about by users. These affordances can either be offered by additional physical artefacts or modifications to the environment, or atmospheric affordances created by the relational arrangement of living beings and social goods and their external effectuality (Löw, 2016). By

providing a set of questions to ask when analysing or planning affordances in public space, we also contribute practically to the field of affordances in research and practice.

9.3. Limitations and Further Research

This project and its research design are empirically limited by the fact that (apart from the interview survey that was supported by student assistants), the research was carried out by a single researcher and therefore had limited resources at hand. The following limitations outlines how some aspects in the topic of diversity in public space may be masked by the research design and the methodology I chose. They also point to directions for further research.

9.3.1. Improving Research Design and Methodology

Despite extensive field work, there are potentially relevant aspects of diversity in public space use which were not covered. The quantitative fieldwork in Part II (screening, behavioural mapping, unstructured observations, intercept survey) was carried out during daytime only. In the evening and at night, the dynamics of public space use could be very different, notably because perceived and actual safety may be affected, in particular for women (Brands et al., 2015; Kern, 2020; Valentine, 1989). The fieldwork only covered summer months, seasonal variation could therefore not be studied. Also, the analysis of the daily rhythm of diversity in the squares was only possible with limitations because the samples were too small if broken down by time of day in combination with other variables. Future research could put more emphasis on how diversity changes throughout the day, and explore, e.g. if territorialisation is easier in the dark.

The results of this research may also have a bias due to my own positionality and the methodology. As a white, German-speaking woman, doing fieldwork implied a social distance to many (potential) participants which might have affected sampling for the intercept survey and the semi-structured interviews in Part III. The intercept survey data might therefore be biased. The purposive sampling strategy for the semi-structured interviews somewhat mitigated this effect. Nevertheless, only some non-users, i.e. people who dislike the squares and hardly ever use them, could be recruited. This may be related to my position as a researcher, and means that non-users had less opportunities to speak, which should be borne in mind when interpreting the results. Also, those who did participate might have been not fully open in the interview. A more diverse team of researchers, and in-depth interviews with specific groups could help mitigate positionality and social desirability effects.

Another limitation is linked to 'social markedness' (Brekhus, 1998). Brekhus argues that there is a tendency in research (and in everyday life, too) to 'mark' one side of a social contrast

or certain categories and pay disproportionate attention to it, perpetuating this 'markedness' in the effort of counteracting it. Even though in the fourth article (Chapter 8), I adopted an open, constructivist perspective of diversity, i.e. letting people state for themselves which dimensions of diversity are relevant for them and how they want to name them, the quantitative analysis relies on sorting people into different categories – either via observing characteristics which are visible from outside or by asking them directly and coding their answers into different categories. Statistics can be an act of othering (Blokland & Vief, 2021), i.e. the drawing of boundaries between 'we' and 'them', as e.g. in opposing 'German-speaking' to 'non-German speaking'. In this sense, statistics may contribute to stereotyping by marking certain sides of social contrasts. Qualitative approaches to diversity in public space could explore processes of categorization and how they are linked to inclusion and exclusion in public space in more depth (Großmann et al., 2019; Zuijderwijk & Burgers, 2015).

With regard to the dimensions and categories used in the intercept survey, it could be of further interest to study the dimensions of diversity related to horizontal stratification of society such as lifestyle and life course stage. These variables were not taken into consideration in the questionnaire due to the limited time available per participant. It would be insightful to analyse how the life course impacts public space use beyond simple dichotomies such as children/no children or retired/not retired. Similarly, studying the influence of different sets of values and preferences for certain activities on public space use would contribute to a better understanding of diversity in public space. Both could also provide us with more knowledge about the reasons why certain groups are overrepresented or underrepresented in the squares studied here. From theory we know that not only formal and informal processes of exclusion, but also self-exclusion based on habitus preferences may be at work (Israel & Frenkel, 2018; Löw, 2016). It would be of particular interest to see how dimensions of vertical and horizontal differentiation interact (van Eijck, 2011), because as I have shown in the discussion of the production of space (Section 2.1), participation in producing space depends on wealth, knowledge, rank, and association (Löw, 2016) and thus requires different forms of capital (economic, cultural and social).

In view of the third research question, how is diversity in public squares perceived and experienced, the semi-structured interviews used here can only give a limited account of how people actually behave in public space and react to encountering others. Further research could explore the potential of phenomenological approaches that are more attuned to physical distance management and body language (Aelbrecht, 2019a; Mehta, 2020; Seamon, 1979) in studying micro-responses to diversity such as the (re-)positioning of bodies, averting the eye, or non-verbal comments on others.

9.3.2. Extending the Scope of Research

Empirically, this research is limited to the three cases, and to the specific type of public space they represent. Studying other types of public space, and other types of social infrastructure (that do not necessarily have to be public) may give further insight into how diversity on the neighbourhood level plays out in the streets or in other institutions of everyday life (Latham & Layton, 2022; Peterson, 2023) and what elements foster encounters across differences in such places.

It can be argued that a ‘place-based approach’ such as the one used here captures people’s experience of diversity no more adequately than an approach based on the experience of diversity in a neighbourhood (Piekut et al., 2019; van Melik & Spierings, 2020). One way to carry out research that is less centred on one or a couple of specific places would be to study one neighbourhood and consider all open public spaces within it, i.e. parks, squares, streets, public transport stops, etc., and relations between these spaces. A more ‘process-oriented’ approach could be of great help in understanding how encounters with diversity in public space are lived as it has been shown for the middle classes (and in all likelihood, this holds true for other groups as well) ‘how they use places “à la carte” according to their habits, their lifestyle and also, how relationships with diversity are mediated through movement through the city, the gravitation towards some places and the turning away from others’ (Bacqué et al., 2015, p. 132; van Melik & Spierings, 2020).

Instead of focussing on the square users as in this research, addressing the neighbourhood residents themselves could also be a fruitful area for further research. A survey targeted at residents within a catchment area of a square might explore what aspects of the distance to the square are responsible for it playing an important role in how the square is used (see the main finding ‘distance matters’, Section 9.1.5). Better data on the residents of a neighbourhood could also be useful in determining the role of the MAUP (modifiable area unit problem, Madelin et al., 2009). If ‘neighbourhood’ had been defined differently, the results of this study would perhaps look different, as it has been shown that self-defined neighbourhoods tend to be less segregated than those defined in official statistics (Pinchak et al., 2020). Moreover, such a neighbourhood-based approach could shed light on how neighbourhood change (e.g. gentrification) affects public space use and the experience of diversity in public space.

Lastly, this thesis lays the foundation for further research on diversity and diversity gaps in public space. The results presented here could be compared with public squares (or other types of public space) in other cities, for example in small or medium-sized cities, in cities of different language regions in Switzerland, or in an international comparison with other, larger cities.

