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The Temporality and Rhythmicity of Lived Street Space

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ABSTRACT

This dissertation, in short, examines the temporalities and rhythmicities of day-to-day urban mobility practices on the city street. Streets, and other mobility-centred spaces of the city, are the main stages of public urban life – they are essential to how we (routinely) use and interact with the built environment, connect to our neighbourhoods, and encounter other city dwellers – and thus play a key part in the making of *liveable*, sustainable and just cities. Examining the street as a *mobile assemblage*, the study probes and conceptualizes some of the key rhythms that emerge from such daily mobility patterns of the street, aiming to draw a detailed picture of the recurring urban (micro)temporalities from a mobilities perspective that partially constitute the 'lived' aspects of the day-to-day built environments. The theoretical framework on temporalities draws from various conceptual lineages, notably a Lefebvrian *rhythmanalytical* framework, and defines the studied mobility rhythms of the street as the inseparable relations between spaces, times and mobile embodied practices.

   The practical research focus is set on the grassroot-level embodied mobilities. Here mobility practices are understood in a broad sense (following a *new mobilities paradigm*) as activities that, whilst physically moving people from place A to place B, also produce meanings, experiences, sense of belonging, socio-material interactions, imageries, and (mobile) cultures in the process. Utilizing various *mobile* research *methods* (in-depth *go-along* interviews, participant-produced photographs, route videos and route maps; extensive videoed site observations), and by taking a *postphenomenological* research perspective, the dissertation examines recurring walking and driving routes, and the mobile event of day-to-day street space in two major Finnish cities. The analysis of the data – presented in four research articles (*#01–04*) – reveals, on one hand, how people (inter)subjectively make sense of and modify the rhythmicities of the street (and the city in general) inside their own mobile daily routines, and, on the other, how people – through their (mobile) uses of the space – produce *temporal*, or momentarily perceivable, *architecture* of the street by adapting to, or contesting, pre-set rhythmicities. The analysis further reveals different *mediacies* (*#01*) and processes of *pacing* (*#02*) of such rhythmicities, the role of *urban*

morphologies in the formation of these rhythmicities (*#03*), and the time-sensitive rhythmic modes of *appropriating* the street through mobile uses (*#04*).

The work proposes that the emerging rhythmanalytical research framework is an applicable and advantageous mode for approaching and mapping the urban phenomena that are inherently caught in a continuous flux and flow. In the case of the day-to-day street space, rhythmanalysis can be used to reveal micro-level (next to macro-level) temporalities that depict the street as a site of multiple heterogeneous and simultaneous temporalities and timings. Likewise, rhythmanalysis, helps us to understand the complexity of urban mobilities and day-to-day routes beyond their strictly functional means, revealing the multiplicities of temporal relations in such recurring body-environment relations. Together, they are able to draw a nuanced picture of some of the key urban structures, mapping both *formal* (planned and designed, set from the 'above') as well as *informal* (accidental and routine-like, set from the 'below') mobility structures of the city. They highlight the continuous, rhythmic and arrhythmic, pulses of human activity in the city, the *intensities* of the urban fabric. In other words, they reveal multiplicities of the *beat* of the city and its streets, both the planned and designed as well as the ones produced by their inhabitants on the move.

TIIVISTELMÄ

Tämä väitöskirja, lyhyesti ilmaistuna, tarkastelee arjen katutilan ja kaupunkiliikkumisen ajallisuuksia ja rytmisyyksiä. Kadut ja muut liikkumisen tilat kaupungissa ovat urbaanin arkielämän tärkeimpiä tapahtumapaikkoja – ne ovat keskeisessä roolissa siinä, miten (rutiininomaisesti) käytämme ja olemme vuorovaikutuksessa rakennetun ympäristön kanssa, miten juurrumme asuinympäristöihimme, ja miten kohtaamme muita ihmisiä kaupunkitilassa – ja näin ollen ovat olennaisessa roolissa *elävien,* kestävien ja tasa-arvoisten kaupunkien muodostumisessa. Tarkastellen katua *mobiilina kokoutumana (mobile assemblage),* tutkimus selvittää ja käsitteellistää eräitä keskeisimpiä liikkumisen ja katutilan rytmejä, ja pyrkii tuottamaan yksityiskohtaisen kuvan kaupunkiympäristön toistuvista (mikro-)ajallisuuksista liikkumisen näkökulmasta, mitkä osaltaan määrittävät kaupunkiympäristöä jokapäiväisenä 'elettynä' tilana. Työn teoreettinen kehys ammentaa useista eri kaupunkien ajallisuutta käsitteellistävistä perinteistä, erityisesti Lefebvreläisestä *rytmianalyysistä*, ja määrittelee tarkasteltavat liikkumisen rytmit tilan, ajan ja kehollisen liikkumisen erottamattomiksi keskinäissuhteiksi.

Tutkimuksen empiirisessä keskiössä on ruohonjuuritason liikkuminen. Liikkuminen, tai mobiliteetti, ymmärretään tässä laajasti (seuraten *uutta mobiliteetin paradigmaa*) toimintoina, jotka muodostavat merkityksiä, kokemuksia, kuulumisen tunteita, sosiaalis-materiaalisia vuorovaikutuksia, mielikuvia ja (liikkumisen) kulttuureita samalla, kun ne siirtävät ihmisiä paikasta A paikkaan B. Tutkimuksessa on tarkasteltu arjessa toistuvia kävely- ja ajoreittejä sekä liikkumisen tapahtumaa tavanomaisissa katuympäristöissä kahdessa suuressa suomalaisessa kaupungissa eri liikkumisen tutkimuksen menetelmiä (*mobile methods*) (*mukaan menemiseen* perustuvia syvähaastatteluita, valokuvia, reittivideoita ja reittikarttoja; videoituja paikkahavainnointeja) sekä *jälkifenomenologista* tutkimusotetta hyödyntäen. Tutkimusaineiston analyysi – mikä on tarkemmin esitelty sisällytetyissä tutkimusartikkeleissa (#01–04) – tuo esiin, yhtäältä, miten ihmiset (inter)subjektiivisesti hahmottavat, kokevat ja toiminnallaan muokkaavat kadun (ja laajemmin kaupungin) rytmisyyksiä omien liikkumisrutiiniensa konteksteissa, ja toisaalta, miten tilallisen toiminnan ja liikkeen kautta tilassa liikkujat tuottavat ajallista, tai hetkellistä, kadun arkkitehtuuria sopeutumalla tai haastamalla muualta

asetettuja rytmisyyksiä. Analyysi tuo lisäksi esiin erilaisia rytmien *välillisyyksiä* (#01) ja *rytmityksen* prosesseja (#02), *kaupunkiympäristön morfologian* vaikutuksia näiden rytmien muodostumiseen (#03), sekä katutilan haltuunoton ajallisesti määrityviä rytmisiä muotoja (#04).

Työ esittää, että nouseva rytmianalyyttinen tutkimusote on soveltuva ja hyödyllinen tapa lähestyä ja kartoittaa dynaamisia ja alati muuttuvia kaupunki-ilmiöitä. Arjen katutilan suhteen rytmianalyysi paljastaa erilaisia mikrotason ajallisuuksia (yhdessä makrotason kanssa), joiden valossa katuympäristö näyttäytyy monien heterogeenisten ja samanaikaisten ajallisuuksien tilana. Rytmianalyysi auttaa myös ymmärtämään kaupunkiliikkumisen moniulotteisuutta sekä arjen reittien merkityksiä funktionaalisten tekijöiden ohella, tuoden esiin ajallisten keho-ympäristö suhteiden moninaisuuden kirjoa. Yhdessä ne piirtävät vivahteikkaan kuvan kaupunkirakenteista kartoittaen sekä *formaaleja* (suunnitellut, 'ylhäältä' asetetut) että *informaaleja* (sattumanvaraiset tai rutiininomaiset, 'alhaalta' asetetut) liikkumisen rakenteita. Ne korostavat ihmistoiminnan jatkuvaa, niin rytmistä kuin kitkaista sykettä, kaupunkikudoksen *intensiteettiä*. Toisin sanoen, ne tuovat esiin kaupungin ja katuympäristöjen tahdin moninaisuuden sekä ennalta suunniteltuna että liikkeellä olevien ihmisten tuottamana.

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ORIGINAL PUBLICATIONS

Publication 01   Tartia, J. (2017) 'Mobile place-making on an everyday walking route: rhythm, routine and experience.' In *Urban Mobility – Architectures, Geographies and Social Space*, edited by A.E. Toft and M. Rönn. Nordic Academic Press of Architectural Research [Online]: 85–107.

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Publication 03   Tartia, J. (2018b) "Examining the rhythms of 'urban elements' on walking and driving routes in the city." *Mobilities* 13(6): 808–824, DOI: 10.1080/17450101.2018.1477303.

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1   INTRODUCTION

1.1   RHYTHMS OF THE STREET: REPETITIONS, SPACES, MOBILITIES

In short, this thesis is mainly the result of an ongoing, both personal and general, research interest towards three major urban issues: first, the daily (re)making of the built environment through peoples' routine activities; second, the nature of the most common, and thus also perhaps the most taken-for-granted form of urban (public) space, the street; and third, and the main connecting thread between the first two: (embodied) mobility, the central activity of the street, and the mode through which most of us encounter the city on a regular basis. We routinely walk, bike, ride and drive on different streets, alleys, paths, highways and roads, and whilst doing so, both perceive and partake in the continuous spatiotemporal remaking of the 'city' – or, in the *rhythms* of the city.

In other words, the research interest here is on the temporal urban environment, and how it is perceived, experienced and (re)made through the mobile embodied routine activities of daily life. Cities are temporal environments, living and functioning in an almost infinite number of different kinds of rhythms. These rhythms – that include various kinds of flows, circulations, movements, cultures, interactions, imageries and materialities – are both natural and man-made, both materialized and abstract, tangible and intangible, and vary in scale in both temporal and spatial scopes. Some of these rhythms are located more in the range of the human perception, others are so large, or so small, in scale that they evade our immediate senses; some rhythms are more hidden, taking place outside of our daily experiences – for example, high above in the sky or deep below the cities – or are confined to buildings and other *private* spaces of the city, leaving only traces or periodical cues of their existence on the boundaries; and some of these rhythms are more visible and take place in the *public*, like on the city street, and we participate in them daily – this thesis is about such rhythms, the *mobility rhythms of the street*.

The thesis, following a number of theoretical approaches on the temporalities and rhythms of cities – Lefebvrian 'rhythmanalysis' (1992/2013) in particular –

concentrates on the question of the city as a 'lived' environment, and its continuous re-production through daily practices. The recurring temporal elements of urban spaces – *rhythms* – have been somewhat limitedly examined in earlier research, providing a clear research gap for the study. The work analyses some of the key mobile and embodied processes – mainly walking and driving – through which urban environments are tirelessly re-made as part of the everyday life, focusing, in specific, on the daily *place-making and rhythm-making of the public built environment through embodied routine mobile practices*. The premise of the work is that although the mobility rhythms of the street – and the city in general – might seem *natural*, they are *socially produced*, and that such a production does not just happen in a top-down direction (through urban planning and design processes, legislation and the like) but also in a down-top fashion as people inscribe their own meanings and temporal relations into such spaces, as well as negotiate, contest and playfully create and modify set-from-the-above rhythms through their bodies (in motion). The study examines these rhythmic *urban mobile assemblages* of the street, and attempts to decode some of their complexity, focusing, in specific, on the body-environment relations. The study asks how such urban rhythms are experienced on the go, and how bodies create, interact, and negotiate such rhythms in (mobile) spaces, *in* and *through* motion.

