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On serendipitous encounters in a growing university area

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Regular Article

Meeting places of the Univer-city: On serendipitous encounters in a growing university area

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ABSTRACT

In this paper we investigate the ways in which a university, taking on the scale of a city of its own, affords meetings for researchers and teachers between disciplines. How does the continuous transformation and expansion of the university's physical environment affect the everyday lives and serendipitous encounters of the researchers active within it? The aim of the paper is to develop a conceptualization to facilitate discussions and analyses of urban transformations and its relation to serendipitous and informal meetings in urban areas. The paper takes Lund University as a case and uses different methods, such as time-geographical notations and Perreault-inspired observations studies, to develop five different aspects that allow us to take measure of urban configurations and their potential for serendipitous meetings and encounters.

In this article, we are interested in how universities function as places for interdisciplinary meetings between researchers, as well as researchers and citizens, and how this is changing as universities are continuously growing and becoming more specialized. Social interactions between researchers have been high on the agenda in recent decades. Informal meetings and in-between spaces have been studied in different ways, from the importance of the dining situation (Kaji-O'Grady 2018) to the role of the atrium (Yaneva, 2010). The important role of chance meetings, often relating serendipitous encounters to innovation, has especially been studied inside offices and research facilities (Penn and Hillier 1992; Penn et al., 1999; Irving et al., 2020). The advantages of spatial proximity have also been highlighted in different studies on research parks and industry-university cooperative research centres (Adams et al., 2001; Appold, 2004). Toker and Gray study six different university research centres and 85 researchers in the USA and conclude that 80% of consultations between researchers occurred through unprogrammed encounters, 12% through e-media and a mere 8% through pre-scheduled meetings (2008:319). As universities have started to acknowledge the role of informal meetings, we also find a new interest in informal spaces. In her article on informal spaces, Henrike Rabe looked into 31 laboratory buildings built from the 1960s to the 2020s and showed that there was a clear increase in the square meterage of informal spaces from the 1990s and onwards.¹ Until the 1980s, the

average ratio of informal spaces was 8%; in the 2010s it was more than 20% (Rabe, 2016, p. 125 f.).

It has also been suggested that research focus has increased on inter- and transdisciplinary knowledge production, where academia tries to solve societal problems together with other actors in society (Vuolanto, 2017). Looking at the last decades, we see examples of a general increase in both multi-investigator grants (Toker & Gray, 2008, p. 313) and interdisciplinary research. The design and construction of university buildings have coped with this through different kinds of interdisciplinary centres. Traditional building types (such as the chemical laboratory, the observatory, the botanical garden) are often replaced by new hybrid types that integrate different functions and departments in the same building (Hebbert, 2018, p. 892). When actors from different organizations or parts of an organization need to meet, a specific space and design is programmed for this; this means that incubators, workshop spaces, interdisciplinary venues, etc., are in specifically designated buildings (Coulson et al., 2022, p. 114 ff).

The need for both interdisciplinary and serendipitous meetings in research environments has thus been verified in a series of studies and accommodated for in new building projects. However, interior proximity does not always promote unplanned meetings, since employees sometimes developed strategies to prevent this (for example, by focusing on existing collaborations and reinforcing group boundaries, see Irving

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¹ Informal spaces, for Rabe, included "the atrium, foyer, café, social space, kitchen, library, terrace or any area for informal use within the circulation areas" (Rabe, 2016, p. 125), i.e., spaces not relating to experimental work (like laboratories) or theoretical work (such as offices and conference rooms).

et al., 2020). So, although serendipity is shown to be important for researcher interaction, it sometimes seems difficult to encourage these kinds of encounters, at least through strategies of spatial proximity within buildings (such as open-plan-offices or ‘hot-desking’). One way to expand the possible arenas of informal meetings is to take the out-door spaces and their configurations more seriously, i.e., to make better use of the spaces in-between the buildings. Despite the recent urban turn in the design of university areas, the outdoor encounters between researchers have not been studied to date. Finding new ways of addressing the outdoor environment could perhaps lead to a complementary and less confrontational way of ensuring chance-meetings.

In this paper we take a territorial perspective, looking at the ways in which a university taking on the scale of a city of its own affords meetings for researchers and teachers between disciplines, i.e., outside their departments and dedicated workplaces. How does the continuous transformation of the university’s physical environment affect the everyday lives and serendipitous encounters of the researchers active within it? The aim is to develop a conceptualization to facilitate discussions related to urban landscapes of encounters. How can we conceptualize and analyse a transformative landscape of meeting places? The theoretical discussion is based in the case of the city of Lund and Lund University in Sweden, where we look at the university area as a constantly changing arena of interdisciplinary meeting place. Lund University currently sits in the midst of a large-scale urban expansion and transformation in relation to construction of the European Spallation Source (ESS) and the synchrotron radiation facility MAX IV, the former primarily funded through the Swedish government, the latter by an EU consortium of 17 countries. Lund University is a good case of an already large, yet quickly expanding (not least in spatial terms) university. The case allows us to contrast the infra-ordinary tasks of researchers with the spatial plans and urban effects of large-scale visions and strategies of European and Swedish research politics. The new north-east expansion of Lund driven by MAX IV and ESS was also discussed early on in terms of meeting places, for example, through the project EU-project TITA (2010–2012), which included Region Skåne, Lund University, a number of municipalities in Scania, and many others (Region Skåne, 2012). Drawing on this case, we then develop five different aspects that allow us to take measure of urban configurations and their potential for serendipitous meetings and encounters. Although this is a case-driven study, it should thus be clarified that article is primarily a theoretical one. The role of the empirical study is thus not to establish and verify certain urban effects. Rather, its role is to investigate the scope of different questions that a conceptual framework relating to the territorial transformation of urban encounters might need to address. The article presents an “as-we-may-think” approach, informed (but not deduced from) a series of smaller empirical investigations.