9.3.3. Unpacking Cultural Differences in Public Space Use

The results of this thesis are likely to be at least partly culture-specific and relating to the context of Zurich and the chosen squares. The public order depends on a set of social norms (Goffman, 1963/1969, see also Section 2.4.1). Even though public space use in other European countries, and to a large extent also in the US, seems to be shaped by similar norms and habits on how these spaces are used (as opposed to, e.g., the street trading that is much more common in the Global South; Bodnar, 2015) and how much civility to show to strangers, the norms and habits found in this study may be particular to Swiss culture and to the context of Zurich. Moreover, it should be kept in mind that this issue might be accentuated by the diversity gap: if most square users belong to a specific group (mainstream society in Zurich: middle classes, highly educated, predominantly Swiss people, see Chapter 7 and Section 9.1.2), social norms of civility may be strong and corresponding between most users, and therefore there might be less reason for conflict.

Internationally, there is a large body of research that sheds light on cultural differences in the frequency, duration, preferred activities, and the type of groups (alone/friends/family, large/small groups) of public space visits, as well as the experiences of different cultural groups when being in public space (e.g. Barker et al., 2019; Daly, 2020; Ganji & Rishbeth, 2020; Harris et al., 2020; Huang & Napawan, 2021; Lesan & Gjerde, 2020; Spierings et al., 2016; Tuttle, 2020). However, to my knowledge, there are no studies that analyse cultural differences in public space use in Switzerland. While my findings on the diversity gap suggest that cultural differences in public space use exist, I did not specifically study variations in attitudes and practices between people of different ethnicities and cultural backgrounds.

In order to better understand why some groups use the public squares more than others, comparative research would need to disentangle the effect of culture, context, and the predominant user groups.

9.3.4. Creating Positive Affordances for Encounters Across Differences

As we have shown in the second article (Chapter 6), affordances can be two-faced, i.e. be inviting for some and have a repelling effect in the eyes of others. Further research, possibly even action research with an interdisciplinary team comprising practitioners and members of the neighbourhood community, could explore how positive affordances that are appealing to as many people as possible can be created. This could, on the one hand, regard the role of designers and possible approaches to robust environments that offer a broad array of activities to a wide range of people. On the other hand, it could also focus on how design can give users

opportunities to appropriate and personalize a space while limiting the potential for strong territorialisation that leads to exclusion.

In this regard, it would also be helpful if public spaces that have been specifically designed with the purpose of being ‘places for everyone’ and fostering social cohesion (as for example the squares studied by Aelbrecht et al., 2021) were subjected to post-occupancy studies. Research of this type could evaluate the outcome of such programmed design and contribute to a better understanding of what elements foster encounters between strangers across different types of differences (Aelbrecht, 2016; Daly, 2020).

9.4. Policy Implications

The findings of this thesis are relevant to public policy mainly in two domains, housing and public space. While the connection to public space is perhaps more obvious, in the context of Zurich and its policies, the issue of diversity is only discussed on the level of residential patterns (see Section 4.2).

Policies of socially mixed housing have their rightful place (Galster & Friedrichs, 2015). However, the finding that there is a diversity gap between neighbourhood diversity and square users’ diversity suggests that residential diversity does not translate one-to-one to diversity in public space. Therefore, policymakers should a) be more specific in stating the objectives that they want to achieve through diversity and b) have realistic expectations about the effect of socially mixed housing on the capacity for encounters across differences in public space. The data analysed here suggests that residential mix is not completely irrelevant, since despite the diversity gap, I also found a neighbourhood effect, i.e. the square’s diversity tends to be higher in cases where the neighbourhood diversity is high.

Just like research, also policies (in housing and in public space) would benefit from being more explicit on which groups diversity policies are tailored to, and to which they are not. This also implies thinking about the top end of the income scale, not only about minorities and groups that are less affluent. If our premise is that in the physical public realm, people should get a sense of whom society is composed of, then the under-representation of higher income groups in the squares suggests that in creating places (squares or any other type of social infrastructure) where people from all walks of life come at least within sight distance of each other, we also need to pay attention to more affluent groups.

In terms of public space, issues of diversity and encounters across differences would need to be put on the agenda of public space planning to ensure that public space is valued as a site that shapes and is shaped by everyday life and has the capacity to be a social infrastructure that

supports sociality. In practice, this could feed into design processes that take into account the views of minorities, marginalized groups, and other groups who use the space in question rarely or not at all. These people, dubbed ‘non-users’, could also be involved in co-designing the space to create spaces that afford uses which are accommodating their lifestyles, tastes, cultural preferences, etc. (Sendra, 2023), to ensure that diversity goes beyond ‘happy talk’ (Bell & Hartmann, 2007) and to give everyone an equal chance to participate. As I experienced in this research, it can be difficult to access these communities, so there is all the more reason to put effort into engaging with them, and generate awareness and competence among policymakers and practitioners on how to account for cultural differences and other sources of different patterns of public space use if we do not want to perpetuate existing patterns of feeling out of place by only asking those about a space who already use it (Aelbrecht & Stevens, 2023).

Establishing the topic in public space policies could also contribute to design briefs and practices that are more attuned to the issue of encouraging encounters across differences. As previous research has shown (Daly, 2020; Ganji & Rishbeth, 2020), it is possible to come up with design elements that allow to be together and share space with each other – even if it is at a distance. If it is not formulated as an objective, however, it is likely that the opportunity to design for diversity in encounters in public space is missed.

There are other approaches that could complement design-related efforts to promote diversity in public space. A programmatic approach would be one of these measures: organizing events and activities for the local community can bring people together. They could be tailored to groups that are normally underrepresented in public space, or geared towards creating opportunities for intergenerational or intercultural contact, for example. Such a programme not only provides a reason to visit a space and share an experience. Since events are also ‘temporally in-between’, carving out a piece of everyday life, they also make people more inclined to interact with others (Aelbrecht, 2016).

However, it is important to bear in mind that not everyone wants to engage with diversity (Blokland & Eijk, 2010; Nielsen & Winther, 2020). Nevertheless, there are ways to foster fleeting encounters across differences that do not need any kind of engagement, but still offer a glimpse of the others society is composed of. Policies to support small businesses with public ground floor uses that make for active, varied, and robust edges of public space (Bentley et al., 1985) can help inviting people into public space. Special attention could be paid to those businesses that cater to marginalized or underrepresented communities. This could mean supporting a café run by and for a local ethnic minority, but also ensuring there is a variety of shops with different price levels. Shopping for food may have a particularly important role in this, since it is a

necessary activity for most people and therefore has great potential for bringing different kinds of people to the same space, even if it is to different shops.