The *urban mobility question* is an important one, not just as questions about the volumes or frequencies of movements (as often associated with studies on mobilities, or *transportation*), or the meanings and contestations over urban patterns (as examined here), but also from very practical standpoints. A large portion of the urban footprint is taken up by mobile uses, whether by the movement itself (such as roads, streets, highways, pedestrian pathways, bike lanes) or by the by-products of such mobile uses (such as parking spaces and lots, transport hubs, public transport stops); similarly, much of the mundane and day-to-day interactions in the public arenas of the city are mobile in nature. What kind of mobile spaces, and thus possibilities for (mobile or more stationary) activity in them, are created, is therefore one of the key concerns about the city and its design. As Robert Cervero, Erick Guerra and Stefan Al (2017) have recently prompted, we need to move past transport-as-cost-effectiveness kinds of conceptual premises towards examining mobility broadly as an integral element in the creation of livable – sustainable and just – cities (see also Jensen 2013; Jensen and Lanng 2017; on a 'new mobilities paradigm', see section 2.1.1).

These issues on the connections between mobilities and the *lived* urban environment are, perhaps, more relevant now than they have been before as cities are increasingly sites of human daily life (and full life-courses). It is estimated that

over half of the global population (since around 2008) lives in urban areas, and this number is expected only to increase in the future (to 68% by 2050) (United Nations 2018). As Ash Amin (2006: 1012) writes: 'The human condition has become the urban condition'. How life in the cities is organized, managed, choreographed and – most importantly – *lived* becomes an increasingly relevant question as more and more people call cities and urban environments their homes. Mobility plays a key role in these increasingly urbanizing daily lives.

The three complex issues that are of interest here – temporalities, street spaces and mobilities – form the larger thematic background in which the work is situated in, and also form the basic ingredients for the kind of urban rhythms the work is interested in. I will examine each issue in more detail below, but some words of caution are in order here. Each one of these themes is, of course, a very large one, and could easily be the subject of a doctoral dissertation, or the work of a researcher's lifetime, on their own. My intention here is not to attempt to *write open* each, or any for that matter, of these themes in detail (which surely would prove out to be an impossible feat), but to situate a practical research work that is more modest (and more feasible) in its scope, into the meeting point of these three major urban themes. Doing so, the work combines concepts, discussion and frameworks from different disciplines, mainly urban planning and design, human geography, architecture and urban sociology. Rather than drawing strict boundaries between disciplines, my interest here is to connect and combine ideas and issues, and, provide, hopefully, some new insight to the complex temporal assemblages of the street, whilst hopefully also managing a sufficient level of coherence and consistency in the process.

1.2   THE EXTENDED VIEW

Having presented the basic premise of the work above, I will continue to further draw out an outline for the research at hand below by making use of the three above-mentioned complex urban issues – temporality, street space and mobility – that together here form the basic ingredients of urban rhythm.

First, *the daily (re)making of the city environments* is increasingly on the urban research agenda as the everyday temporality of the city has been recognized as essential to how the city works and to what it *is*, next to the historical and evolutionary timescales. There is a long history of 'freezing the world in maps' (Dodgshon 2008: 1), but the contemporary city is increasingly viewed as *animated* (Allen 1999), where

different local flows and movements are connected to global networks that bring people, things and information together, around the clock, and in increasing speeds (Virilio 1977/2006; Harvey 1990; Castells 1999; see also Hubbard and Lilley 2004; Cresswell 2010a; Schwanen, van Aalst, Brands and Timan 2012; van Liempt, van Aalst and Schwanen 2014). Urban (public) spaces, similarly, are not seen as to be determined by their physical form alone – by the designed or haphazardly set up materialities – but also by the human activity in it: how the space is used, by whom, and how these uses vary temporally (see Lynch 1972). As Fran Tonkiss (2013: 8) writes, 'Cities are composed of physical structures, but also by the patterning of urban life by social actors as this reproduces the city in built and unbuilt forms, and in more or less stable morphologies.' Time-lapse photography – often tracing the fleeting tracks of mobile practices amidst the fixed built environment, outlined by the changing time of day – has become somewhat the portrait of the contemporary city, representing the dynamic nature of its life: its continuous flows and fluxes.[1]

Second, *the city street has a long history as a central site of public life*, acting as a setting for commerce, social meetings and political changes (see e.g. Fyfe 1998; Marshall 2005; Urry 2007: 66–77; Amin 2008; Loukaitou-Sideris and Ehrenfeucht 2009; Connerton 2009; Sennett 2011; Hubbard and Lyon 2018). The study of street-life has been on the urban research agenda at least since the introduction of the modern city, such as Georg Simmel's (1903/2010) notions of the urban *strangers* and the over-stimulating experience of the city-life, or the 'Chicago School's' sociological studies on various urban populations (such as the homeless in Anderson 1923/1988), to more recent studies on the 'life between buildings' (Gehl 1971/2011; Gehl and Svarre 2013; also Appleyard 1981; Whyte 2000). The 'problem' of the street is that it's character is located somewhere between a movement channel, a built form and a public space, which produces multiple and heterogeneous needs, uses and visions for the street (Marshall 2005; or for the sidewalk: see Loukaitou-Sideris and Ehrenfeucht 2009: 8–9), as well as producing difficulties for grasping that complexity of the street-life in a research setting (see e.g. Hubbard and Lyon 2018). The privatization and commercialization of street space, and new modes of social control (such as video surveillance), as well as questions of social inclusion and exclusion, have increasingly been on the forefront of studies centred on the street. (See A.B. Jacobs and Appleyard 1987; Fyfe 1998; Koskela 2000; Cronin 2006; Franck and Stevens 2007; Stevens 2007; Kärrholm 2009; also Hubbard and Lyon 2018.) The

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[1] For renowned representations of urban temporalities in film, see *Berlin: Symphony of a Metropolis* (Ruttmann 1927) for the daily cycle of the city, or *Koyaanisqatsi* (Reggio 1982) for time-lapse photography and the urban environment.

overall role of the street in contemporary urban life has also been seen to be somewhat in jeopardy, as street-life has partially migrated to shopping malls and other (semi)private spaces, raising questions about the control, management and inclusivity of such spaces (Crouch 2000).

Third, *streets channel mobility* and, thus, act as central settings for many of the day-to-day body-environment relations and social interactions in the city (Cresswell 2010b). Much of these mobile activities can be defined as 'necessary activities' (Gehl 1971/2011), conducted (at least primarily) for function rather than enjoyment or pleasure as part of the organization of the daily life. In a modernistic view, the city has been considered as a *machine* (Le Corbusier, in Evenson 1969; see also Urry 2007: 76–77; Amin and Thrift: 78–104), and the street as the main conduits in its (motorized) circulations, which have enforced ideals of speed and efficiency, as well as the use of the private car, in the planning of such spaces (Jacobs 1961/2011; Hubbard and Lilley 2004), rendering many urban sites as 'non-places' (Augé 1992/2008) or 'placeless' (Relph 1976) mobility-centred *no-man's-lands* that are passed-by in a hurry. Importantly, mobilities are increasingly recognized as more complex phenomena, beyond the scope of *transport*: as key modes of social interactions, body-environment relations, as well as functional movements (Sheller and Urry 2006). The so-called urban 'non-places' have increasingly attracted research interest that looks for signs of meaning in such spaces that are often somewhat disregarded in public discussion (see e.g. Jensen and Lanng 2017). Mobility, thus, is central to the life of cities, including their ecological and social sustainability (see Tonkiss 2013: 114–136; Sheller 2014; Cervero et al. 2017). Calls for planning and design practices that put the walker and the human-scale 'back' on the forefront – such as the focus on 'walkable' environments, 'shared spaces'*,* and 'transit oriented design' (TOD) – have been increasingly made to revitalise the *public* street (see Ewing and Handy 2009; Forsyth 2015; Jensen 2013; Jensen and Lanng 2017; Cervero et al. 2017).

The interconnections between these three above-mentioned major themes – temporalities, streets and mobilities – can be somewhat summarised through Jane Jacobs' (1961/2011) renowned notion of 'sidewalk ballets' from over fifty years ago. Examining the qualities that make streets lively and enjoyable environments, Jacobs noted the recurring temporal 'rituals' of the street – the recurring happenings that are part of the expected perceivable and experienced daily events of the street, such as the daily mobility flows, opening of shops and services, and the activities of different people groups during different hours of the day – which formed a sort of a recognizable script of the street, making the street familiar, *known* and one's 'own'

(see also Lehtovuori and Koskela 2013). Why Jacobs' notion is interesting here is that it not only suggested a kind of a choreographed dance of the street that takes place *without* any particular choreographer (see Tonkiss 2005: 69), but also that there is a perceivable, or experienced, script of events, which is not only place-specific, but also connected to the subjective uses of space, including one's movement in it. Think of a commute, or a route to the local shop, and the various (expected and anticipated) physical features, social interactions and possible encounters along the way that are each part of the (habitual) relations we have with the environments we dwell in. Such urban everyday choreographies, enacted by people as part of their daily routines, are central to urban life, providing familiarity and attachment to our immediate environments through such emerging patterns and temporary forms.

This brings up the fundamental question of what creates such sustained and habitually enforced connections between (urban) spaces, times and their (embodied) uses. Rather than moving towards increasing entropy, what keeps the temporal structures of urban spaces supported; what keeps the street space 'intact' temporally; what makes things repeat, what shapes such repetitions, and what such repetitions mean for our understanding of the city, its life and its functions, as well as ourselves and other people?[2] These fundamental questions, although obviously beyond the scope of this (or any) thesis, are intrinsically connected to the research approach taken here towards the analysis of the temporal city and its continuous re-production.

Whereas there has been interest on the temporalities of various mobile patterns and structures of the city (see section 2.2.1), less attention in previous research has been directed towards the experiential and embodied urban times and rhythms that people produce through their activities in the urban environments, and which present urban temporalities as heterogeneous and *multiple* times, rather than as a singular time (Crang 2001; also May and Thrift 2001; Edensor 2010; Mareggi 2013). The interest here, in other words, is more on the types and forms – the *intensities* (see Shields 1997; Pasqui 2016; Brighenti and Kärrholm 2018) – than on the calculable volumes or frequencies – the densities – of urban mobile flows and their timings (see section 5.3.1). What is important here is not only how the city temporally works

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[2] *Pareidolia* refers to the phenomenon where one draws meanings from a seemingly random material by recognizing forms and patterns in it, such as seeing human-like faces in inanimate objects, recognizing clouds as distinctive shapes, or as hearing sounds or words in aural noise (see Lee 2016). This human need for patterns (and thus familiarity and predictability) sets up the questions about what kind of patterns can be found in the organization of societies, or whether such emerging patterns relate more to our need for finding order and predictability in the natural chaos. These are mostly rhetorical questions here in the context of this work but provoke ideas about the nature of the pattern and repetitions of daily lives.

together – revealed by mapping how, where and when, and in what quantities, people move – but what happens *during* that movement, how that movement is practiced and experienced, how these movements reciprocally affect the mobile bodies and spaces, and how the mobile embodied contexts create a plethora of different kinds of micro-temporalities on the street-level. In other words, we know that the city lives and breath in various mobility rhythms but what does it mean for one's experience of it, and for how we understand the urban space and its continuous re-making?