1. Theory and method

This article is inspired by the notion of serendipity as developed by Robert Merton in his posthumously published book *The Travels and Adventures of Serendipity*, written together with Elinor Barber (Merton & Barber, 2004). Here the role of serendipity, in the form of a beneficial and unexpected discoveries, is discussed in relation to research and knowledge production. The important role of serendipity and unexpected discoveries has since then been further investigated and elaborated on (Foster & Ellis, 2014; Yaqub, 2018). Within geography, the role of serendipity and chance has been seen as important for social and cultural change. Simandan has, for example, championed the importance of surprise for producing spatial situations of both social and personal change (Simandan, 2020). Serendipitous meetings in more or less public spaces can also be seen as relate the growing field called ‘geographies of encounter’ (Wilson, 2017), arguing that the city is produced through encounters. The constitutive role of encounters for urban life and culture has been lifted in several contemporary studies (Amin, 2012; Darling & Wilson, 2016; Stevens, 2007). In fact, the intervisibility

of strangers and its importance for public space has a long history, relating back to scholars such as Jane Jacobs and Richard Sennett (Hajer & Reijndorp, 2001; Gehl, 2013). There have, however, also been critical discussions questioning the role of proximity and brief encounters for social change, arguing that the role of brief encounters for social integration sometimes can be exaggerated (Valentine, 2008; Valentine & Waite, 2012). The outcome of encounters could of course never be taken for granted, but it is still an important (and quite often neglected) aspect of how different borders, geographies and cultures are formed as well as transformed (Wilson, 2017, 2020). It should thus not be seen as far-fetched that encounters between researchers outside their own department and discipline, and the serendipitous findings and collaborations that can come out of this, can be of importance for forming new research questions and cultures.

If this article is based on earlier research when it comes to the role of informal encounters, its aim is to develop a territorial conceptualization able to capture how different borders and insides/outside are configured within certain urban agglomerations or districts, such as campuses or university areas. We are here interested in how different territories associated with meetings transform, stabilize and relate to each other. We thus use a territorialological perspective (Brighenti, 2010; Brighenti and Kärrholm 2020, 2023), to discuss how certain spaces become both materialized and encoded as meeting places. A territorialological perspective looks at space, time and meaning together, and rather than prioritizing one over the other, it looks at the process of their co-production. The focus on meeting territories means that we are interested in both the formal and informal ways in which meetings become associated to certain places and occasions. This also relates to former studies discussing public space in relation to territorial complexities (Kärrholm, 2005, 2007; Qian, 2020). In the end, this territorialological approach helps us to formulate a conceptual framework that allows for more nuanced discussions on the meeting potentials of different environments.

In terms of methods, we work with what one can call a fragmentary mixed method approach, which means that we have prioritized a range of different methodological access points to the question, rather than going deep into what one methodological technique could deliver. This is consistent with a theoretical and qualitative approach looking for a variety of associations to a given topic. The methods were used to get an idea of meeting places but also to speculate on how the now rapidly changing urban landscape might affect these places. The methods employed include interviews (with people at the architectural firm behind ESS), study trips to MAX IV and the ESS construction site (with a go-along interview at the latter), and the study of maps and archive material (including early publications on meeting places in Brunnsög, the brief and programme of ESS, and the reports concerning Science Village). It also includes a questionnaire that we sent to eighteen researchers who work around the Lund University area; there were ten respondents in 2020 and 2021. Based on the questionnaire, we did a small time-geographic investigation (Hägerstrand, 2009) in which we asked the researchers to describe their work-related movements over three average days, one day during the Covid-19 pandemic, and two before the pandemic; only the latter two have been used in this article, however). We also asked the informants to describe a few places where they run into and talk to colleagues who are not part their research unit/department, and if they had any ideas for how the physical environment could be transformed to encourage more interactions of this kind. The questionnaire gave us an idea of some important meeting places, and it also allowed us to make some time-geographical notations. In addition, we made observations at two strategic public places deeply connected to Lund University: the LUX plaza and the tram. These were chosen because they are the two most recent public places or urban dignity, introduced in relation to the university. The observations were inspired by Georges Perec’s free observations from the 1970s (Perec, 2010), where he sought in different ways to note the rhythms and on-goings of public life. Perec did not take an ‘objective and

disinterested' as much as a 'subjective and interested' approach in his observations. His goal was especially to make visible the infra-ordinary rhythms, i.e., the aspects of everyday life that, through force of habit, are invisible and neglected, and doing so he worked in a kind of staccato-like essayistic style (Sheringham, 2006; Forsdick et al., 2019, p. 276; Phillips, 2018). The observation studies that we did, are thus not comprehensive in any way. They were made with pen and notebook, limited to mornings and afternoons on weekdays, and took place during a few weeks in spring 2023. It should perhaps also be mentioned that the authors of the article together have more than thirty years of working at Lund university, which means that we, for better and for worse are well acquainted with the campus area and its different places.