Mobility policies could also contribute to inviting everyone to public space and consequently to diversity in public space, be it on the level of mere co-presence or more focussed interactions. Walking and cycling, for example, are forms of mobility that allow to see others at a human scale and a human speed. When moving at higher speeds, it is only possible to connect with those who are in same vehicle (and who, presumably, are similar in many respects). Public transport, on the one hand, also prevents seeing and interacting with people in the street, but on the other hand, it offers plenty of opportunities for encounter *within* the vehicle. Even though exposure to diversity when walking, cycling or on public transport does not necessarily turn into social cohesion or a sense of connection, moving in cars certainly prevents exposure to others (te Brömmelstroet et al., 2017).

Lastly, policies that aim to promote social diversity in public space could also envisage an evaluation of their effectiveness. Post-occupancy studies with a careful analysis of the links between the composition of the neighbourhood population and public space users, similar to the approach of this thesis, could provide valuable insights on how design, mixed ground floor uses, events and activities, mobilities with higher exposure to diversity, as well as the interactions between these elements affect co-presence and interactions across differences in public space.

Research on diversity in the public realm – be it public space or social infrastructure that is perhaps not literally public, but has a public character – can shed lights on how we can be together – peacefully – in dense cities, despite the fact that there are many differences that might potentially lead to conflict. With this thesis, I attempted to show the role of urban planning, public space design, and neighbourhood diversity has in this. I believe this work contributes empirically, theoretically, and methodologically to a continuing debate both in academia and in practice.

10. References

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11. Appendices

11.1. Appendix A: Interview Guide, Part I

For everyone (3 questions, ~ 20min)

Question	Why?
How would you describe the square to a person who does not know it?	Get a description of square, as well as references to the atmosphere, the image of the square. Maybe even references as to “what one does” in this square or who usually uses it/hangs out there. If not, use backup questions.
To go further: → <i>What</i> is the square made for? (How is the square used? Are there any conflicts due to uses? What does a typical day on xxx-Platz look like? What uses take place where? Are there dominant or very frequent uses? What needs are there in the neighbourhood that aren't/can't be covered by the square? → <i>Who</i> does the square seem to be made for? (What do you think, who uses the square? Who feels particularly welcome or comfortable? What groups use the square perhaps less frequently, and for what reasons?	
What role does the square play for the neighbourhood population?	Get an account of how people see the square in perspective to the whole neighbourhood. Lets people tell what functions/uses they (fore)see for the square.
To go further: → What are the strengths of the square? In what ways could the square be improved? What functions does the square have? In what ways does it actually fulfill these functions?	
Could you describe how you were involved in the redevelopment?	Lets them explain their own and their organization's role in the development/maintenance of the square. Creates a bridge to the next set of questions. → Make sure to adapt question to their organization/position etc.

For landscape architects (2 questions, ~ 20min)

Question	Why?
What considerations played a role in the design of the square?	Get an account of how the square was conceived, what kind of image was aimed at, which elements were worth preserving, etc. Maybe even references to uses and users. If not, use backup questions.
To go further: → What did you want to achieve with your design [uses/users]? What did you want to avoid? → What target groups did you design the square for?	
Can you explain how your design is connected to the ideas you referred to?	Get an idea of how they link the built material structure with lived space.

To go further:
 → Ask for specific elements of the design.

For city officials (1-2 questions, depending on the number of squares they are involved in, ~ 20min)

Question	Why?
Hallwylplatz (no recent redevelopment)	
What projects are planned in Hallwylplatz, or could pop up in the next years?	Get an account of what may be planned in the future (redesign projects/traffic/social projects/...) and thus also what might be missing at present, what problems/needs are seen by the city or with what requests the city is approached.
To go further: → What are ideas or visions for Hallwylplatz?	
Idaplatz/Lindenplatz (recent redevelopment)	
What considerations played a role in the design of the square?	Get an account of how the square was conceived, what kind of image was aimed at, which elements were also worth preserving. Maybe even references to uses and users. If not, use backup questions.
To go further: → Which concerns, and the concerns of which groups, were taken into account in the redevelopment? Which people (groups) is the square aimed at? What specifications were given to the designers involved?	

For representatives of neighbourhood association etc. (3 questions, ~ 20min)

Question	Why?
Idaplatz/Lindenplatz (recent redevelopment)	
What ideas or requests did you bring to the participation process?	Get an account of the redesign process and what requests the local residents have/had. What works well/less well in their eyes.
Hallwylplatz (no recent redevelopment)	
What has already been achieved at Hallwylplatz?	Get an account of what requests the local residents have/had. What works well/less well in their eyes.
To go further: → What concerns do you still hold? How could Hallwylplatz be improved?	
How would you describe the residents living around the square?	Get an idea of the image of the local residents, as it is viewed by the neighbourhood association (→ the identity of the neighbourhood and of themselves, as constructed by the associations' representative)

To go further: → Who likes to live here? Who might not consider moving here?	
Who uses the square?	
Get an idea of how the square relates to the neighbourhood and to the local residents. Who/what groups use the square and probably also in what ways they use it.	
To go further: → How do these people [specific groups/the neighbourhood residents/...] use the square?	

11.2. Appendix B: Screening, Part II: Tally Sheet + Code Book

Screening

Name:	Datum:	<input type="checkbox"/> Lindenplatz	<input type="checkbox"/> Hallwayplatz	<input type="checkbox"/> Idaplatz
Temperatur:				
Wetter:				

- Alter: **Baby** 0-3, **Kind** 3-6, **SchülerIn** 7-15, **JugendlicheR** 16-24, **Erwachsene (I)** 25-65, **Pensioniert** 66-79, **Ältere** 80=+
- Gruppengröße: 1 Person ohne Code, 2-4: Gruppengröße, 5: 5 Personen oder mehr

		Weiblich		Männlich			
Zeit	Gehen	Aufenthalt		Gehen	Aufenthalt		Sitzend
		Velo/Trotti	Stehend		Velo/Trotti	Stehend	

Screening Code Book

Variable name	Variable description	Measurement scale	Value	Value description
square	Square in which the person was observed	Nominal	Lindenplatz	
			Hallwylplatz	
			Idaplatz	
wave	Wave of fieldwork of the observation	Ordinal	1	Wave 1, before summer holidays
			2	Wave 2, after summer holidays
date	Date and time of the observation (full hours only)	Interval	%Y-%m-%d %H:%M:%S	
hour	Time of the observation (full hours only)	Interval	%H:%M:%S	
wday	Day of the week	Ordinal	3	Tuesday
			5	Thursday
			7	Saturday
group_size	Size of the group the individual was in (1 = alone)	Interval		
age_group_level	Apparent age group, numeric	Ordinal	1	age 0-3
			2	age 3-6
			3	age 7-15
			4	age 16-24
			5	age 25-65
			6	age 66-79
			7	age 80+
age_group	Apparent age group, character as on tally sheet	Ordinal	B	age 0-3
			K	age 3-6
			S	age 7-15
			J	age 16-24
			E	age 25-65