To probe these questions, the work here (in part) turns to the emerging framework of 'rhythmanalysis'. In *Rhythmanalysis* (1992/2013), Henri Lefebvre examined a (mobile) street scene opening from an apartment's balcony, and used it to conceptualise 'urban rhythms' – as co-constitutive relations between *spaces*, *times* and *energies* (or actions) – and to formulate a mode of analysis of such rhythms (see also Lefebvre and Régulier 1985/2013; 1986/2013). Drawing from music theory, Lefebvre's rhythmanalysis attempted to understand the 'diverse beats' of the city that together formed the 'lived' form of the space – to examine the city as a *polyphonic* orchestra (Crang 2001: 192; see also Prior 2011). Lefebvre – in a Marxist lineage – noted that, in the urban man-made environment, the way such temporal orderings take shape is not objective or natural but *produced* (Lefebvre 1992/2013; see also Simonsen 2005). The natural (such as the day-time/night-time, seasons) and the social times (schedules, calendars, holidays, the 'workday', *clock-time*) all intertwine into a complex man-made temporal order, and it was Lefebvre's attempt to see how these *socially produced* rhythms could be (critically) analysed, and then, perhaps, also transformed (see Ibid.; Meyer 2008; Schmid 2008; Mels 2004) (see also section 2.2.2).

Rhythmanalysis remains as an unfinished project as it was largely published posthumously (see Elden 2004b/2013). The (underutilized) potential of rhythmanalysis has, though, been noted in various research fields, perhaps most prominently in human geography and urban studies (see e.g. Edensor 2010; 2014; Amin and Thrift 2002: 16–21; Crang 2001; Mels 2004; Smith and Hetherington 2013; Brighenti and Kärrholm 2018), in specific, for its 'insights on time, multiple temporalities and the time-body relationship' (Simonsen 2005: 7). Rhythmanalysis has, in specific, been picked up by mobilities scholars who have focused on the interplay between the embodied and environmental rhythms in different mobile contexts and situations, connecting rhythmanalysis to other research and conceptual approaches, such as phenomenology and *time-geography*. This work follows in a similar suite (see section 2.2.4). As discussed in more detail below, a definitive narrative of such a research process(es) utilizing rhythmanalysis is yet to be set, which provides room for new approaches, methodical experiments and (interdisciplinary) theoretical

connections. Rhythmanalysis is not here used nor developed strictly in Lefebvre's intended terms – as a Marxist urban analysis – but as a mode to *grasp* (and to be *grasped* by) (Lefebvre 1992/2013: 37–45) urban rhythms, and to focus on the emergent and processual body-environment relations to which rhythmanalysis provides fruitful ground (see section 2.2.2). As presented below, rhythmanalysis, as a form of temporal phenomenology, manages to combine practice and timespace under a same analytical lens, without favouring either, which is elemental for the study of such *mobile assemblages*, and it can help us to attune to the aforementioned *intensities* in which things take place, rather than only on the quantities or densities.

The main research interests of this work are, thus, related to the (partial) unpacking of the day-to-day mobile event from a temporal and embodied perspective, and the development of the rhythmanalytical framework in connection with other temporal frameworks – as a hybrid framework – as a mode of understanding the mobile city, particularly its street spaces, from experiential and material perspectives. The work connects the rhythmanalytical, or rhythm-based, framework to a mobilities oriented framework and a 'postphenomenological' research orientation in the examination of contemporary street spaces, embodied (mobile) practices, and (mobile) place-making and rhythm-making processes. Through an empirical study of day-to-day urban routes and mobility-oriented urban sites, the work examines critically three central notions or conceptualisations in urban research in specific: (1) the notions of places as bounded and stationary sites; and the homogeneous understandings of both (2) urban spaces and (3) temporalities.

The work makes use of qualitative ethnographic and participatory methods that stem from recent developments in *mobile ethnography* (see Chapter 3). The argument here is that rather than producing 'totalising accounts of the city' (Hubbard and Lyon 2018: 9), we need methods that facilitate analyses of the urban scene as it opens in, and *alongside* (see Ingold 2009), urban (mobile) lives. In other words, we need to get *closer* to people and things (Mareggi 2013) – to move away from the spatial representations from the 'top' (maps, satellite images, zoning plans), towards the embodied *enactment* (Jensen 2013) of these spaces from the 'below', and examine the city from the *lived* perspectives of people engaged with the real, physical and tangible socio-cultural-material elements of the city. This, in turn, can provide critical perspectives to day-to-day urban environments and how they are (re)made through mobile practices and engagements with the space, connecting to practical urban planning and design questions, such as the concerns on quality of the lived environment, ecological and social sustainability of urban environs, environmental experiences and meanings, and the organization of (both formal and informal)

(embodied) mobilities. Such an empirical focus on day-to-day routes and mobility-oriented sites can also shed light on the mundane, and even *marginal* (Madanipour 2004) public spaces of the city, over the specific public arenas – the plazas and the 'great streets' (A.B. Jacobs 1993) – that are often celebrated or promoted as sites of the city's social life (such as through city image branding) – or become politicized topics of public discussion – but which, though, only form one piece in the larger urban puzzle. Such a focus on what could be called *ground-level temporalities* – focusing on the micro-scale mobilities, and taking an embodied and practice-based approach – can reconfigure some of the taken-for-granted elements of street-life, and present a pluralistic, rather than a singular, view on the rhythms of the street.

1.3   RESEARCH QUESTIONS

Drawing the above notions together, the work is interested in urban rhythms that are revealed on the surfaces, or meeting points, between spaces, times and mobilities – understood here as elements of rhythm, following Lefebvre's (1992/2013) original notion of rhythm as *space-time-energy* (as noted above). In more practical terms, the interest is set on rhythms as the coming together of (routine and habitual) place-making processes, temporal repetitions, and embodied practices (see Figure 1). The work alters between these different positions *hermeneutically*, moving between theory and practice. These concepts are examined closer in the next chapter.

The main research questions of the work are: what kind of temporal urban assemblages emerge in the day-to-day mobile event of the street, and what kind of place-making and rhythm-making processes can be identified in repeated, contextualized mobile practices. The work probes these questions through practical research cases, presented further below in four research articles (referred to in the text through the abbreviations *#01–04*). The article-specific research questions relate to the practice of the mobile event, and the experience of urban temporalities. First, examining the contextual practices and experiences from 'inside' the mobile event, the works asks: what kind of temporal patterns and repetitions structure body-environment relations on habitual urban routes (Article #01–02)? Here, the focus is set on the mediacy of different temporalities on repeating walking routes (Article #01), and on the organization of rhythms in the meeting point of 'above-below'/'below-above' directed control, management and enactment of driving routes (#02). Then, by rooting these experience to specific physical sites, the work further asks: what kind of temporal patterns and repetitions structure habitual urban

routes in material settings? Here, the focus is on the sequences and polyrhythmia of day-to-day routes in relation to different urban morphologies that provide the material skeleton for the route to play out (Article #03). And third, through site observation data that sets the perspective on 'outside' the mobile event, the work asks: what kind of temporal socio-material interactions and appropriations take place in mobile events, focusing on the rhythmic and embodied negotiations and spatial appropriations in the day-to-day mobile event (Article #04).
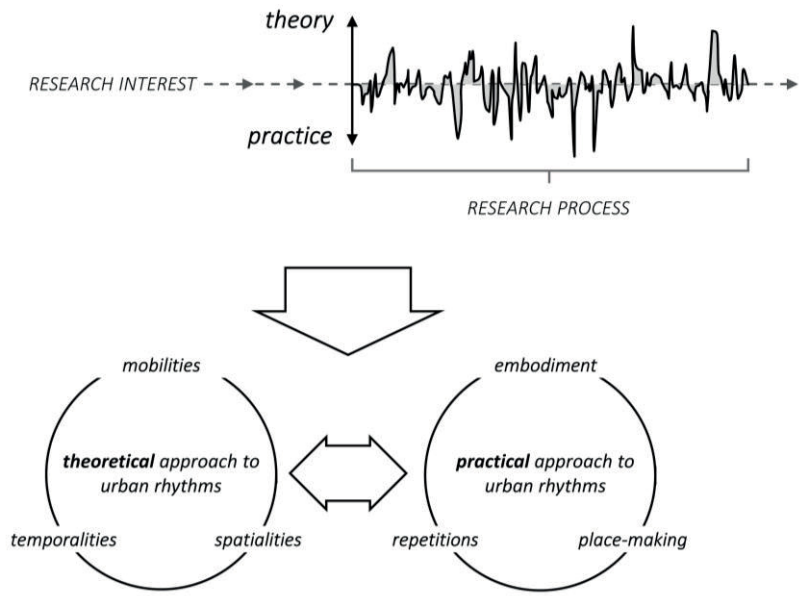
Figure 1. A sketch depicting the research interest on urban rhythms that in the (hermeneutic) research process moves continuously back and forth between theory and practice. Rhythm, following Lefebvre's (1992/2013) time-space-energy triad, is here examined as the coming together of – or as the co-productive relations between – spaces, temporalities and mobilities (substituting 'energy') from a theoretical standpoint. In practice, and in situating such analysis to real-life mobile events, the understanding of rhythm transforms into a focus on repetitions of embodied practices as part of day-to-day place-making processes.

The structure of the thesis is as follows. Chapter 2 introduces briefly the relevant theories on urban mobilities, street spaces and urban rhythms, moving from the concrete and corporeal mobilities towards the more theoretical notions of urban rhythm, and then back again towards practical applicability of a rhythm-based research process in the study of daily urban mobilities. Chapter 3 presents the

practical research cases – walking and driving routes, mobility sites – and research methods. Chapter 4 reviews the results presented in the original publications (Articles #01–04) that form the main body of the thesis. Chapter 5 discusses the findings and conceptualises rhythmanalytical thinking in relation to both urban research and planning processes. In Chapter 6, conclusions are drawn, and the possible future paths for rhythm and mobility-centred research frameworks are sketched.

2 MOBILITIES/RHYTHMS: THEORY

2.1 MOBILITIES

Mobility is central to how cities and human lives work. Mobility is a complex issue, with multiple strands and paths that connects widely to various major social discussions, such as to the organization of human settlements, accessibility and physical movement, social interaction, mobility justice, global mass tourism and migration, and mobile imageries, as well as to fundamental questions about epistemologies (a *static* world-view vs. *everything* in a constant motion). Without expanding the view too broadly here, in the following sections, central elements related to an experiential, embodied and relational urban mobilities framework are discussed. The argument for experienced and embodied mobilities is made through the 'new mobilities paradigm' and the interrelations between bodies and places that form complex mobile assemblages.