Together, the different methodological entry points to our question gave a rich variety of insights (rather than in-depth knowledge) concerning meeting places and their socio-spatial prerequisites. Needless to say, the approach did not result in a full mapping of all meeting places at Lund University, neither did it allow us to draw any firm conclusions about how the outdoor meeting landscape has changed for researchers. However, the different research techniques has allowed us to capture a variety of important and interesting aspects which in turn helped us in pinpointing and conceptualizing some relevant territorial themes, which is the main aim of this article.

2. Lund and Lund University

The relationship between the university and the city in which it is located is generally a crucial one, and it has been discussed in different ways (Bender, 1988; Hall, 1997; Hebbert, 2018; Kärrholm & Yaneva, 2022). Recently, the university as a producer of urbanity and urban life has come to the fore (Hebbert, 2018; Coulson et al., 2022). Hebbert and others (Hebbert, 2018; Coulson et al., 2022) noted a shift around the millennium where former, often suburban-oriented, campus strategies were swapped for more urban approaches. Universities have, as Hebbert puts it 'learned the visual vocabulary of streets, squares and places' (Hebbert, 2018, p. 889). Today, then, we might talk of an urban campus type, organizing buildings in a grid structure rather than in a park. In fact, both cities and universities have in many cases started to develop a closer relationship to each other, for example through the densification and connection of existing post-war campuses as well as through the integration of new university expansions into urban development schemes. Universities can be important factors in urban transformation and redevelopment, for example when it comes to youthification and gentrification (Moos et al., 2019). Universities do expand. Coulson et al. note that in terms of construction that has started, the number of university-related square metres in North America rose from around one million in 1990 to three million in 2008 (Coulton et al., 2022, p. 11).

In Sweden, the 1990s marks the start of a large university expansion coupled with marketisation. A number of new regional universities were introduced, and the number of students more than doubled from 1989 to 2003 (Börjesson & Dalberg, 2021). On the one hand, the constantly expanding universities incite more urban ambitions, but on the other, we often see how architectural programmes and solutions counteract urbanity. The buildings themselves (and their interiors) are often designed with a belief in spatial proximity and in increasing chance encounters between different researchers (Irving et al., 2020), but the large scale and inward-looking focus of these buildings often comes at the price of a decreasing number of urban chance encounters. The ever-growing and increasingly all-encompassing buildings do not contribute much to urban life; on the contrary, they risk draining it.

Lund University has some 45,000 students and is situated in a town of some 92,000 inhabitants (2020). The university was initially centrally located just next to the Lund Cathedral in the 1600s and soon developed to include a series of buildings and different building types, well integrated in the urban fabric and life of Lund (Caldenby, 1994, pp. 40–41). By the end of the 19th century, however, we see how the university took a more focused and wedge-shaped expansion strategy in a north-eastern

direction (Tägil, 2001; Kärrholm & Yaneva, 2022). In the 1960s, the technological faculty (LTH) was established on a large, landscaped campus outside of the city centre. It was followed by Ideon Science Park and more recently a satellite city (Science Village) on previously agricultural land north-east of the city centre. This latest expansion is primarily due to the establishment of two very large science facilities, MAX IV and ESS. These facilities cannot primarily be seen as located in an urban setting, but are instead important actors in, at least partly, driving the urban development of the city of Lund itself. The expanding university and the development of new research areas has led to the merging of departments and a constant need for more space. Centrally located buildings are vacated or handed over to administration and new, up-scaled university buildings find their place further and further out along a north-east axis.

The centrifugal expansion of the university has been coupled with the establishment of a central corridor called *Kunskapsstråket*, translated into English as the 'Science Road', which primarily runs along the street Sölvegatan, where many of the university's faculties are located. The Science Road is (since 2020) serviced by a tramway that weaves its way along the corridor, connecting its furthest part, ESS, with Lund Central Station. Before ESS we also find a couple of tramway stops serving Lund's new urban district, Brunnskög. The density of the university increases along specific nodes along the Science Road and Sölvegatan. Such nodes can be found, for instance, in relation to ESS and MAX IV, and to the new faculty centres and department agglomerations, such as LUX (Humanities & Theology), SOL (Language & Literature), GEO-centre (Geography) and Medicum (Medical faculty). Over the centuries the university morphology has developed quite radically. For the first two hundred years or so, Lund University developed from a nucleus into a more or less integrated mosaic in the traditional urban block structure. Starting in the late 19th century, Lund University started to expand on the border and along the first proper fringe belt of the city (Conzen, 2004, p. 245 f.), and thus became a driver of urban expansion at the outskirts of the city centre (see Fig. 1). In the 20th century we saw the development of superblock structures (campus), and today, spanning the full radius of the city, the university has become a super-actor of urbanization. A linear structure of big box buildings is crystallising along the Science Road, attracting other large buildings (such as student housing). This path is well connected to the city centre but quite poorly connected to the directly adjacent urban areas.