Variable name	Variable description	Measurement scale	Value	Value description
			P	age 66-79
			A	age 80+
gender_level	Apparent gender, numeric	Nominal	1	female
			2	male
gender	Apparent gender	Nominal	female	
			male	
posture_level	Posture or type of movement of the observed person, numeric	Nominal	1	walking
			2	bike
			3	standing
			4	sitting
posture	Posture or type of movement of the observed person	Nominal	walking	
			bike	
			standing	
			sitting	

11.3. Appendix C: Behavioural Mapping, Part II: Screenshots + Code Book



Objekt zu pts (offline) hinzufügen

departure
(Kein Datum) □

age_gender
□

activity
 Elektro_int □
 Konversation □
 Lesen □
 Spielen □
 E+T selber □

posture
Bank/Stuhl sitzen □

group
1 □

attribute
 Kinderwagen □
 Velo □
 Trotti, Rollbrett □
 Gehhilfe □
 Hund □

arrival2
28.07.2021 - 08:12 □

notes
□

same_sex
□

other_sex
□

Figure 65: QField app screenshots. Upper image: interface of the app used for behavioural mapping. Dots stand for people engaged in stationary activities. Left image: input screen for attributes of each person recorded.

Behavioural Mapping Code Book

Variable name	Variable description	Measurement scale	Value	Value description
square	Square in which the person was observed	Nominal	Lindenplatz	
			Hallwylplatz	
			Idaplatz	
wave	Wave of fieldwork of the observation	Ordinal	1	Wave 1, before summer holidays
			2	Wave 2, after summer holidays
location	Location of the observed person	Spatial geometry, points	Format: WKT	
date	Date of the observation	Interval	%Y-%m-%d	
wday	Day of the week	Ordinal	2	Monday
			3	Tuesday
			4	Wednesday
			5	Thursday
			6	Friday
			timeslot	Timeslot of the mapping session during which the person was observed
16-18	4 p.m. – 6 p.m.			
arrival	Arrival time of the observed person	Interval	%H:%M:%S	
departure	Departure time of the observed person	Interval	%H:%M:%S	
group_size	Size of the group the individual was in (1 = alone)	Interval		
age_group_level	Apparent age group, numeric	Ordinal	1	age 0-3
			2	age 3-6
			3	age 7-15
			4	age 16-24
			5	age 25-65
			6	age 66-79
			7	age 80+

Variable name	Variable description	Measurement scale	Value	Value description
age_group	Apparent age group, character as on tally sheet	Ordinal	B	age 0-3
			K	age 3-6
			S	age 7-15
			J	age 16-24
			E	age 25-65
			P	age 66-79
			A	age 80+
gender_level	Apparent gender, numeric	Nominal	1	female
			2	male
gender	Apparent gender	Nominal	female	
			male	
posture	Posture or type of movement of the observed person	Nominal	sit_bench	sitting on a bench
			sit_add	sitting on additional furniture (Hallwylplatz)
			sit_secondary	sitting on secondary seating (e.g. edges)
			sit_byo	sitting on self brought furniture
			standing lying	
pram	Dummy variable for attributes: having a pram with you	Nominal	0/1	0 = no, 1 = yes
bike	Dummy variable for attributes: having a bike with you	Nominal	0/1	0 = no, 1 = yes
scooter	Dummy variable for attributes: having a scooter or a skateboard with you	Nominal	0/1	0 = no, 1 = yes
walkingaid	Dummy variable for attributes: having a walking aid with you	Nominal	0/1	0 = no, 1 = yes
dog	Dummy variable for attributes: having a dog with you	Nominal	0/1	0 = no, 1 = yes

Variable name	Variable description	Measurement scale	Value	Value description
grill	Dummy variable for attributes: having a grill with you	Nominal	0/1	0 = no, 1 = yes
baby	Dummy variable for attributes: having a baby with you	Nominal	0/1	0 = no, 1 = yes
electro_int	Dummy variable for activity: being engaged with electronic devices (introverted, i.e. listening, conversing, reading, writing, playing, etc.)	Nominal	0/1	0 = no, 1 = yes
conversation	Dummy variable for activity: being engaged in conversation with others	Nominal	0/1	0 = no, 1 = yes
read	Dummy variable for activity: reading	Nominal	0/1	0 = no, 1 = yes
play	Dummy variable for activity: playing	Nominal	0/1	0 = no, 1 = yes
eatdrink	Dummy variable for activity: eating or drinking self-brought food/drinks	Nominal	0/1	0 = no, 1 = yes
being	Dummy variable for activity: relaxing, resting with no other apparent activity	Nominal	0/1	0 = no, 1 = yes
work	Dummy variable for activity: working (on a laptop)	Nominal	0/1	0 = no, 1 = yes
beg	Dummy variable for activity: begging	Nominal	0/1	0 = no, 1 = yes
electro_ext	Dummy variable for activity: being engaged with electronic devices (extroverted, i.e. playing audio, photogrpahing, interacting with surroundings, etc.)	Nominal	0/1	0 = no, 1 = yes
recycle	Dummy variable for activity: bringing recycling goods to the recycling station	Nominal	0/1	0 = no, 1 = yes
commercial_buy	Dummy variable for activity: buying food or goods	Nominal	0/1	0 = no, 1 = yes
commercial_sell	Dummy variable for activity: selling food or goods	Nominal	0/1	0 = no, 1 = yes
cultural	Dummy variable for activity: being engaged in a cultural activity (performing, providing, participating, observing)	Nominal	0/1	0 = no, 1 = yes
parking	Dummy variable for activity: parking one's car	Nominal	0/1	0 = no, 1 = yes
physical	Dummy variable for activity: being engaged in phsysical acticities	Nominal	0/1	0 = no, 1 = yes

Variable name	Variable description	Measurement scale	Value	Value description
policing	Dummy variable for activity: policing	Nominal	0/1	0 = no, 1 = yes
smoking	Dummy variable for activity: smoking	Nominal	0/1	0 = no, 1 = yes
maintenance	Dummy variable for activity: doing maintenance work	Nominal	0/1	0 = no, 1 = yes

Derived variables

Variable name	Variable description	Measurement scale	Value	Value description
minspent	Number of minutes the person spent in the square (derived by calculating the difference between arrival and departure)	Interval		