2.1.1 A 'NEW' MOBILITIES PARADIGM

The research interest here, in the examination of day-to-day mobile event, is anchored to what has been titled as the 'new mobilities paradigm' (Sheller and Urry 2006). This paradigm is not necessarily a 'new' one (see Cresswell 2010b) but it has – by taking a relational and a *processual* approach to mobility and movement (Merriman 2018) – re-focused the interest of mobility studies from mostly functional and quantitative approaches (*mobility-as-transport*) towards the various forms and scales (Cresswell 2006; Jensen 2013), spaces, practices and subjects (Cresswell and Merriman 2011), meanings and experiences (Edensor 2000; 2011), and politics of mobilities (Cresswell 2010b). Tim Cresswell (2010a: 554) writes: "While transport geography's main concern might be summarized by the need to figure out how to efficiently get from A to B, the mobilities turn motto may well be 'it's about more than getting from A to B'." Inside such a 'new' framework, mobilities are examined as 'corporeal travel', 'physical movement', 'imaginative travel', 'virtual travel', and 'communicative travel' (Büscher and Urry 2009), which include both the various

representations *and* practices of mobilities. The research focus inside the framework is also set on the regulation and control (Cresswell 2010b), and the various disturbances and obstacles of mobilities – or the *immobilities* (Bissel and Fuller 2011; Turner 2007) – as well as on issues related to *mobility justice* (Jensen 2019; Miciukiewicz and Vigar 2013; see also Middleton 2018).[3] In other words, mobility is more than *movement*, or the (physical) displacement between a point A and a point B: it is *socially produced* (Cresswell 2006: 2–4).

The shift in the paradigm has followed a more general 'mobilities turn' in academics, which generally refers to the increased interest towards, and understanding of, mobility in the making of the world (Büscher and Urry 2009).[4] Tracing the lineages of mobilities thinking, Cresswell notes that mobility, as a social activity, has often been seen as an uprooting, or even destructive (or morally 'wrong') force, in contrast to the 'order and structure' of more fixed elements and settlements (Cresswell 2006: 25–56). In contrast, and more increasingly, mobility has also been a basis for a *nomad thought* where everything is seen in a continuous motion, and where mobility is connected to ideas such as progress and freedom (Ibid.), which might sometimes be in danger of drawing over-simplified accounts of a 'hypermobile world' (Cresswell 2010a).

Most importantly, in regard to the interests of the study at hand, the 'new mobilities paradigm' tackles the question of ordinary, day-to-day mobilities. Somewhat counter-intuitively, everyday urban mobilities, in otherwise thoroughly-mobile contemporary understandings of the world, are often examined mostly as accessibility or travel-time, referred to as 'dead time' that is to be cut or minimized through efficient transportation planning (see Sheller and Urry 2006). The new mobilities paradigm, however, underlines that the daily mobile practices, as mundane, and ordinary events that are part of the *daily grind*, are meaningful practices and modes of 'dwelling-in-motion' (Ibid.; Sheller 2014, following Martin Heidegger's notion of 'dwelling'). In other words, these mobilities are 'situational': contextual, material, as well as experiential and social (Jensen 2013; 2018; Jensen and Lanng 2017). Such insight, as argued further below, can provide critical insight to body-

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[3] The airport, in specific, is an often-used example of a mobile space that is created upon the idea of a fully mobile system (and the strict control, management and supervision of it) (see Adey 2011) by 'cocooning' the passenger through a variety of means for the duration of the flight (Bissel and Fuller 2011).

[4] For more detailed examinations of the *mobilities turn*, the *new mobilities paradigm*, and their interlinkages, see Urry 2006; 2007; Sheller and Urry 2000; 2006; Büscher and Urry 2009; Cresswell 2006; 2010a; 2010b; Cresswell and Merriman 2011; Adey 2010; Sheller 2014; Jensen 2013; 2018; Jensen and Lanng 2017.

environment relations in urban environments as people are not only 'moving through space-time but making it.' (Crang 2001: 194.)

2.1.2   (MOBILE) BODY, PLACE, AND POSTPHENOMENOLOGY

In the centre of the 'new mobilities paradigm' is the body: 'Human mobility is practiced mobility that is enacted and experienced through the body.' (Cresswell 2010b: 20.) The view on the body here is a holistic one: it refers simultaneously both to the 'flesh' and the 'mind' of the body, and to a body that is in a continuous reciprocal relation with its environments (see Sheller and Urry 2006; Büscher and Urry 2009; Murray and Doughty 2016). Rather than a rational agent that optimizes each step in the city, the living body is biological, performative, and affective (Gregson and Rose 2000; Edensor 2000; Bissel and Fuller 2011; see also Pallasmaa 2018), multisensorial (Rodaway 1994), and bounded by habits and routines (Bourdieu 1996; Simonsen 2010; Dewsbury and Bissell 2015; Casey 2001; Middleton 2009). Embodied mobilities, thus, are not easily pinpointed as simple *trajectories* as 'Some [of it] is purposeful, much of it is routine, unintentional, even accidental' (Tonkiss 2013: 8).

The question of the nature of the body-environment relations is in the focus of *phenomenology*. Stemming from the works of Edmund Husserl, Martin Heidegger and Maurice Merleau-Ponty, phenomenology, generally, examines the 'field of phenomena' (Ihde 1977/2012: 23; see also 2008; also Laverty 2003; Ash and Simpson 2014; Spinney 2014). In other words, phenomenology is about the examination of a phenomenon, in specific the *taken-for-grantedness* of the everyday life: the 'primary aim of phenomenological research is a more accurate and thorough understanding of human life, experience, and meaning' (Seamon 2018a: 13). A key concept here is the 'lifeworld' as the (pre-reflective) centre of the body-environment relations (Buttimer 1976; see also Seamon 1980; 2018b; Laverty 2003), and what could be called the 'lived experience' as occurring somewhere between the mind and the body (Simonsen 2010; Seamon 2018b).

The interest is, in specific, on the questions about the experience of being in a *place* – as an ordered and structured, meaningful space that is in the centre of human experience – and the 'sense of place' that is formed through a prolonged interaction and personal investment with a particular space (such as 'home') (Casey 2001; Relph 1976: 39–41; Tuan 1977; 1978). Place, in other words, is seen as an important site of human experience, which, often as a bounded or *enclosed* (see Norberg-Schulz 1979:

189) space, separates the *places* from the *spaces in-between* (see Trigg 2017). The notion of mobility – that frames many contemporary urban spaces – sits poorly with such bounded and territorial conceptualisations of places (an area, a specific building, a square, a stretch of a street, a room)*,* as the formation of a 'sense of place' often requires *rootedness* – or fixity – to emerge, and mobility often means the opposite (Cresswell 2010a; 2010b). Yi-Fu Tuan, for example, noted that 'Place is a break or pause in movement – the pause that allows a location to become a centre of meaning with space organized around it.' (Tuan 1978: 14; also 1977: 161; see also Adey 2010: 54.)[5]

Focus on re-occurring mobile involvements with spaces – routes and mobile practices – could, however, provide some alternative insight to such approaches to places and the urban experience. Justin Spinney (2014, reading Relph 1976) notes that even though phenomenology and mobility are related approaches (*things* are in motion from a phenomenological perspective), there is a rather clear distinction between *places* and the *other* environments in-between – including the 'placeless' sites (Relph 1976) and the 'non-places' (Augé 1992/2008). Such dichotomies – *space/place*, *place/non-place*, or *place/placelessness* – can be, though, problematic (see Mels 2004; Ingold 2009: 30–31; Trigg 2017). Places, as Elizabeth Grosz (1998) argues, are experienced and practiced *through* the body, and thus a separation between the more meaningful and the less meaningful spaces or places is somewhat arbitrary – as Edward S. Casey (1996) notes, there is no places without bodies, and there is no bodies without places. Drawing from the 'new mobilities paradigm', movement – that is carried out by the body – is always experienced and performed (Jensen 2009; 2013), which suggests that elements of (inter)subjective place-making – as embodied socio-material connections – are always present when we move and dwell in (any) space. In short, embodied movement is a *constitutive force* of the city, re-making it again and again (Simonsen 2004), which questions the (aforementioned) 'rooted and bounded notions of place as the locus of identity.' (Cresswell 2010a: 551; see also Edensor 2010.)

Approaching places from a phenomenological perspective puts major focus on the *subject* in the making of such places, which might render some of the non-subjective and non-human elements of the body-environment relations less crucial in such views, setting the milieu as a backdrop 'in which human agents ascribe

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[5] Tuan (1977: 161), though, does note that such breaks can be very short – or quick – and the experience of movement thus forms into a succession of such small breaks. An alternative approach from Tim Ingold, where movement is considered as a *continuous line*, is presented further below (see section 5.2.1).

meaning and significance.' (Buttimer 1976: 284-285; see also Ash and Simpson 2014.) Thinking phenomenology through the above mobilities paradigm – that enforces the role of the concrete materialities and corporeality, the multisensorial body, and human as well as non-human agencies, and their reciprocal relations – thus could benefit from some additional approaches. Mobilities, here, after all, are regarded as *flows* that 'are spatial, temporal – but above all, material.' (Shields 1997: 2.) The work here moves towards *postphenomenology* that expands the phenomenological lens from the human experience towards the materialities of the world and the body, and their co-constitutive relations.

Similarly to phenomenology, postphenomenology is not a coherent discourse or a singular strand of thought but rather a collection of ideas (Ash and Simpson 2014). For Don Ihde (1977/2012: 128), the basic formula for postphenomenology can be presented as:

phenomenology + pragmatism = postphenomenology

In other words, 'Postphenomenology is a modified, hybrid phenomenology' with a focus on *pragmatism* (Ihde 2009: 23), which 'substitutes embodiment for subjectivity' (2003: 11) (see also Ash and Simpson 2014). Ihde argues that the focus on embodiment can overcome the critical notions sometimes set against phenomenology as a 'philosophy of subjective phenomena' (Ihde 2003: 11) through a focus on the 'actional' body, and contextuality (1977/2012: 73), as well as through recognizing that bodies are 'both gendered and cultured' (2003: 12). It also aims for intersubjective, situated and material perspectives on experiences: 'Clearly one begins with first person experience, but one does not end with it.' (2008: 6.) Postphenomenology examines the role of *technologies* (which is understood here in a broad meaning, encompassing anything from language to high-tech, from shoes to pavements) and the *non-human* elements in the making of the world, connecting the body (inseparably) to the concrete spaces it acts in (see Ihde 2003;1977/2012; 1993; also Spinney 2014). Robert Rosenberger and Peter-Paul Verbeek (2015: 12) note that whereas phenomenology focuses on the *intentional relations* between the subject and the object, postphenomenology emphasises how these relations are most often *mediated* (by technology) and that 'the mediation is the *source* of the specific shape that human subjectivity and the objectivity of the world can take in this specific situation.'

(Italics in original.) In the urban setting, as examined below, such mediations happen through the built environment – through its material design and physical elements (such as pavements, street furniture and vehicles) (see Jensen 2013), socio-material relations, and, increasingly, digital connections and augmentation (see section 3.1.2). To be clear, my intention here is not to juxtapose phenomenology and postphenomenology. Postphenomenology is here highlighted mainly for its *articulated focus* on the body, practices, and the relations between the material environment and the body.

The focus on both the human and the non-human elements in postphenomenology shares connections with 'assemblage theory', or *assemblage thinking* more broadly. Assemblage thinking – based on the works of Gilles Deleuze and Félix Guattari, and Manuel DeLanda – examines the socio-material world as emergent and relative, and focuses on the relations between different human and non-human actors, and how these relations are continuously (re)assembled as *ongoing processes* (see McFarlane 2011; Anderson, Kearnes, McFarlane and Swanton 2012; Dovey 2010; Allen 2011; Shaw 2014; Häkli 2018). In assemblages, the relations between the different parts are in a continuous process of *formation,* over a static *form* or a fixed network of relations (that could perhaps be found more commonly in another similar framework, the *actor-network-theory* [for comparison, see e.g. Müller and Schurr 2016]). In an urban context, 'assemblage urbanism' brings together practices, affects and materialist orientations in order to understand what the city is and how it functions, and examines the city and urban spaces as continuous processes (Shaw 2014).