The relationship between industry and academy has been very important for the development of Science Village (Lund University, 2022, p. 22 f.), and it was expressed by the architects' vision document like this:

A third generation science park recognizes that post-industrial economic activities need a much closer interaction with the knowledge suppliers and the wide range of services that support the innovative firm. Therefore, a successful local cluster of competencies relies on the capability of the producers of innovation to interact successfully with potential users as well as with many other economic players. (Henning Larsen Architects, 2021:13)

The architects are optimistic, claiming that 'The ESS will in time become an integrated part of its surroundings instead of a built structure situated outside the city' (Henning Larsen Architects, 2021: 11). Still, the linear structure of the ESS and the whole settlement (ESS, 2012, p. 2), together with its general isolation from the surroundings, makes this claim seem less probable. While many contemporary universities try to transform their campuses from a monofunctional territory and integrate them into urban life and communities (Coulton et al., 2022, p. 56), the Science Village in Lund is somewhere in between. The place is not well integrated in the urban fabric, and the radiation risk connected to ESS does not allow for housing in the vicinity, yet the new town is planned for different themed public events and spaces.



Fig. 1. Map of north-east part of Lund. The curved lines depict moves of departments and research facilities at Lund university from 2000 up until now (including the planned move of physics and parts of chemistry to Science Village). Each tram station is marked with “s”.

3. Where researchers meet

When Lund University was spread over the city centre, researchers' movements were naturally well integrated with urban life. In a talk from 1983, the famous geographer and developer of time-geography Torsten Hägerstrand compared the Lund of the 1930s with that of the 1970s (in Wärneryd, 1983). Drawing on places which were important for his own creativity and comparing the life of a student in the 1930s with that of a professor in medicine in 1975, he lamented the 'poorer contact milieux in Lund' (Wärneryd, 1983, p. 46). Judging from the illustration (see Fig. 2), Hägerstrand's view on the early 1980s was probably to some extent a reaction to the newly built regional hospital, a gigantic new structure that now seemed to overshadow all of Lund's other buildings. Although this was an extreme case, university buildings have since, especially since the 2000s, striven toward bigness (Koolhaas, 1995). In his talk, Hägerstrand also notes how 'students have been pushed out from the central area because space has been taken over by growing administration' (Wärneryd, 1983, p. 48). This development has certainly continued as more departments have moved from the city centre and administration has expanded in the former department buildings of the central city. Meeting places are also changing. Some places, like the Botanical Garden, the Zoological Museum, the University Library and the Planetarium, have traditionally been important for mixing people within and outside the university. While several of these remain important, we can also see changes. The role of the University Library as a physical meeting place has declined with the digitalization of research, some places have been closed, like the Zoological Museum and the Museum of Antiquities (*Antikmuseet*), others have moved to less

central locations, like the Planetarium. New places, like *Vattenhallen* Science Center, have been established outside the old city centre, in the north-eastern part of the LTH campus.

Paying greater attention to the outdoor environment could be one way to increase chance meetings, but if researchers only go to work and then go home, as suggested by Hägerstrand, this is perhaps unrealistic. To get an idea of this, we can look at a diagram of sixteen daily trajectories of eight of the researchers who answered the questionnaire (see Figs. 3 and 4).² The places of the diagram are arranged depicting more central areas to the left, and they move towards the north-eastern parts of the university as we go further to the right. The sample is of course not big enough to give us results of any statistical significance, but it gives some interesting indications. A first glance shows that movement varies between different researchers, and although some are quite stationary, several researchers actually seem to move between buildings on a daily basis. While this naturally does not necessarily mean that they experience a greater number of serendipitous meetings, it does at least offer a somewhat more positive picture than Hägerstrand's poignant depiction from 1983. It is also worth noting that the most static researchers seem to be the ones who work the furthest away from the city centre (the trajectories on the right in the diagram), and that people tend to move from their workplaces towards more central destination points (and back), but more seldom in the other direction.

² Two researchers were omitted for cartographic reasons, as their workplaces were located a bit off in relation to the others. Three researchers (GEO, K and V) reported a similar trajectory for both days.

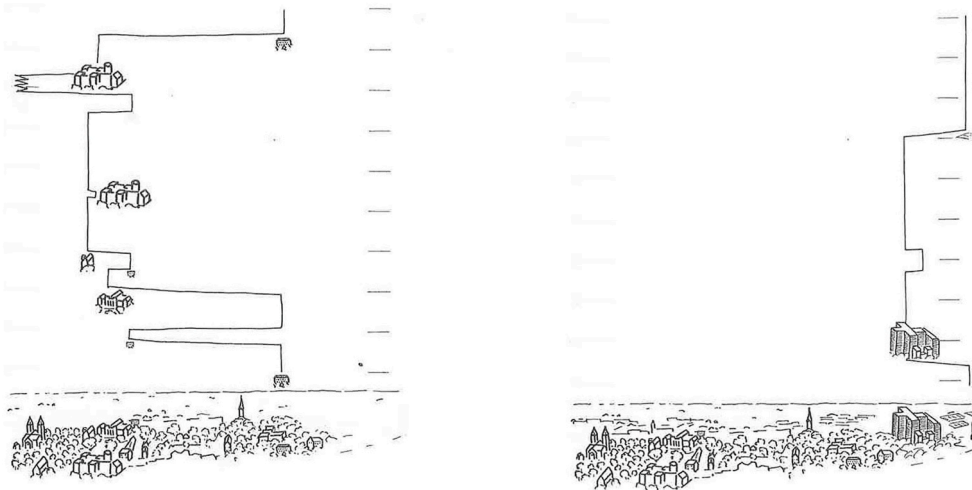


Fig. 2. Daily orbits of a humanities student in the late 1930s and a professor of medicine in the mid-1970s, Lund. Maps by Torsten Hågerstrand (in Wärneryd, 1983: 47 and 49).