11.4. Appendix D: Intercept Survey, Part II: Questionnaire (English Version) + Code Book

1. What brings you to this square today?	<input type="checkbox"/> Passing through <input type="checkbox"/> Shopping, visiting a shop/... <input type="checkbox"/> Spending time family/friends <input type="checkbox"/> Spending time alone <input type="checkbox"/> Eating, drinking (picnic) <input type="checkbox"/> Eating, drinking (café/restaurant) <input type="checkbox"/> Other: _____	<input type="checkbox"/> Sport <input type="checkbox"/> Walk with pet <input type="checkbox"/> Sightseeing <input type="checkbox"/> Cultural event/performance <input type="checkbox"/> Political event, protest <input type="checkbox"/> Parking	
2. How much time do you plan on spending here today?	<input type="checkbox"/> None (Transit) <input type="checkbox"/> Less than 10 min	<input type="checkbox"/> 10-19 min <input type="checkbox"/> 20-29 min	<input type="checkbox"/> 30 min - <1 h <input type="checkbox"/> 1 h or more
3. What best describes your relationship to this square?	<input type="checkbox"/> Direct neighbour (AnwohnerIn) <input type="checkbox"/> Resident (QuartierbewohnerIn) <input type="checkbox"/> Employee of nearby company <input type="checkbox"/> Other: _____	<input type="checkbox"/> Student of nearby school <input type="checkbox"/> Visit in the neighbourhood <input type="checkbox"/> Tourist	
4. *How did you get here today?	<input type="checkbox"/> Walk <input type="checkbox"/> Bike/ eBike <input type="checkbox"/> Scooter (Trotti)	<input type="checkbox"/> Bus <input type="checkbox"/> Tram <input type="checkbox"/> Train	<input type="checkbox"/> Car (private) <input type="checkbox"/> Taxi <input type="checkbox"/> Other: _____
5. Last section? (umkreisen)			
6. How often do you visit this square on average?	<input type="checkbox"/> (Almost) every day <input type="checkbox"/> Several times a week	<input type="checkbox"/> Several times a month <input type="checkbox"/> Several times a year	<input type="checkbox"/> Never → jump to question 10
7. At what times of the day are you usually here?	<input type="checkbox"/> vor 9 <input type="checkbox"/> 9-12 <input type="checkbox"/> 12-14 <input type="checkbox"/> 14-17 <input type="checkbox"/> 17-19 <input type="checkbox"/> nach 19		
8. Do you usually visit on certain days? On which days? What do you do here on these days?	<input type="checkbox"/> Mo <input type="checkbox"/> Tu <input type="checkbox"/> We <input type="checkbox"/> Thu <input type="checkbox"/> Fr <input type="checkbox"/> Sa <input type="checkbox"/> Su <input type="checkbox"/> various	Occasion 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____	
9. Please take a moment to look at the people here. Do you recognize anyone you weren't planning to meet?	<input type="checkbox"/> No, I don't recognize anyone here right now <input type="checkbox"/> Yes, I recognize a familiar face, but I don't 'know' them <input type="checkbox"/> Yes, I recognize someone I know but didn't plan to meet		
10. Year of birth			
11. ZIP code / postcode			
12. *Including yourself, how many people live in your household?	_____ Adults or children over age 14 _____ children under age 14		
13. Are you currently employed or doing some kind of education programme?	<input type="checkbox"/> Full-time employed <input type="checkbox"/> Part-time employed <input type="checkbox"/> in training (school, studies, apprenticeship) <input type="checkbox"/> Other: _____	<input type="checkbox"/> Looking for a job <input type="checkbox"/> Housewife / househusband <input type="checkbox"/> Retired	
14. What is your main language, that is the language you know best? (the language you think in)	<input type="checkbox"/> Swiss German <input type="checkbox"/> High German <input type="checkbox"/> English <input type="checkbox"/> Italian <input type="checkbox"/> French <input type="checkbox"/> Other: _____	<input type="checkbox"/> Spanisch <input type="checkbox"/> Portuguesee <input type="checkbox"/> Serbo-Croatian <input type="checkbox"/> Albanian	
15. *Were you born in Switzerland?	<input type="checkbox"/> Yes <input type="checkbox"/> No, born in: _____		
16. What is your highest level of education?	<input type="checkbox"/> No completed compulsory education <input type="checkbox"/> Compulsory school <input type="checkbox"/> Vocational training/school, apprenticeship <input type="checkbox"/> High school, (vocational) baccalaureate, other secondary school <input type="checkbox"/> Higher technical and vocational education <input type="checkbox"/> University, ETH, university of applied sciences <input type="checkbox"/> Other: _____		
17. What is the combined monthly income of your household? (brutto = gross)	<input type="checkbox"/> Less than Fr. 3'000.- <input type="checkbox"/> Fr. 3'000.- to 5'999.- <input type="checkbox"/> Fr. 6'000.- to 8'999.- <input type="checkbox"/> Fr. 9'000.- to 11'999.- <input type="checkbox"/> Fr. 12'000.- to 14'999.- <input type="checkbox"/> Fr. 15'000.- or more <input type="checkbox"/> I don't know	(less than Fr. 39'000.- per year) (Fr. 39'000.- to 77'000.- per year) (Fr. 78'000.- to 116'000.- per year) (Fr. 117'000.- to 155'000.- per year) (Fr. 156'000.- to 194'000.- per year) (more than Fr. 195'000.- per year)	
18. Geschlecht	<input type="checkbox"/> weiblich <input type="checkbox"/> männlich <input type="checkbox"/> anderes		
19. Begleitung	<input type="checkbox"/> alleine <input type="checkbox"/> PartnerIn <input type="checkbox"/> _____ Kind(er) <input type="checkbox"/> _____ Freunde/Kollegen) <input type="checkbox"/> _____ weitere		
20. Ort <input type="checkbox"/> Linden <input type="checkbox"/> Hallwyl <input type="checkbox"/> Ida	21. Zeit:	22. Datum:	
23. Interviewer			