Connecting threads between assemblage thinking and postphenomenology can be found at least on three levels: they both enforce materiality, a processual view on phenomena, and the multiplicity of such processes. As such, they can provide a view on place where it is understood as a continuously forming and emerging process, rather than as being a pre-set or fixed site, and that it is simultaneously a material, social, as well as subjective site. Kim Dovey (2010: 17) notes that neither materiality, representations, or subjectivity can *alone* provide the whole picture about places and their elements: 'To see places as assemblages is to avoid the reduction of place to text, to materiality or to subjective experience.' Assemblage thinking in relation to experiences and body-environment relations is a move away from pre-set cultural assumptions towards a focus on events and practices, and their continuous re-making (Buser 2014): 'Assemblage is a way of understanding the city as produced by multiple desires and at multiple scales – both top-down and bottom-up.' (Dovey, Ristic and Pafka 2018: 4.) It helps to explain the relations between bodies and the

environments that they dwell and act in, and how they shape one another in a continuous and inseparable fashion. Casey (1996: 24) similarly notes that places *gather*, meaning that places hold together configurations, even if consisting of multiple, even conflicting elements. This further echoes with Doreen Massey's notions of places as *constellations of events*. Places, rather than homogeneous, static and bounded sites, are instead best thought of as processes: as sites of *becoming*, relative, heterogeneous, and incoherent. (Massey 2005.) This moves the view on places and spaces away from 'Russian doll' kinds of hierarchical understandings towards more relational and body-centred views (Ingold 2011: 146; see also Osman and Mulíček 2017).

Further below, such a view on places is examined in relation to recurring mobile contexts and 'lived' street spaces.

2.1.3   'LIVED' STREET SPACE

Urban public spaces are often divided into 'spaces for movement and spaces for staying: streets and squares.' (Gehl and Svarre 2013: 113.) Similar dualistic categorisations include 'armatures' and 'enclaves' (Jensen 2013: 35–37, following the works of David Grahame Shane), 'corridors' and 'rooms' (Colin Buchanan, in Marshall 2005: 48–49), or spaces of 'possession in movement' and spaces of 'static possessions' (Cullen 1961: 24). While the focus on the study of urban life is often set on the latter of each of such conceptual pairs (see Jensen 2013: 37), the contemporary street, although often overdriven by (motorised) movement, is also a complex, and somewhat undervalued, site:

> The street, as the simplest form of public space in the city, is more complex than it looks. These everyday public spaces are subject to different uses and meanings: they are means and media of getting about, meeting places or places to hang around in, forums of visibility and displays, sites of protest. Carrying off these different uses of space is an art or skill that is carried in the body.
>
> (Tonkiss 2005: 69.)

The street is a collection of materialities, practices, social interactions, and signs and symbols (Tonkiss 2005; 2013; Scollon and Scollon 2003; Crouch 2000), and simultaneously both *real and imagined* (Soja 1999). Streets are 'sites of domination and

resistance, places of pleasure and anxiety' (Fyfe 1998: 1), and sites where individual and collective identities are formed and displayed (Loukaitou-Sideris and Ehrenfeucht 2009).

The criticism on the nature of the contemporary street often stems from modernistic car-dependent approaches in urban planning and design (see Marshall 2005) that have produced traversed-through rather than 'lived' spaces. The argument often is that urban spaces lack meaning and investment by their users, that they are monofunctional rather than multifunctional, and that they are only experienced (superficially) *in passing* (Relph 1976; Augé 1992/2008; see also Sheller and Urry 2006). Especially the effects of car use (segregation of space for different mobility modes, effects on safety, traffic noise and smog, social isolation inside the car) have often been noted as deteriorating elements of the 'livable' and social street space (see Jacobs 1961/2011; Appleyard 1981; Sheller and Urry 2000; Cervero et al. 2017). Mobility, in all of its forms, is seen somewhat separate from *city life*, and as (motorized) mobility is assigned to the streets, the role of the street in the public life is not always regarded as essential.

The seemingly lifeless streets and sidewalks that populate our contemporary cities – that might not get much attention in city design (see Jensen and Lanng 2017) nor in our personal life narratives – are, nonetheless, key sites in cities. Of course, there are *lively* streets and sidewalks (as noted in section 1.2) but not all streets and sidewalks are lively – but that does not mean they are *lifeless* either. Ole B. Jensen (2018: 9, reading Cresswell 2006) writes, "nothing (except analytical prejudice) suggests that 'nothing happens' and that we are 'switched off' as we move through contemporary urban mobility systems". The day-to-day spaces that we use, both the celebrated *and* the marginalized (Madanipour 2004), *are* both important in the making of the city and urban life. As Grosz writes:

> If bodies are not culturally pregiven, built environments cannot alienate the very bodies they produce. - - This is not to deny that some city environments are forbidding, but there is nothing intrinsically alienating or unnatural about the city. The question is not simply how to distinguish life-enhancing from life-denying environments, but to examine how different cities, different sociocultural environments actively produce the bodies of their inhabitants as particular and distinctive types of bodies, as bodies with particular physiologies, affective lives, and concrete behaviors.
>
> (Grosz 1998: 48)

In urban studies, the connections between the embodied mobile phenomena, materiality and planning have been examined somewhat narrowly. Architecture and transportation planning have long been considered as separate fields (Marshall 2005: 10–14; Connerton 2009; Dovey and Pafka 2016; Jensen and Lanng 2017). Some notable exceptions include approaches that have examined the interlinkages between motion and (visual) perception of the environment as an *aesthetic experience* (usually from an architect's professional perspective) (see Cullen 1961; Appleyard, Lynch and Myer 1964; Venturi, Scott Brown and Izenour 1972; Bosselmann and Gilson 1993; Aura 1993), or through the notion of *accessibility* (see Hillier 1999 on *space syntax*).[6] One approach that has aimed to take the body more holistically into account in city design is Lawrence Halprin's (1963/1972; see also Merriman 2011) conceptualisation of 'motation' as a tool to map and choreograph movement in space (in an analogue to music and dance) (see also Thiel 1997 on 'envirotecture'). Kevin Lynch (1984) also formulated some initial notions for a 'sequence design' as an alternative to existing urban design practices that would approach the design of the urban environment from a mobile perspective and how the movements of people are connected together (as highlighted in Tonkiss 2013: 14–15). These approaches on the interlinkages between motion and the built environment are, though, still exceptions rather than the norm.

What such approaches initially suggest, though, in accordance with the 'new mobilities paradigm', is that mobilities do not only take place in spaces – like lines on maps, or particles inside boxes – but that they actively produce, shape and transform such spaces (Cresswell and Merriman 2011), as well as produce meanings and cultures (Jensen 2009): 'bodies act upon the city, inscribing their presence through movement in a process of continual remaking.' (Edensor 2000: 121.) On the street, the body's movements are affected by the concrete materialities of space that *affords* (Gibson 1979)[7] different kinds of uses, and facilitates (or impedes) social

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[6] Mobilities have also inspired architects and designers to envision (future) mobile urban lives, such as the works of architect Yona Friedman (2006) on 'mobile architecture' and the 'villa spatiale' (see also Pinder 2017); the 'Walking City' concept, and others, of the *Archigram* group (see Ibid.); the transportable pod-like plastic housings of architect Matti Suuronen (for example, the 'Futuro' design); the air-supported structures of various designers in the 1970s (see McLean and Silver 2015); the floating city concepts, such as the 'Lilypad' model from Vincent Callebaut; or even the self-mobile *Strandbeest* art installations by Theo Jansen. Each of these examples tackles themes related to the fixed/dynamic and the static/motion dichotomies in urban design, and the temporality of the architectural/urban form.

[7] James J. Gibson's (1979: 127–143) renowned notion of environmental 'affordances' refers to the possibilities (and limitations) that the surroundings provide for a subject (whether a human being or an animal). Gibson draw his notion from ecological thought, connecting the affordance idea to a 'niche of the environment' for each living animal, people being subject to their environments as well as to

relations. These materialities are often taken as *given*, even if they, in the *built* environment, are most often the result of planning and design processes (see Jensen 2009; 2013). The body's movements are also affected by social interactions and encounters: different modes of codes of conduct, street wisdoms, etiquettes and mutual trust between the urban *strangers* are habitually used (Goffman 1983; see also Tonkiss 2005: 10–14; Edensor 2000).

In other words, the city orients and directs social life (Grosz 1998). Jensen, following partially de Certeau's (1990/2013) renowned notions of 'strategies' and 'tactics', notes how mobilities are both 'staged' from the 'top' (regulated and planned) and enacted from the 'below' (practiced and performed) (respectively) through the body (Jensen 2013). Here, the body is both the source of and the subject to power: on one hand, the embodied uses of space – as *territorializing practices* (Kärrholm 2007; 2017) – are active modes of taking control of the space through embodied presence (see also Tonkiss 2005: 59–62); on the other, the body is disciplined to behave in specific ways – such as through the control of the *social gaze* [Foucault 1975/2005; see also Koskela 2000]), or the 'eyes of the street' (Jacobs 1961/2011), and trained to move in certain ways in the public (see also Lefebvre on *dressage* in section 2.2.2). The body can conform to, or contest and (re)negotiate, such intended and regulated uses of the space through (mobile) practices, such as escaping the intended functionality of the street through *playful* behaviour (Stevens 2007; Franck and Stevens 2007; Stratford 2015). As David Seamon (1980) elaborated, the embodied spatial and temporal (mobile) choreographies are complex – formed of 'body routines' (such as walking) and individual 'time-space routines' (such as a walking route) that together form distinctive shared 'place-ballets' (following the aforementioned Jacobs' [1961/2011] 'sidewalk ballet') (see also Seamon and Nordin 1980; see also Wunderlich 2008; 2013). Such repeating spatial uses form distinctive spatio-temporal orders and structures (Edensor 2011; see also Sheller 2014), or 'temporal architecture' (the presence/absence-oscillations of bodies, practices and materialities) (Osman and Mulíček 2017), which begin to highlight the *rhythms* of the street.

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other people. In specific, affordances are about the properties of the environment that facilitate action (see Heft 2010). For example, a chair affords sitting by design, but also other kinds of uses are possible.

2.2   RHYTHMS

Cities, as noted already above, are temporal environments. We all are familiar with the experience of time in urban environments: the daily alteration between the day and the night, the familiar faces on the commute bus signalling similar daily schedules, the moments spend sitting in the rush-hour; the teared gig poster on a street poll, the alteration between the old and the new buildings on a street; the seasons following one another, and the yearly growth of the green areas following these seasons.

A differentiation is often made between time as *cyclical* or *linear*, where the former refers to the repetitions and reoccurrences, and the latter to its one-directionality (Adam 2004; Lynch 1972: 65). A further differentiation is made between natural (or *biological*) and social (*man-made*) time – the former referring to the passing of time and ever-looping cycles, and the latter to the socialisation and quantification of such temporal processes as reoccurring practices and events (Adam 2004). Even further differentiation is also made between the *experienced time* (such as Henry Bergson's notion of time as 'duration', see Hodges 2008) and the time that works independently of human experience. The *clock-time* is usually considered as quantitative and 'objective' time, whereas 'event time' is considered as qualitative and 'subjective' experience of the passing of time (Orlikowski and Yates 2002).