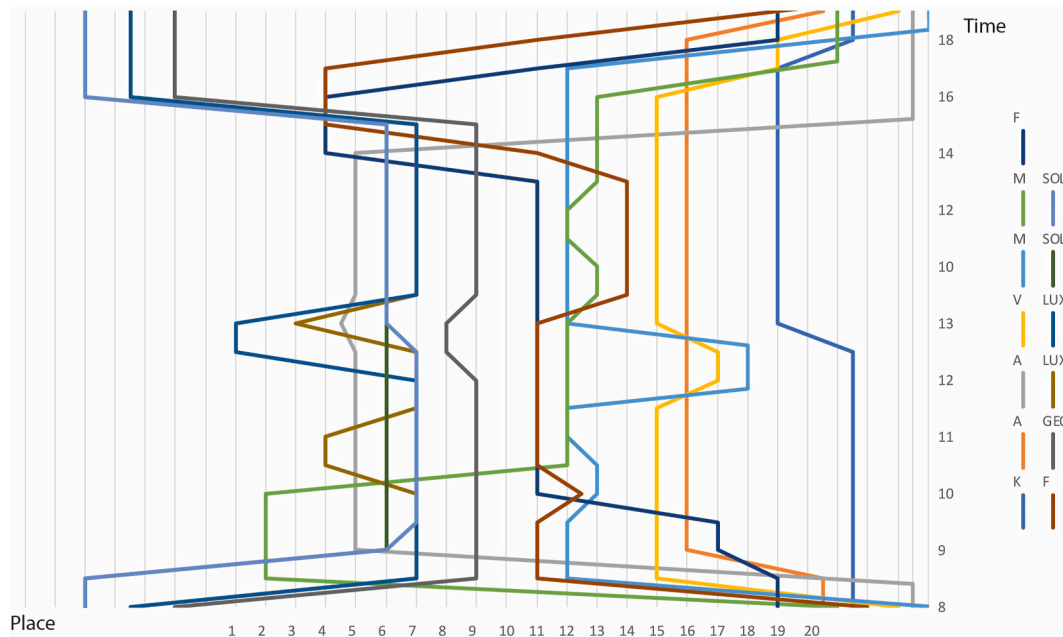


Fig. 3. Daily trajectories of researchers from nine different disciplines. The clock time can be read on the vertical axis (from 8.00 to 18.00). Place can be read on the horizontal axis (for legend, see Fig. 4). Each trajectory is related to the building in which the researcher works (see legend). The home (starting point) of each researcher is more or less randomly assigned to an unnumbered place in the diagram.

The questionnaire gave us a range of different answers. On the less enthusiastic side, two informants, both of whom worked far from the city centre, stated that there are almost no chance meetings at all: ‘To be honest, work is so streamlined these days that you only meet people outside your “bubble” when planned’ (researcher at the V-building). The other researcher (at the K-building) pointed to the indispensable role of money, arguing that:

The only way for researchers to meet spontaneously is common coffee rooms and/or lunchrooms. However, the whole idea of spontaneous meetings is overrated. It assumes that wonderful ideas will arise in meetings between researchers. This happens, but it is very rare and usually falters because of financial problems. The true driver of spontaneous meetings is, unfortunately, funding. Where there is a pot of money to be found and gained, ideas will sprout.

Some of the informants’ stated that most meetings with others take

place indoors at the department, or at least within the same faculty:

We have many and long corridors and when I meet colleagues I often stop and exchange a few words with them, as in the stairwells. In the room where we have the copy machine, we often exchange a few words. (Researcher at the M-building)

One way of improving this, he goes on, would be ‘more blackboards and chalk in elevators, at toilets, in corridors, in foyers.’ The idea of blackboards in communal areas has been tested, for example, at MIT (Hebbert, 2018, p. 893) and at the Graphene Institute in Manchester (Novoselov & Yaneva, 2020), but has yet to be tried in Lund. Building on her field work, Yaneva’s conclusion is that blackboards and chalk seem to work very well as ‘they accelerate the epistemic exchange while also strengthening the social bonds.’ (Yaneva, 2022, p. 752).

Outside the own research unit, meetings seem fewer and are either planned or happen in transit:



Fig. 4. Map of Lund, the north-east part, with tramway in red. The buildings in black are the workplaces of the respondents in Fig. 3. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)



Fig. 5. LUX Square in May 2023, with the LUX building to the left and GEO-centre to the right (photo by author).

My colleagues that are not a part of the research unit are basically all international; we meet at meetings, zoom, skype, field work. At the university, I meet colleagues in restaurants, on the way to the restaurants, in the corridor, [and the] bus back and forth to the University. (Researcher at the GEO-centre)

Judging from the questionnaire, the places where people actually meet do not seem to be consciously designed for meetings. They end up in copy rooms that never were planned or designed for social interaction, or, as a researcher from Physics responded to the question about where s/he met other people:

Outdoors, it is curiously enough the small slope leading from the E-building to the M-building next to the green area around Sjön [a pond]– this seems to be trafficked by a few people I meet almost exclusively there ...