Intercept Survey Code Book

Variable name	Variable description	Measurement scale	Value	Value description
foo_lang_qn	Language in which the survey took place	Nominal	de	German
			en	English
			fr	French
			it	Italian
wave	Wave of fieldwork of the observation	Ordinal	1	Wave 1, before summer holidays
			2	Wave 2, after summer holidays
fo1_transit	Dummy variable for current activity: transit	Nominal	0/1	0 = no, 1 = yes
fo1_shop	Dummy variable for current activity: shopping	Nominal	0/1	0 = no, 1 = yes
fo1_time_ff	Dummy variable for current activity: spending time with family/friends	Nominal	0/1	0 = no, 1 = yes
fo1_time_al	Dummy variable for current activity: spending time alone	Nominal	0/1	0 = no, 1 = yes
fo1_eat_pic	Dummy variable for current activity: eating/drinking self-brought food/drinks	Nominal	0/1	0 = no, 1 = yes
fo1_eat_caf	Dummy variable for current activity: eating/drinking in a café/restaurant	Nominal	0/1	0 = no, 1 = yes
fo1_sport	Dummy variable for current activity: sport	Nominal	0/1	0 = no, 1 = yes
fo1_pet	Dummy variable for current activity: walking with a pet	Nominal	0/1	0 = no, 1 = yes
fo1_sight	Dummy variable for current activity: sightseeing	Nominal	0/1	0 = no, 1 = yes
fo1_cultural	Dummy variable for current activity: providing/participating in a cultural activity	Nominal	0/1	0 = no, 1 = yes
fo1_political	Dummy variable for current activity: providing/participating in a political activity	Nominal	0/1	0 = no, 1 = yes
fo1_parking	Dummy variable for current activity: parking one's car	Nominal	0/1	0 = no, 1 = yes
fo1_other	Dummy variable for current activity: any other activities	Nominal	0/1	0 = no, 1 = yes
fo2_time_level	Estimated duration of today's visit	Ordinal	1	none/transit

Variable name	Variable description	Measurement scale	Value	Value description
			2	less 10min
			3	10-19min
			4	20-29min
			5	30-59min
			6	60min or more
fo2_time	Estimated duration of today's visit	Ordinal	none/transit	
			less 10min	
			10-19min	
			20-29min	
			30-59min	
			60min+	
fo3_rel_level	Relationship to the square	Nominal	1	direct neighbour
			2	resident
			3	employed nearby
			4	student nearby
			5	visitor
			6	tourist
			7	other
fo3_rel	Relationship to the square	Nominal	direct neighbour	
			resident	
			employed nearby	
			student nearby	
			visitor	
			tourist	
			other	

Variable name	Variable description	Measurement scale	Value	Value description
fo4_walk	Dummy variable for means of transport used for getting to the square: walking	Nominal	0/1	0 = no, 1 = yes
fo4_bike	Dummy variable for means of transport used for getting to the square: cycling	Nominal	0/1	0 = no, 1 = yes
fo4_scooter	Dummy variable for means of transport used for getting to the square: scooter/skateboard	Nominal	0/1	0 = no, 1 = yes
fo4_bus	Dummy variable for means of transport used for getting to the square: tram	Nominal	0/1	0 = no, 1 = yes
fo4_tram	Dummy variable for means of transport used for getting to the square: tram	Nominal	0/1	0 = no, 1 = yes
fo4_train	Dummy variable for means of transport used for getting to the square: train	Nominal	0/1	0 = no, 1 = yes
fo4_car	Dummy variable for means of transport used for getting to the square: private car	Nominal	0/1	0 = no, 1 = yes
fo4_taxi	Dummy variable for means of transport used for getting to the square: taxi	Nominal	0/1	0 = no, 1 = yes
fo4_other	Dummy variable for means of transport used for getting to the square: other means of transport	Nominal	0/1	0 = no, 1 = yes
fo5_last_trans_level	Mode of transport used for the last stretch to get to the square	Nominal	1	walk
			2	bike
			3	scooter
			4	bus
			5	tram
			6	train
			7	car
			8	taxi
			9	other
fo5_last_trans	Mode of transport used for the last stretch to get to the square	Nominal	walk	
			bike	
			scooter	

Variable name	Variable description	Measurement scale	Value	Value description
			bus	
			tram	
			train	
			car	
			taxi	
			other	
fo6_freq_level	Frequency with which the square is visited (= passing by or staying)	Ordinal	1	(almost) everyday
			2	several times a week
			3	several times a month
			4	several times a year
			5	never
fo6_freq	Frequency with which the square is visited (= passing by or staying)	Ordinal	(almost) everyday	
			several times a week	
			several times a month	
			several times a year	
			never	
fo9_stranger_level	Knowing people in the square (yes, known), or knowing familiar strangers (yes, familiar), or nobody	Ordinal	1	nobody
			2	yes, familiar
			3	yes, known
fo9_stranger	Knowing people in the square (yes, known), or knowing familiar strangers (yes, familiar), or nobody	Ordinal	nobody	
			yes, familiar	
			yes, known	
fio_year	Year of birth	Interval		
f12_adult	Number of adults, i.e. people over age 14, living in the same household (including the interviewer person)	Interval		
f12_kids	Number of children, i.e. people below age 14, living in the same household	Interval		

Variable name	Variable description	Measurement scale	Value	Value description
f13_occ1_level	Main occupation/employment status	Nominal	1	full-time employed (including self-employed)
			2	part-time employed (including self-employed)
			3	in training (school, studies, apprenticeship)
			4	looking for a job
			5	housewife, househusband
			6	retired
			7	other
f13_occ1	Main occupation/employment status	Nominal	full-time	full-time employed (including self-employed)
			part-time	part-time employed (including self-employed)
			edu	in training (school, studies, apprenticeship)
			unemployed	looking for a job
			housewife	housewife, househusband
			retired	retired
			other	other
f14_mainlang1_level	Main language	Nominal	1	Swiss-German
			2	Standard German
			3	English
			4	Italian
			5	French
			6	Spanish
			7	Portuguese
			8	Serbo-Croat
			9	Albanian

Variable name	Variable description	Measurement scale	Value	Value description
			10	other
f14_mainlang1	Main language	Nominal	Swiss-German	
			Standard German	
			English	
			Italian	
			French	
			Spanish	
			Portuguese	
			Serbo-Croat	
			Albanian	
			other	
f15_country_grp_level	Country of birth, grouped into broad categories (except for Switzerland)	Nominal	1	Switzerland
			2	N/W/Central Europe
	(see list of countries in the other sheet of this file, in German)		3	Southern Europe
			4	Eastern Europe
			5	Other
f15_country_grp	Country of birth, grouped into broad categories (except for Switzerland)	Nominal	Switzerland	
			N/W/Central Europe	
	(see list of countries in the other sheet of this file, in German)		Southern Europe	
			Eastern Europe	
			Other	
f16_edu_level	Highest level of education	Ordinal	1	No completed compulsory education
			2	Compulsory school
			3	Vocational training/school, apprenticeship
			4	High school, (vocational) baccalaureate, other secondary school

Variable name	Variable description	Measurement scale	Value	Value description
			5	Higher technical and vocational education
			6	University, ETH, university of applied sciences
			7	other
fi6_edu	Highest level of education	Ordinal	none	No completed compulsory education
			compulsory	Compulsory school
			apprenticeship	Vocational training/school, apprenticeship
			high school	High school, (vocational) baccalaureate, other secondary school
			higher ed	Higher technical and vocational education
			university	University, ETH, university of applied sciences
			other	other
fi7_rev_level	Combined gross monthly income of household	Ordinal	1	<3'000 Fr.
			2	3-6'000 Fr.
			3	6-9'000 Fr.
			4	9-12'000 Fr.
			5	12-15'000 Fr.
			6	>15'000 Fr.
			7	doesn't know
fi7_rev	Combined gross monthly income of household	Ordinal	<3'000	<3'000 Fr.
			3-6'000	3-6'000 Fr.
			6-9'000	6-9'000 Fr.
			9-12'000	9-12'000 Fr.
			12-15'000	12-15'000 Fr.
			>15'000	>15'000 Fr.