Even the brief paragraph above shows that time is an extremely complex issue, and it is not always clear what we mean when we speak about time; time is perhaps even the *greatest mystery* (Rovelli 2017/2018: 9) that remains unsolved. Rather than attempting to discuss time in all its complexity and depth, or to dwell into discussion on the complexities of urban histories and futures, I will here focus on the urban mobility timespace patterns, the synchronization processes that shape and transform these patterns, and on the *plurality* of embodied urban temporalities in order to gain an understanding of urban rhythms.

2.2.1   SYNCHRONISED URBAN TEMPORALITIES

Time in the city has been standardized and quantified through a variety means – through various institutions – in order to organize and manage the daily life in societies (Highmore 2002: 5–7), *timing* both the public and the private activities (Parkes and Thrift 1978; Kärrholm 2007; Edensor 2010). The societal temporal organization has meant that the natural cycles and embodied, or biological, times

(day/night cycles, seasons; sleep-cycles, hunger, ageing) have been socially *colonized* (Adam 2004; see also Lefebvre 1992/2013, see section).The clock-time is often taken as an objective fact, even if it runs against our own temporal and embodied experiences: 'Even when we do not conform to it, we know very well what it is we are not conforming to.' (Harvey 1990: 418).[8]

From a mobilities-perspective, John Urry (2007: 95–99) notes the interlinkages between the development of complex mobility systems and the emergence of global clock-time. The introduction of the railroad, in specific, has historically played a key role here, as the operation of the trains required the formation of synchronised schedules over long distances between places that, until then, had had their own unique timings and modes of keeping time (see also Highmore 2002: 5). Such synchronization processes have also been adapted on the city streets in spatial as well as temporal terms. The movements on the street have been *domesticated* (Amin 2008) in the wake of the automobile and the clock-time: making movements predictable through (traffic) regulation and control, and by physically segregating different uses of the street (Loukaitou-Sideris and Ehrenfeucht 2009). Phil Hubbard and Keith Lilley (2004) note how modern urban planning practices have had a long history in the *pacing* of urban environments, enforcing the ideals of speed, rationality and efficiency, and the automobile, which's effects can still be found in contemporary cities and planning policies today (see also Marshall 2005). On a city scale level, the zoning system – with strictly demarcated single-use areas for different activities – has similarly separated different daily uses and practices in the city (and beyond), both spatially and temporally (A.B. Jacobs and Appleyard 1987; Hamilton-Baillie 2008; Kärrholm 2007; Mäntysalo and Rajaniemi 2003) – thus (partially) creating the need for city-wide and inter-city-wide transit: or in other words, the need for complex timespace connections over long distances, which, today, are, in many cases, connected with the help of the private car (Sheller and Urry 2000; Urry 2006). Such timespace patterns have been, as noted earlier, increasingly in the interests of urban research, stemming from such approaches as *chronogeography* (Parkes and Thrift 1978) or *time-activity studies* from the 1970s onwards, which have attempted to map out such temporalized human activity in the city (see e.g. Bullock, Dickens and Steadman

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[8] During the thesis process, one related discussion on the societal temporal organization and synchronization was the debate on the yearly changes between the daylight savings time/'summertime' and standard time/'winter-time' in the European Union, and whether this practice should be waived in the future (European Commission n.d.). In the Northern Scandinavia, one island community has also recently (as a marketing campaign) publicly aimed to declare itself as the first time-zone free area in the world (O'Hare/CNN 2019).

1972; Shapcott and Steadman 1978; see also May and Thrift 2001), often from mostly quantitative perspectives (as volumes, frequencies and timing [clock-time]).

Time-geography is one of the key approaches that has examined the temporality of body-environment relations, and the synchronization of the individual's subjective movements into larger collectives and patterns. Formulating the basic principles of time-geography, Thorsten Hägerstrand (1970) famously noted that the human body moves in time-space, drawing a continuous line in both spatial *and* temporal coordinates on a three-dimensional 'map' (Figure 2) (see also Pred 1984; Mels 2004). In the day-to-day life, such lines are grouped into 'bundles' where these different lines momentarily meet, such as transport hubs and offices, bringing people momentarily together. For Hägerstrand, movement was a first and foremost a corporeal, material activity: people are always located *somewhere* in the time-space coordinates. The location of the body in the physical world also sets 'constraints' on the capacities of the body to act, such as *time-budgets* that demarcate where one can move in a given time, on a given mode of movement (speed, accessibility). (Hägerstrand 1970.) (On time-geography, see also Pred 1984; Gren 2001; Edensor 2010; Haldrup 2011; Schwanen et al. 2012.) The basic 'visual language' of the time-geography framework provides a thought-provoking system of representation of day-to-day movements and temporalities, and underlines the importance of the physicality of the body and the space (and their constraints) – the relational *lived-space* (Bollnow 1961) rather than the *geometrical* space – in the mobilities framework.
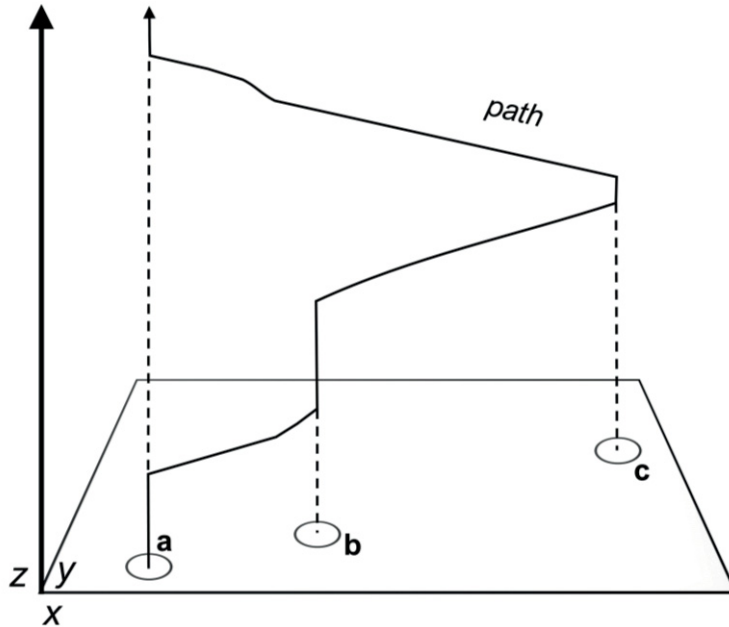
Figure 2. A basic sketch of a body in motion, following Hägerstrand's (1970) time-geography framework and visual language. The path, representing the location of the body, moves simultaneously in space (x, y) and time (z) coordinates as the body moves between locations a, b, c and (again) a.

Time-geography, though, has been criticized for focusing mainly on the *mappable* (quantifiable) aspects of human mobilities, and treating time (and space) as a singular homogeneous factor (as clock-time) rather than as a plurality of different temporalities, and thus missing the key 'lived' and embodied aspects of mobility and temporality (respectively) (see Buttimer 1976; Crang 2001; Neutens, Schwanen and Witlox 2011; Merriman 2012; Simpson 2012). Anne Buttimer (1976), as a contemporary commentator of the then emerging time-geography framework, in specific, noted that what time-geography lacked were the 'lived' elements of temporality – the multiplicities, *intensities* (see also Kärrholm and Brighenti 2018) and experiences of times and temporalities – and noted that *rhythm* could be an alternative, and more suitable, notion to approach such 'lived temporalities' (see also Mels 2004; Crang 2001).

Rhythm, as a concept, has long been of interest among urban researchers, and part of the *lingua franca* of urban studies, even if it has not been defined as a concept in detail, and, thus, has come to refer to different kinds of phenomena in different contexts. Julian Henriques, Milla Tiainen and Pasi Väliaho (2014) trace the uses of

the word *rhythm* from 19th century onwards, and note that rhythm – as the keyword of modernism – was used as a term to explain both mental and physical (urbanizing) life (see also Kärrholm and Brighenti 2018). In general, rhythm refers to *repetition*, often associated with music and dance, and other kinds of recurring patterns, such as sleep-cycles, eating habits, daily life structures, automation and machines, or seasonal changes. In different societies, various rhythms in nature have been recognized, named and numbered in different ways, which in turn have facilitated the 'anticipation and planning' of such repetitions and created 'a sense of ownership and control' of time (Adam 2004: 102; see also Kullman and Palludan 2011).

Such relations between repetitions and ownership can be found, for example, in the aforementioned notion of 'sidewalk ballets' in Jacobs' (1961/2011) writings. Similarly, Allan Jacobs writes that 'Knowing the rhythm of a street is to know who may be on it or at a certain place along it during a given period; knowing who can be seen there or avoided.' (A.B. Jacobs 1993: 4.) Rhythm, in essence, can be thought of 'as an element of dynamic stability' (Mareggi 2013: 5), where consistency, predictability and familiarity is (re)created through otherwise mobile phenomena.

Such a stability of day-to-day life rhythms, however, can also be increasingly questioned in the contemporary city as cities are gaining more complex spatiotemporal forms (Smith and Hetherington 2013), such as through the emerging *24/7-city* idea (night shift workers, continuous global networked connections, around-the-clock availability of [automated] services) and the above-mentioned fragmentation of spatial uses (also new digital arenas and augmenting technologies). The role of the collectively shared *pacemakers* – producing collectively shared temporal structures, such as the 9 to 17 working day (Parkes and Thrift 1978; Mulíček, Osman and Seidenglanz 2014) – might be in this sense under questioning, as we move from a *fixed* time towards a more *fluid* or *negotiated* time (Urry 2007: 172– 175), and the temporal assembly of the city becomes more varied (Smith and Hetherington 2013).

The rhythms of the street – that are of interest here – are complex and multifaceted, and thus difficult to grasp in depth, working in different scales and levels. The interest further below is focused on the experienced rhythmicities (in a mobile route context) and body-related rhythms: how people take control of space and time through mobile practices. Such temporal body-environment relations are examined through *rhythmanalysis*.