Another informant noted that besides the library and cafeterias, s/he meets people on her way to and from the parking lot. The need for an improvement of outdoor facilities was also expressed by a few informants. The new buildings with larger public entrance places and well-designed indoor/outdoor relationships that do exist seem to be appreciated (see Fig. 5). As one researcher from the LTH campus expressed it:

I truly enjoy every time I can visit LUX or SOL. They have a centrally positioned café with library, seminar rooms and lecture halls often accessible (or at least possible to identify where to go) from a central spot close to the entrance. (Researcher at the A-building)

A couple of researchers pointed to the important role of organized cross-faculty events and meeting. It is here also interesting to note that one informant reported a visit to the Pufendorf Institute, and two informants mentions it positively. The Pufendorf Institute for Advanced Knowledge opened in 2009 at the location of the former Museum of Antiquities as an interdisciplinary meeting place for researchers. Its aim is to be a cradle where new research ideas and collaborations can take form. The Pufendorf Institute requires that one changes one's work location to the Institute for that day; the change of work location means a change in routine and exposure to chance meetings with new people, in new places.

4. The square and the tram

Taking spaces as a point of departure, rather than researchers, we will also look at two relatively new urban places in the midst of the Science Road. First, the new urban square just outside the new LUX-building (see Fig. 5), which houses several departments from the Faculty of Humanities and Theology. The square, inaugurated at the same time as the LUX building in 2014, is a rare attempt at establishing a public square in relation the university. LUX is a huge building; more than 18,000 square metres host five large departments, the offices for the joint faculties of Humanities and Theology, a cafeteria, a library and a laboratory. In addition to LUX, the square is also directly connected to the SOL-centre (languages and literature) and the GEO-centre (natural and human geography). The second place we will look at is the tram that connects Lund Central station with ESS. To illustrate these places, we will consider two excerpts from the observational studies.

LUX square. Wednesday, May 25, 2023, 9:15

It is cloudy and around 17 °C. Several people are walking towards the LUX building. A small group of students are walking up the street Sölvegatan. A man sits on a small platform on the square, talking on his phone. Two people sit on one of the seating groups along the LUX façade with their take-away coffee.

Bus 7 passes by on Sölvegatan. It does not bother to slow down, even though Sölvegatan is supposed to be a living street [a pedestrian-place] as it crosses the square.

A cargo bike belonging to the LUX café is parked outside the entrance.

A garbage truck passes by on Helgonavägen.

A woman with a roller bag crosses the square and walks towards the city centre. My guess is that she is heading for the station.

A number 7 bus passes by again, now in the other direction.

A man in a wheelchair comes out of LUX and takes the ramp that follows the façade. Professor U., a colleague from one of my research projects, enters LUX. He does not notice me.

There are always a few people passing through the square, but the pace is slow and there are seldom more than a dozen people at the same time.

It is 9.25. Cars pass by regularly along Sölvegatan, but none of them heed the speed limit of the square. They act as if the square does not exist.

The square is clearly a space structured by the use of students and teachers and the university, still there are some examples of people passing by. We also see activity related to university maintenance and service work. The observation was made during a calm part of the day. Lectures often start at eight or ten o'clock, and the lunch hour starts at 12. Even though these are off-peak hours for LUX, the square activity is mostly centred around the LUX entrance. This becomes even more apparent during peak-hours, when students and teachers crowd the entrances and spread out over the square and its streets, forcing cars and traffic to slow down. Although there is a steady rhythm of passing traffic (including a bus line), it is clearly a space that is by structured more by the rhythm of its entrances than by the rhythms of the city surrounding it.

The tram was discussed early on in Lund, even before the planning of ESS in fact, but since the planning of ESS it has started been closely connected to the expansion of Lund University. In fact, if we count the University Hospital, more than half of the tram stops relate to the university. Only in between LTH/Ideon and MAX IV do we have three stops relating to the new Brunnsög housing area and the (predominantly high-tech) workplaces there.

Tram. Friday, March 10, 2023, 15:30

15.30 I am entering the tram on Clemenstorget next to the Central Station. The tram starts after two minutes. On the loudspeaker, a woman's voice calls out in a Scanian accent: 'Next stop, the University Hospital'. Each time the doors open there is a sustained beeping sound. The TV screens inside the tram show news. A man has been imprisoned in Missouri for burning a cross. The news is intermingled with information about the departure times of regional busses and a pollen report.

Most people are looking at their phones. The car is quite silent, much more silent than when I was going in the other direction before; that time, I heard people from LTH talking about work-related things. As I write we pass one station after another.

'Next stop Ideontorget' [Ideon square].

There is no square here yet. Just a road. One person leaves, one enters. Most people get off on the following stops, at Brunnsög, where people now have moved into the new apartments. / ... /

15.43. The tram now starts its journey from ESS and back towards the city centre. They play the news about a man burning a cross again. The video loop is short, no longer than a tram ride.

The tram is different from the LUX square. Here people from Brunnsög and different workplaces mix with students and researchers from the university. Different people follow different rhythms. In early mornings the tram is full of people going from the Central Station and on

their way to work, and in the late afternoon they go back. The people living in Brunnshög travel in the opposite direction and (so far) in smaller numbers. Both LUX Square and the tram are to a certain extent places of serendipitous encounters between researchers, in fact we experienced a couple doing the observations, but in terms of heterogeneity they cannot be compared to the more central places of the city.