Variable name	Variable description	Measurement scale	Value	Value description
			doesn't know	doesn't know
fi8_gender_level	Apparent gender, numeric	Nominal	1	female
			2	male
			3	other
fi8_gender	Apparent gender	Nominal	female	
			male	
			other	
fi9_alone	Dummy variable to indicate whether the interviewed person was alone (2) or in company of other people (1)	Nominal	1	no, accompanied by other people
			2	alone
fi9_partner	Dummy variable to indicate whether the person was accompanied by a partner (no value if not accompanied by partner)	Nominal	1	yes, accompanied by partner
fi9_kids	Dummy variable to indicate whether the person was accompanied by children	Interval		number of children
fi9_friend	Dummy variable to indicate whether the person was accompanied by friends	Interval		number of friends
fi9_other	Dummy variable to indicate whether the person was accompanied by people not identifiable as children, friends, or partners (e.g. elderly parents)	Interval		number of other people
fzo_square	Square in which the person was observed	Nominal	Lindenplatz	
			Hallwylplatz	
			Idaplatz	
datetime	Date and time of the observation (full hours only)	Interval	%Y-%m-%d %H:%M:%S	
wday	Day of the week	Ordinal	3	Tuesday
			5	Thursday
			7	Saturday
timeslot	Timeslot of the mapping session during which the person was observed	Ordinal	8-10	8 a.m. – 10 a.m.
			12-14	12 p.m. – 2 p.m.

Variable name	Variable description	Measurement scale	Value	Value description
			16-18	4 p.m. – 6 p.m.
			14-16	2 p.m. – 4 p.m.
f23_interviewer	ID of the interviewer	Nominal		

Derived variables

Variable name	Variable description	Measurement scale	Value	Value description
age	Age of the surveyed person at the time of data collection, derived from fio_year	Interval		
hh_size	Total number of people in the household (summing up f12_adults and f12_kids)	Interval		
group_size	Total number of people in the group the interviewed person was with (combining variables f19_alone, f19_partner, f19_kids, f19_friend, f19_other)	Interval		
act_tod_no	Combination of the activities: optional and necessary, derived from fo1	Nominal	0 1	Necessary: transit, shopping Optional: being with friends/family, being alone, eating/drinking takeaway or food from home, eating/drinking in a café/restaurant, other
neigh	Dummy variable living in the neighbourhood / living outside the neighbourhood, derived from fo3_rel	Nominal	0 1	Living in the neighbourhood: direct neighbour, resident Not living in the neighbourhood: any other values of fo3_rel
eqrev_oecd_3	Calculate equivalized household income based on OEC modified scale (Hagenaars et al., 1994), based on variables on f17_rev, f12_adults, and f12_kids. Calculate the median of all incomes, then the percentage of the median for each individual's	Ordinal	1 2 3	Low (less than 50 % of the median) Average (50-150 % of the median) High (more than 150 % of the median)

Variable name	Variable description	Measurement scale	Value	Value description
	income, categorize			
edu_3	Highest level of education, aggregated based on fi6_edu	Ordinal	1	Primary: no completed compulsory education or compulsory school
			2	Secondary: vocational training/school, apprenticeship, high school, (vocational) baccalaureate, other secondary school
			3	Tertiary: higher technical and vocational education, university, ETH, university of applied sciences

11.5. Appendix E: Diversity Index: Formula

Shannon-Wiener Index of Diversity (Shannon, 1948)

$$H' = - \sum_{i=1}^n p_i \cdot \ln(p_i),$$

System of notation:

$i = 1, \dots, n$	n different groups (e.g. for nationality: Swiss, North- and West-European, South-European, other)
p_i	Relative frequency of group i in the whole population

11.6. Appendix F: Interview Guide, Part III

Broad Topic	Interview Question
Intro- duction	Introduction project / Hannah Introduction interviewee («Could you tell me a little bit about yourself?»)
Action / use	Where do you live?
	Since when do you live there?
	What does Idaplatz mean to you?
	How do you use the square? How often? For which activities? When? With whom?
	With whom would you not come here?
	Do you feel comfortable? When/why not?
	What do you like here? What do you not like, what is missing? (Atmosphäre! Dingfamilien! ganz konkret nach Dingen fragen! Symbole/Atmosphären, signs of openness/closedness...)
	What does the square enable you to do? Or the things that there are? → What do you make of... LIST
	Do you have a balcony/terrace? Or close by? In what way is it different from square?
	Sometimes it happens that you get engaged in a conversation. What's that like on xxxplatz?
	How about meeting/seeing familiar faces?
Perception	Who uses the square? (for what activities?)
	How do people live together? How's the cohabitation?
	How many people are similar to you? In what respect? In what respect are they different from you?
	If you could make a wish, what would be a good mix of people?
	What are challenges in the use of xxxplatz? (Who is bothering whom? Where is distance required?)
	MAP → Can you locate people who use the square?
	If you think about the people who live in the neighbourhood – do you find the same people in the square, or are there differences?
Views	What do you think about diversity, in general? Some people say there are too many foreigners in Switzerland. What do you think about that?
COVID-19	The way you use the square – how has it changed since the pandemic started?
	Frequency, new activities, times of the day...? Changes due to personal motivations, or rather due to changes in use by other people?

	Use of other places/parks nearby?
	How do you perceive interactions on the square – has it changed since the start of the pandemic?
	Are there any other topics you find important that we haven't talked about yet?
Sociodemo- graphics	Age Gender Profession / occupation (Education) Type of household (children?) Migrant background

11.7. Appendix G: Estimation of Margins of Error

In order to compare the population of square users and the population of neighbourhood residents for each square, the primary data gathered during fieldwork is compared to secondary data from official statistical sources. As the intercept survey is based on a sample, the results are subject to a sampling error. The size of the margin of error cannot be computed accurately since the actual size of the 'true' population of square users is unknown. As an approximation, the margin of error has been calculated for a restricted sample of direct neighbours and residents in relation to the whole population of residents within a 500m radius (Table 12). The margins of error presented here are not identical to the margin of error for the whole intercept survey sample in relation to the whole population of square users, nor to the margin of error for the whole intercept survey sample in relation to the population of residents. Comparing users living in the neighbourhood to residents of the neighbourhood seems to be the closest approximation available.