2.2.2   RHYTHMANALYSIS

What are *urban rhythms* exactly? This is one of the key questions Lefebvre brought up in 'Rhythmanalysis' (1992/2013). In it (together with Catherine Régulier), he formulated initial ideas for the conceptualisation and analysis of urban rhythms – following the works of Lúcio Alberto Pinheiro dos Santos, and Gaston Bachelard – setting focus on the different temporalities and repetitions, or *reprises* (Ibid.: 6; following here partially the writings of Friedrich Nietzsche, see Elden 2004a: 196–198), of the (urban) environment. Kirsten Simonsen (2005) notes that Lefebvre's rhythmanalysis essentially was an attempt to formulate a theory of the *production of time*, similarly to his theory of the *production of space* earlier, in which some basic premises for the analysis of rhythms are already set (see Lefebvre 1974/1991: 205–207).[9]

In Lefebvre's Marxist analysis, the city is presented as a site of polyphonic, intersecting and overlapping rhythms that compose the complex urban life. Rhythmanalysis was a means to critically examine the temporal dimension of modern societies, and how the produced, or man-made, rhythms of the modern industrialized capitalistic societies put the (working) man[10] under oppressive, mechanistic rhythms (*dressage*) (rather than the natural and biological rhythms), rendering everyday life as a site of *consumption*. (See Crang 2001; Highmore 2002: 113–119; Mels 2004; Stevens 2007: 20; Meyer 2008.) Lefebvre (1992/2013) divides rhythms into 'cyclical' or 'linear' rhythms that refer to either natural or man-made origins (respectively) of rhythm in urban societies. The rationalized rhythms of modern societies, and the embodied and lived rhythms of the body, are often in contradiction with one another (Ibid.; see also Meyer 2008). The cyclical rhythms are, in a way, *colonised* by the linear rhythms (Simpson 2012; Elden 2004a: 192–198; Jones and Warren 2016): 'the cyclical is social organisation manifesting itself.' (Murray and Doughty 2016: 74). In Lefebvre's view, the natural rhythms, including the rhythms of the body, are transformed by social practice (see Mels 2004; Simonsen 2005), and the heterogeneous lives of people are set under a similar beat through the regulation and standardization of lifestyles (Lefebvre 1992/2013; see

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[9] On the connections between 'rhythmanalysis' and Lefebvre's other works, in specific *The Production of Space* and *The Critique of the Everyday Life*, see Soja 1999; Highmore 2002; Elden 2004a; Mels 2004; Simonsen 2005; Schmid 2008; Meyer 2008; Edensor 2010.

[10] Highmore (2002: 125–126) highlights some of the feminist critique set against Lefebvre's writings, where women can be interpreted to be as objects and subjects of alienation (see also Reid-Musson 2017).

also Edensor 2010).[11] The rhythms of everyday life in cities are thus not objective or natural but *socially produced* (Lefebvre 1992/2013; Lefebvre and Régulier 1985/2013: 82–83; see also Meyer 2008; Brighenti and Kärrholm 2018).

In specific, it was the separation of the work life from the domestic life that produced a negative effect – *alienation* – in the everyday life (Lefebvre 1958/1991). However, it was also the everyday life itself – 'the sum total of all our relations' (Burkitt 2004: 212), punctuated by 'moments' (shock, awe, delight) of other possible everyday lives – which also held the key to *transform* it, which, for Lefebvre, essentially meant bringing creativity and art *back* to the everyday life (Highmore 2002: 115–119). The key for transforming the everyday life was to be found in the repetitions of everyday life, which, in their essence, are not mechanistic – such as found in a factory's production line – but organic, which entails constant changes and *differences* in the repetitions, and, thus, possibilities for change (Lefebvre 1992/2013: 16–17). Rhythm is not the repetition of the *same* but 'a generative and creative force, rather than simply a reproductive one.' (Smith and Hetherington 2013: 6.) Kevin Hetherington writes:

> In his last work on the city, Henri Lefebvre suggested we should become sensitive to its rhythms in order to develop our understanding of what cities are. - - They [rhythms] are made up, he suggests, not only of the built environment and infrastructures through which people move but through repetitions of activity that also produced ripples of difference that mean that any one time in the city is never quite the same as another.
>
> (Hetherington 2013: 22–23.)

Rhythms, for Lefebvre, are found wherever space, time and energy meet (1992/2013: 20–21). The rhythmanalytical framework can be distilled into a basic formula (following Ibid.: 25):

space + time + expenditure of energy = rhythm

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[11] One example is the possible contradiction or friction between the biological rhythms of the body and the social organization of the day into times of activity and rest. The night, for example, modifies and slows down rhythms (Lefebvre 1992/2013: 40), but for a night-shift worker or an insomniac, such daily rhythms appear *differently* (Lefebvre and Régulier 1985/2013: 84).

Rhythms take different forms, and are measured differently: 'Every rhythm – be it the heart, breathing, or even the working hour – has its own measure, its own beat. (Meyer 2008: 148–149.) Time, here, is a *lived experience* (Simonsen 2005), and the 'rhythmanalyst' would be the one to 'listen' to the rhythms, and to the city: 'Without omitting the spatial and places, of course, he makes himself more sensitive to times than to spaces. He will come to 'listen' to a house, a street, a town, as an audience listens to symphony.' (Lefebvre 1992/2013: 32; see also Lefebvre and Régulier 1986/2013.)

For Lefebvre, the street was the subject of a specific interest, appearing as a recurring 'spectacle'. In *The Critique of the Everyday Life, Volume II*, Lefebvre wrote that: 'the street changes constantly and always repeats itself. In the ceaseless alteration of times of day, people, objects and light, it tirelessly reiterates itself.' (Originally published in 1961, in Lefebvre 2003/2017: 102.) In Lefebvre's rhythmanalytical view, the street is a site of chaotic 'noise' from which one can begin to differentiate rhythm through attentive *listening* (as an embodied and multisensory practice) (see also Hetherington 2013; Edensor 2010; Stratford 2015). Robin James Smith and Kevin Hetherington (2013: 9) write that 'Recognizing, recovering, the body, practice and perception within the urban environment was an important act of resistance for Lefebvre'. Lefebvre writes of the mobile street scene:

> He who walks down the street, over there, is immersed in the multiplicity of noises, murmurs, rhythms (including those of the body but does he pay attention, except at the moment of crossing the street, when he has to calculate roughly the number of his steps?). By contrast, from the window, the noises distinguish themselves, the flows separate out, rhythms respond to one another. Towards the right, below, a traffic light. On red, cars at a standstill, the pedestrians cross, feeble murmurings, footsteps, confused voices. One does not chatter while crossing a dangerous junction under the threat of wild cats and elephants ready to charge forward, taxis, buses, lorries, various cars. Hence the relative silence in this crowd. A kind of soft murmuring, sometimes a cry, a call.
>
> (Lefebvre 1992/2013: 38.)

Simonsen (2005: 8) writes that rhythmanalysis is 'a kind of phenomenological-hermeneutic description of the relationship among the body, its rhythms and its surrounding space.' In the centre of rhythmanalysis is the body that does not only perceive rhythms but actively produces them: 'The body is both a rhythm machine and a producer of space' (Brighenti and Kärrholm 2018: 7), embodied movements producing patterns that make up 'the texture of the world' (Ingold 2009: 34). Here,

'The body consists of a bundle of rhythms, different but in tune' (1992/2013: 30), and acts as a 'metronome' for the *external* rhythms that are compared to the *internal* rhythms of the body (Ibid.: 29; see also Meyer 2008). Rhythms, thus, are always multiple, *polyrhythmic*, as compilations of both the inner and the outer rhythms of the body, and grasped *in relation* to the body (Lefebvre 1992/2013: 29–30; see also Prior 2011). 'Strong' and 'weak' rhythms alternate, accentuating different relations between different rhythmicities. Lefebvre divides these relations between rhythms into four basic elements: *eurhythmia* and *arrhythmia* (as harmonious or disharmonious co-existence of rhythms; drawing parallels with a healthy or a sick body, respectively), and to *polyrhythmia* and *isorhythmia* (where the multiple rhythms are either working towards multiple heterogeneous 'goals', or a single 'goal', respectively) (Lefebvre 1992/2013: 25–26, 77–78; see also Kärrholm 2007) (see Figure 3).

cyclical rhythms	**natural** phenomena, continuous, without a definite end/beginning
linear rhythms	**socially** produced, sequence-like, with a beginning/ending
eurhythmia	**harmony** between rhythms
arrhythmia	**disharmony** (friction or clashes) between rhythms
isorhythmia	different rhythms working under **a same overall beat**
polyrhythmia	different rhythms working under **different beats**
strong/weak rhythms	repetitions as **accentuated**

Figure 3.   The basic elements of urban rhythm (following Lefebvre 1992/2013).

Beyond the above notions, Lefebvre's take on rhythmanalysis can be criticized as being general and *elusive* (Amin and Thrift 2002: 19) in its description of both rhythms and the practise of rhythmanalysis – which were left open as the work was released posthumously (see Elden 2004b/2013) – and that it provides only few cues (as noted above) for a practical research setting (Middleton 2009; Edensor 2010). More specifically, Andrea Mubi Brighenti and Mattias Kärrholm (2018: 7) note the limitations of rhythmanalysis as a theory as it presents some 'stark oppositions' in a dualistic manner (such as cyclical versus linear rhythms, eurhythmia versus arrhythmia), rather than the *trialectics* – the possibility of the *third*, the *other* (Soja 1999) – that Lefebvre favoured in his other works. Similarly, the essay 'Attempt at rhythmanalysis', published some years earlier (Lefebvre and Régulier 1985/2013),

highlights *singular* city temporalities in its analysis – even if they are multiple in a city-to-city comparison – rather than examining the plurality and contestation of lived temporalities within a city. Tim Edensor and Jonas Larsen (2018) note that Lefebvre's (1992/2013) own *body* is also not prominently present in his writing – although rhythmanalysis is supposed to be based on the body as a *metronome* – providing a rather detached and textual based narrative on what is supposed to be the 'lived' body. Tom Hall, Brett Lashua and Amanda Coffey (2008) also bring up the privileged and detached perspective of the balcony – that comes closest to the empirical tools provided in *Rhythmanalysis* (Lefebvre 1992/2013) – that Lefebvre uses for his examination of the street and its rhythms (as also noted in Chapter 1), and how it is not the (claimed) perspective of the body engaged in, or *grasped by* the rhythms, but rather that of an *outside observer*.

Rhythmanalysis is, thus – partially in reference to the critique above – best understood as more of an exploration of a theoretical orientation than a practical methodology – more of 'an attitude' (Mareggi 2013: 5) or a *mode* of research (Elden 2004a: xii; see also Koch and Sand 2010; Kullman and Palludan 2011) than a set of conceptual or practical tools to be applied in a research setting (see also Brighenti and Kärrholm 2018). In short, 'Lefebvre sought to change our understanding of the city by unpacking the phenomenology of the place as object' (Crang 2001: 192), and 'rhythmanalysis was a critique of reification as well as a project of reanimating social space and place' (Mels 2004: 24). Mostly, rhythmanalysis is about using the body *as* a research tool in examining the urban phenomena (Middleton 2009; Brighenti and Kärrholm 2018) as a multidisciplinary, or as a 'pluridisciplinary' approach (Kofman and Lebas 1996: 31). Christian Schmid writes that Lefebvre (beyond his work on rhythmanalysis) was a critic of phenomenology as it to him emphasized the subject over the material world: 'Lefebvre's aim is, so to speak, a materialist version of phenomenology' (Schmid 2008: 39; see also Brighenti and Kärrholm 2018; Ihde 2003.) and rhythmanalysis could be understood as a move towards that direction.

As noted in the Introduction, whereas Lefebvre's Marxist urban analysis focuses on the origins and the processes of production of societal rhythms – or the 'rhythms of capital' in Lefebvre's view (Kofman and Lebas 1996: 31–32) – it does lend itself to other kinds of approaches and theoretical connections too (see Mels 2004; Smith and Hetherington 2013; Brighenti and Kärrholm 2018). As highlighted above, rhythmanalysis' capacities as a *phenomenological-hermeneutic description* of body-environment-relations (Simonsen 2005) can provide tools to unpack and examine the kind of embodied mobile urban assemblages that were defined in the previous section (2.1): to examine the embodied practices *together* with their environments, and

their interrelations and co-productive connections, without favouring or suppressing the other in the analysis, in order to understand the *spatiotemporal* urban experience and the ever-on-going assembly of such body-environment relations. Rhythmanalysis, in short, acts as a valuable insight to a body-centred research perspective on urban temporalities: on the recurring temporal urban structures, the modes of synchronization of the everyday (urban) life, assemblages, and the 'lived' space (see Crang 2001).