5. Territorial configuration and the prerequisites for serendipitous meetings

Above, we could see how some places are planned for longer stays, like the LUX square, but at the same time they mostly accommodate people associated with the university. Others, like the tram, serve a larger diversity of people, but only afford shorter stays. Some places are formalized and designed for pre-planned interdisciplinary meetings, like the Pufendorf Institute. Others work as de facto places of serendipitous and informal meetings, such as parking lots, even though they are poorly designed for this activity. The landscape of meetings and encounters is quite rich, but often also programmed, or at least structured by a certain set of delimited activities. In the following, we will develop a way to address this from a territorial perspective, suggesting a way of analysing the meeting potential of territorial configurations.

Indoor-centred studies of meetings between researchers have often emphasized spatial configuration as a – if not the most important – parameter, using space syntax as a method to describe this (Hillier & Penn, 1991; Penn et al., 1999; Toker & Gray, 2008). Space syntax (a methodological approach used to measure spatial configurational properties of different kinds) could also be a valid approach when we come to a more urban scale. In fact, the urban scale is where the correlation between spatial integration and chance meetings of other people has been proved to be strongest (Hillier, 1996), and there are studies of how different neighbourhood configurations have different conditions for the co-presence of people (Legeby, 2010; Legeby 2010). In terms of spatial integration, the Science Road is not very integrated in traditional space syntax terms. The Science Road includes both the tramway from Lund Central Station to ESS, and Sölvegatan, going from the perimeter of the old city centre to LTH. These two routes keep bending and turning, and although they align for a while, they are two separate entities that each have their own directions.

For urban structures that mainly host a certain category of uses or users, the territorial question becomes important. The Science Road collects open urban spaces that are at least theoretically accessible to the entire urban population, but they are also territorialised so that a majority of spaces are primarily used by students and university employees. In fact, The Science Road has become an obligatory point of passage (Callon, 1984) to an increasing number of departments and university buildings of different kinds. How, then, can we tackle the question of territorial configurations? Based on our study, we will discuss various themes that allow us to take measure of potential meeting places. We will thus suggest five crucial aspects that need to be addressed when considering the ongoing production of an urban configuration of meetings and encounters. These aspects can be seen as an initial and simple way of diagnosing an unfolding landscape of encounters (see Table 1 for a summary).

First of all, we need an idea of the *number* of different territories of the urban landscape at hand (even though no exact numbers are

possible). Some places need a low number of territories to work (like places with motor traffic), whereas busy public places (like a central square) can be seen as defined by a high number. Science Village works with spatially determined activities; they want the number of territories to be high at certain points (around the tram stop and the public spaces), but low at others (inside the ESS territory, protected by a moat, ha-ha walls and a guardhouse). A large number of different territories, i.e., temporary claims (however short or long) of different groups and activities, is a prerequisite for serendipitous meetings to occur. Lund University faces a double problem here. It is both moving researchers out of a place of territorial richness (the city centre) and trying to add new activities to an area (Science Village) which, due to its proximity to ESS, does not allow for housing a night population and can thus not host mixed-use urbanity. To an extent, then, the University is withdrawing from the city (see Fig. 1). It is thus lowering its engagement and presence in one end (where the number of different territorial productions are high) and increasing them in the other (where they are low).

A second factor is *horizontal homogenization*. Do different territories tend to take the same form? One way to look at this is to look at typological variety. Chain stores and shops in a mall are often spatially homogenous; the first one relates to similar stores across different places, and the second one to similar stores at the same place. On one hand, typological variety has developed and become richer over the centuries as more building types related to the university have evolved. On the other, today we have larger areas covered by university buildings alone. For Lund University, the post-war campus plan (LTH) was a first major step towards a horizontal homogenization, i.e., a larger number of buildings that were very similar in terms of both spatial structure and aesthetics. ESS and MAX IV are quite unique building structures, and despite their size, they might in one way be seen as contributing to a heterogeneity of types. However, we also have a large-scale homogenization process, manifesting itself through the big-box department and faculty buildings stacking along Sölvegatan (LUX, SOL, GEO-centre, Forum Medicum, etc.). As we noted in the observation studies, the residential area Brunnshög and its stops, squeezed in between the University campus and Science Village with MAX IV and ESS, are here crucial for introducing a certain heterogeneity to The Science Road.

The *verticality* of how territories are assembled is another factor (Delaney 2005). A vertical order suggests that several territories are controlled and framed by a higher order and that there are one or more hierarchically ordered obligatory points of passages. A gate into a yard of entrances means that the territorial structure (or depth, Habraken, 1988) has two territorial steps, and it thus gets a verticality. Verticality can be found both along spatial and semiotic lines. Spatially, we saw how the university developed from an archipelago logic into a campus and then on to a more linear logic, where the Science Road is increasingly becoming an obligatory point of passage. As noted above, this can also be seen in the new focus on entrances, and entrance plazas, i.e., the obligatory point of passage to the faculty buildings receives an increasing amount of attention by architects and designers. Public spaces that act as important nodes for through-movement (like traditional squares) are still uncommon in the university area. Nodes that exist, including the parking lots mentioned by the informants, are instead often quite under-designed. There is also a more semiotic verticality or hierarchization where the university increasingly seems to be branded as ‘Science’ (a very reductionist strategy for a broad

Table 1
Five aspects to describe and define different territorial configurations.