As some of the data for the population of residents is also based on survey data (Structural Survey, see 3.3.6), a margin of error applies also there. Both types of margins of error are displayed in the table below.

Table 12: Margins of error (confidence level: 95 %) for the intercept survey data (based on a restricted sample of direct neighbours + residents) and the Structural Survey data.

Square	Population size (neighbourhood 500m)	Intercept survey sample size (direct neighbours + residents)	Margin of error	Sample size Structural Survey	Margin of error
Lindenplatz	12'952	334	5 %	732	4 %
Hallwylplatz	10'141	184	7 %	487	4 %
Idaplatz	19'133	319	5 %	1087	3 %

11.8. Appendix H: Supplementary Material for Article ‘Conviviality in Public Squares’

Table 13: Response rates of age-gender-groups.

Gender	Age group	Response rate
Women	15–24 years	25.5 %
	25–65 years	34.5 %
	Older than 65	31.1 %
Men	15–24 years	27.1 %
	25–65 years	39.4 %
	Older than 65	38.2 %

Table 14: Frequency distribution of all variables used in the logistic regression models.

Variable		all (n = 1087)	Lindenplatz (n = 334)	Hallwylplatz (n = 353)	Idaplatz (n = 400)
Optional activities	No	61.5%	72.2%	57.2%	56.5%
	Yes	38.5%	27.8%	42.8%	43.5%
Familiar stranger	No familiar stranger	73.0 %	61.7 %	80.5 %	76.0 %
	Yes, knows (a) face(s)	27.0 %	38.3 %	19.5 %	24.0 %
Neighbourhood	Living in the neighbourhood	61.6 %	74.9 %	41.6 %	68.2 %
	Living outside the neighbourhood	38.4 %	25.1 %	58.4 %	31.8 %
Timeslot	8–10	21.0 %	21.9 %	21.8 %	19.5 %
	12–2	25.9 %	22.5 %	32.6 %	23.0 %
	4–6	25.9 %	25.1 %	22.4 %	29.8 %
	Sat: 12–2	27.1 %	30.5 %	23.2 %	27.8 %
Occupation	Not (self-)employed	23.7 %	35.0 %	17.0 %	20.2 %
	(Self-)employed	76.3 %	65.0 %	83.0 %	79.8 %
Gender	Women	47.4 %	50.6 %	44.5 %	47.2 %
	Men	52.6 %	49.4 %	55.5 %	52.8 %
Age	15–24 years	5.8 %	2.4 %	7.6 %	7.0 %
	25–65 years	80.5 %	73.1 %	84.1 %	83.5 %
	Older than 65	13.7 %	24.6 %	8.2 %	9.5 %
Accompanied by children	No	89.1 %	88.3 %	90.1 %	88.8 %
	Yes	10.9 %	11.7 %	9.9 %	11.2 %
Born in Switzerland	No	31.6 %	35.3 %	31.2 %	28.7 %
	Yes	68.4 %	64.7 %	68.8 %	71.2 %
Main language: German	No	17.9 %	19.5 %	14.7 %	19.5 %
	Yes	82.1 %	80.5 %	85.3 %	80.5 %
Household income	Low (less than 50 % of median)	6.8 %	4.8 %	5.9 %	9.2 %
	Average (50-150 % of median)	73.3 %	81.4 %	72.2 %	67.5 %
	High (more than 150 % of median)	19.9 %	13.8 %	21.8 %	23.2 %
Education	None/compulsory	4.0 %	6.0 %	4.0 %	2.2 %
	Secondary	27.7 %	38.0 %	23.2 %	23.0 %
	Tertiary	68.4 %	56.0 %	72.8 %	74.8 %

11.9. Appendix I: Frequency of Visiting

Table 15: Bivariate analysis: frequency of visit and highest level of education. No significant relationship between the two variables (Pearson's chi-squared test: $\chi^2 = 6.05$, $d.f. = 8$, $p = 0.64$)

	Education			Total
	compulsory	secondary	tertiary	
Frequency of visit				
(almost) everyday	25 (30%)	132 (32%)	300 (32%)	457 (32%)
several times a week	30 (36%)	129 (31%)	297 (32%)	456 (32%)
several times a month	10 (12%)	81 (20%)	175 (19%)	266 (19%)
several times a year	10 (12%)	35 (8.5%)	104 (11%)	149 (10%)
never	8 (9.6%)	33 (8.0%)	64 (6.8%)	105 (7.3%)
Total	83 (100%)	410 (100%)	940 (100%)	1,433 (100%)

Table 16: Bivariate analysis: frequency of visit and income. No significant relationship between the two variables (Pearson's chi-squared test: $\chi^2 = 9.73$, $d.f. = 8$, $p = 0.28$)

	Income			Total
	low (<0.5)	average (0.5-1.5)	high (>1.5)	
Frequency of visit				
(almost) everyday	27 (32%)	287 (32%)	80 (34%)	394 (32%)
several times a week	27 (32%)	283 (31%)	82 (34%)	392 (32%)
several times a month	21 (25%)	175 (19%)	37 (16%)	233 (19%)
several times a year	2 (2.4%)	95 (11%)	25 (11%)	122 (10.0%)
never	7 (8.3%)	63 (7.0%)	14 (5.9%)	84 (6.9%)
Total	84 (100%)	903 (100%)	238 (100%)	1,225 (100%)

Table 17: Bivariate analysis: frequency of visit and employment status. No significant relationship between the two variables (Pearson's chi-squared test: $\chi^2 = 27.37$, $d.f. = 12$, $p = 0.007$)

	Occupation				Total
	full-time	part-time	retired	other	
Frequency of visit					
(almost) everyday	211 (34%)	132 (30%)	62 (30%)	53 (30%)	458 (32%)
several times a week	197 (32%)	139 (32%)	77 (38%)	48 (27%)	461 (32%)
several times a month	112 (18%)	98 (23%)	29 (14%)	27 (15%)	266 (19%)
several times a year	62 (10.0%)	42 (9.7%)	20 (9.8%)	23 (13%)	147 (10%)
never	40 (6.4%)	24 (5.5%)	16 (7.8%)	25 (14%)	105 (7.3%)
Total	622 (100%)	435 (100%)	204 (100%)	176 (100%)	1,437 (100%)