Territorial configuration (defining factors)
1. Number of territories
2. Horizontal homogeneity/heterogeneity
3. Vertical homogeneity/heterogeneity
4. Degree of territorial overlapping
5. Scalar dissonance and resonance

university such as Lund). The science theming is stabilized by The Science Road, Science Village, the new Science Museum, The Science Village Hall and with the moving of general university activities such as incubators, visitor centres and even the Pufendorf Institute (it has been suggested) to Science Village, where there will be two departments at best: one in Physics and one in Chemistry.

A fourth factor that relates to spatial homogenization to some extent is *overlapping*. A certain place can be a place of several overlapping territories. The construction of large faculty buildings comprising a series of different departments might, through atrium plans, produce interiors that are quite overlapping in terms of territorial production. Yet, these milieus are boxed, and aligned, and their sheer size and multi-functional interiority drain public space. Although new spaces, such as the LUX Square and the tram, can perhaps be seen to counteract the tendencies to focus on interior atriums, they cannot really be seen as very rich public spaces. The former allows for through-passage but is mostly structured by entrance spaces and people of the university, and the latter, although directed at a more heterogeneous population, is just a short-term transit space. The newly planned Rydberg Square at Science Village will work in a similar way as LUX Square, mostly gathering entrances to the university and science-related activities (although some of these are also intended for public audiences).

The fifth and final factor is *scalar dissonance and resonance*, which concerns how different scales resonate with each other, or not. An example of scalar dissonance could be an important central place that is under-programmed for its potential, or a more peripheral place that is overprogrammed without the location and population to back it up. Science Village could perhaps be used as an example here. It is planned as a new centre of gravity; it is a place for an anchor or a magnet to be installed (albeit one that is not yet in place). Even when ESS opens, it is uncertain whether it will fulfil its role as the end destination and anchor of the tram. On the map it is important; on the ground however, the surrounding spaces are only relevant to a small number of people. Looking back at the study of researchers' movements, we see researchers moving from their workplaces to destinations in more central parts of the city, but not the other way around. The university plans appear to strive for the opposite: destinations in the central city are abandoned, and new ones are constructed at the end station of the tram line. Locating a new 'Pufendorf Institute 2:0' in Science Village has been suggested, for example (Lund University, 2022, p. 8). This will force researchers out into a more homogenous 'science environment' than now. Then there are the researchers from our questionnaire, who point to how they meet in quite un- or under-designed places. A certain amount of scalar dissonance is natural when it comes to large development projects; it takes time for the potential of a certain location to bear fruit. In this case however, the risk is, of course, that the scalar dissonance will take a very long time to heal.

6. Concluding remarks

In this article, we have investigated possible and actual meeting places in a university area. In the studied case, we saw that there was a tendency to build increasingly larger buildings, sometimes housing whole faculties under the same roof, thus favouring interiority and draining the adjacent streets from life. We also saw that new outdoor places seem first and foremost to be planned as entrance plazas, and that some of the places where researchers actually seem to run into each other are under-designed and do not really afford meetings to develop for more than a brief moment. Recent development continues in the same direction; although some outdoor spaces seem to receive increasing attention, these are often entrance spaces rather than urban nodes of interaction. Furthermore, more and more university activities are moved out of the city and into its outermost periphery, and there flagged under the reductive pretext of 'Science'. There are, of course, also some positive things. The design of outdoor spaces is receiving more attention, and the new linear super-campus structure has also come with

a new discontinuity: a new housing area (Brunnhög) is establishing itself right in between two different parts of Lund University.

Following our study, we have suggested five different themes that allow us to describe the territorial configuration of the university and take measure of its potential meeting places. The themes, including number of territories, horizontal homogenization, verticality, overlapping and scalar dissonance/resonance, help us to describe and pinpoint different territorial configurations, and can thus be a method of comparing different university areas (or other urban landscapes). One way to do this, for example, is to compare the territorial complexities of different configurations. Territorial configurations that are rich and well-integrated can be described as territorial complexities (Kärrholm, 2005, 2008; Kärrholm et al., 2017), and more actively affording and fostering public life. Places with rich territorial complexity include a large number of territories. This also entails that these territories overlap, are horizontally heterogeneous, do not have a very verticalized structure and take part in the formation of a scalar resonance. Of course, this does not mean that university areas need to be as territorial complex as possible. University areas have a long tradition of seclusion and compartmentalization, and these aspects are to a certain degree still necessary. Still, if universities wish to make serious efforts to facilitate informal and creative meetings between researchers (as well as between researchers and other citizens), they also need to look outside their own buildings. They need better understanding of how these outdoor spaces connect to each other and to the rest of the city, as well as how they can play a more active part in affording vital interaction in the everyday life of researchers and citizens. This is not merely a question of designing the big research buildings and their hinterland; a much more structural approach is necessary that focuses, for example, on the publicness of spaces, urban nodes, the diversity of types and various scale relations in which different parts of the university become entangled.

Availability of data and materials

Datasets are available from the corresponding author on reasonable request.

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