Rhythmanalysis can also be used to highlight 'other' rhythmicities: the marginal, informal and contesting rhythms (Amin and Thrift 2001: 9–27; see also Mareggi 2013). Tim Edensor writes that through rhythmanalysis, 'Place can thus be depicted, performed and sensed through its ensemble of normative and counter rhythms' (2010: 4), and that these '"resistant' rhythms - - offer alternative modes of spending time, different pacings and pulses which critique normative, disciplinary rhythms and offer unconventional, sometimes utopian visions of different temporalities." (Ibid.: 16.)

What rhythms are considered as such 'resistant' ones (or how one separates *one* rhythm from another), however, is not a simple issue to answer. Nigel Thrift (2000) highlights that critical views on the everyday modern city (here partially referring to Lefebvre's writings too) often take nostalgic approaches towards village or rural life in relation to modern urban life, which is in danger of drawing too harsh lines between *authentic* or *inauthentic* practices in city environments (see similarly Relph 1976 on the *authenticity/inauthenticity* of spaces and places in the modern city). The argument here is that creativity can be found in the day-to-day urban practices – as playfulness, contestations, different meanings and the like. Thrift argues that studies on urban life 'shows urban life as ambiguous, fragmented, dilemmatic, and thereby creative' (Thrift 2000: 243), and as Quentin Stevens (2007), for example, has shown, such creativity can be found in everyday practices – the ways in which people engage their day-to-day environs. It is this creativity of the day-to-day mobilities what is in focus here.

In summary, the rhythmanalytical framework can be distilled into a few central notions that provide a basis for a rhythmanalytical thinking here, or a rhythmanalytical orientation, in the study of the lived (built) environment and mobile assemblages. These notions define urban rhythms as:

- socially *produced*;
- produced and perceived through (multisensory, physical, and trained [*dressage*]) *bodies*;

- having both qualitative *and* quantitative characteristics;

- *relational* to other rhythms (including the rhythms of the body), the body working as a *metronome*;

- always *multiple* (no clear separation can be made on where one rhythm ends and another one begins);

- *accentuated*, or oscillating between *strong/weak* times;

- repeating but *different* in this repetition.

What I see, in specific, as the key insight that Lefebvre's take on rhythmanalysis provides for the examination of the temporal city, beyond the overall focus on the body as both the perceiver and maker of rhythms, is, first, the notion that no rhythm (in a societal context) is natural or objective, but always infused with different values, presuppositions, perspectives, cultures and meanings, even if they are often unquestioned or taken as given. It also highlights the interdependency between rhythms: as Marco Mareggi (2013: 6) writes, 'city's rhythms are not free to roam where they will' as the social and the natural temporalities, as well as the subjective and the shared, are inseparably interwoven. Secondly, in every repetition or reprise, there is always included the possibility of a change or a difference in that repetition. Rhythms change, evolve and transform, and every time is different than the one before it, which highlights the processual nature of rhythms.

On the other hand, the more precise terminology provided by Lefebvre (such as *eurhythmia* and *arrhythmia*, described above) is used more sparingly in this study, as its use is not without some issues and concerns. Mainly, the problematic question is to how the relations of rhythms (the eurhythmia and arrhythmia) are measured – to whom the temporal relations are 'easy flowing' or 'frictional'? Similarly, the idea of the 'rhythmanalyst' as a sort of a specialist that listens to the city or the street, can be perceived as somewhat problematic, prompting a question of who is, or can be, a *rhythmanalyst*? Here, all bodies are considered as such *metronomes* to rhythms, which is somewhat a move away from a Lefebvrian *rhythmanalyst's body*, towards *bodies* engaged with the spaces they inhabit. The research perspective here is set on the route experiences and the bodies of the informants, and the observed interactions between bodies in mobile events (see Chapter 3).

Below, I follow a number of works that have turned the focus on rhythmanalysis towards the notion of the body, and its relations with the environment, and the negotiation of such street rhythms of the ground-level.

2.2.3   SITUATING URBAN RHYTHMS

The incorporation of rhythmanalysis into a research work on urban mobilities requires practical tools with which the analysis of urban rhythms can be conducted (see e.g. Middleton 2009; Edensor 2010). The argument here is that we need to move somewhat away from the 'poetic' approaches to rhythmanalysis – in which the *rhythmanalyst* would 'attempt to keep the scientific and the poetic apart as little as possible' (Meyer 2008: 156) – towards more practical and *pragmatic* approaches that put some of the rhythmanalytical notions into practice by combining it with other methodological approaches towards the understanding of the city, bodies and temporalities. The idea here is not to put Lefebvre's ideas directly into practice, but to use Lefebvre's insightful notions on the struggles and contestations over the *production* of (spaces and) temporalities as conceptual and theoretical framing devices for other more practical research settings and methods. It is the relations between the bodies and the environments that are focused on here.

Connecting to the mobilities framework discussed above, rhythmanalysis has been utilized in the study of *mobility rhythms* in relation to a variety of practices, events and spaces, each approach treating mobility as a complex spatiotemporal and socio-material event. Most of these approaches examine rhythm from one of the following three main views (that Edensor [2010] has noted): the rhythms of 'the mobilities that course through' places, the rhythmic sense of place produced by regular mobilities, and the rhythmic practices inside mobile vehicles. These approaches include walking (Wunderlich 2008; Middleton 2009; Vergunst 2010), cycling (Spinney 2010; Cook and Edensor 2017), commuting (Edensor 2011), school journeys (Kullman and Palludan 2011), ferry travel (Vannini 2012), street performances (Simpson 2008; 2012), and marathon running (Edensor and Larsen 2018); night-time economies (Schwanen et al. 2012), life-courses (Stratford 2015), outdoor advertisements (Cronin 2006), touristic travel (Haldrup 2011), and touristic sleep in nature (Rantala and Valtonen 2014); public spaces (Mulíček et al. 2014; Osman and Mulíček 2017), street-blocks (Lehtovuori and Koskela 2013), city squares (Wunderlich 2010; 2013; Kärrholm 2017), metro spaces (Gibas 2012), ageing neighbourhoods (Lager, van Hoven and Huigen 2016), office spaces (Jauhiainen 2007), taxi ranks (Rink 2019); festival spaces (Duffy, Waitt, Gorman-Murray and Gibson 2011), shopping spaces (Kärrholm 2009), and museum spaces (Prior 2011). These works have utilized a variety of both qualitative and quantitative methods, ranging from ethnographic observations (see section 3.2.2), interviews, 'go-along' methods (see section 3.2.1), autoethnographies, and the uses of visual material, to questionnaires, mappings,

statistics, travel diaries, time-lapse recordings and modes of semiotic reading. The scales in which the above works deal with vary too: from the body and specific sites to neighbourhoods and cities.

The above is in no means a comprehensive list, and *only* presents works that focus on mobility issues, but gives a representative image of the variety and broadness of the ways in which rhythmanalysis has been utilised in practice, in the research of mobility practices, events and spaces. What connects these approaches to rhythmanalysis is the focus on the body (through practices, spaces, objects) and focus on the continuous (re)negotiation and production of spaces *and* temporalities through (more or less) mundane and day-to-day activities. One of the key anchor points that the works above connect to are the various *frictions* and *clashes* in and between mobile practices and events that bring momentarily visible the multitude of different rhythms – or the heterogeneous 'rhythmscapes' (as in *landscapes)* (Mareggi 2013) – and their interactions, tensions and conflicts through such arrhythmic relations (as also noted by Lefebvre 1992/2013: 25–26, 77; see Middleton 2009; Edensor 2010; Smith and Hetherington 2013). Drawing connections between the earlier notion on urban assemblages and rhythmanalysis, we can use Kurt Meyer's (2008: 152, following Lefebvre and Régulier 1985/2013) analogue of rhythms and the ocean surface: how the waves – like rhythms – are complex, multiple, and difficult to observe or differentiate *one* wave apart from the others. Similarly, rhythms are impossible to differentiate from the 'whole' assemblage, but some cues are presented of such edges, like the crests of waves in the ocean. Tim Edensor (2010: 14) writes: 'in a polyrhythmic assemblage, rhythms influence each other, sometimes achieving eurhythmia, where stability persists, and sometimes, arrhythmia, where they jar and clash.' It is these surfaces or edges between different rhythms (as already noted in Chapter 1) that here provide perhaps the most approachable practical implications of urban rhythms.

2.3   SUMMARY: RESEARCHING URBAN MOBILITY RHYTHMS

Urban rhythms, as noted above, are multifaceted. What is of interest here, connecting the rhythm discussion to the mobilities framework presented earlier above, are the *mobility rhythms* of the street. Drawing the above theoretical notions on mobilities and rhythms together, the work focuses on the interconnections between spaces, times and mobilities, or in more practical terms, in the repeating embodied

place-making and rhythm-making processes of the everyday street (again, see Figure 1 in Chapter 1). Here, these mobility rhythms are first and foremost embodied and *lived* rhythms: bodies being both regulated and governed by various rhythms, as well as practicing, producing and perceiving such rhythms. The focus is on the *qualitative* side of rhythm – the repetitions and variations of rhythmic *intensities* are highlighted over the quantifiable measures of frequencies or intervals. Following a *material pragmatic* (Jensen 2018) approach towards mobilities, postphenomenological orientation as a body-centred research mode, and approaching rhythmanalysis as a form of a material phenomenology (as each noted above), the work examines the assembly of the urban mobile event. The body's role is central in the understanding of the 'lived' aspects of contemporary street spaces as it is the body that *moves* and is *moved* (Ingold 2011), and while it moves and is moved, it creates meanings and (material and tangible) *temporal architecture* (Osman and Mulíček 2017) of space. The street space, and the mobile events that characterise it, are in a continuous co-constitutive relation, one affecting the other in the daily processes of (re)making, as people, as much as they are place-makers, are also 'rhythm-makers' (Mels 2004: 3).

In practical terms, the work's focus is on the mobile event as place-making and rhythm-making processes. As outlined by the discussion on places and bodies above (sections 2.1.2 and 2.1.3) *place-making* is here understood as a mobile, (inter)subjective, and embodied practice, framed by a set of routines and habits, and social, spatial and temporal constraints set by the body-environment context – as something people *do* through their embodied interaction and engagement with spaces they inhabit. (As a distinction from the designed – 'the conscious attempts of designers to create a sense of place' [Dovey 2010: 3] – or the communal and organized – the efforts to create more inclusive, cohesive communities, and to 'improve' sites by various architectural or social interventions [see e.g. Project for Public Spaces, n.d.] – *placemaking* activities). In other words, it is about the place-making that occurs haphazardly – including when the *placemakers* (the professionals, activists, community members and the like) are on the way to make those specific 'places'. *Rhythm-making* here is similarly understood as something people cannot help but to *do* through embodied (mobile) engagements with spaces/places, as outlined above (sections 2.2.2 and 2.2.3). In other words, embodied practices, that are bounded by habits and routines, as well as regulated and timed, produce complex rhythmic – repeating, reoccurring and patterned – mobile assemblages.

The place-making and rhythm-making processes are here located in one particular urban environment: the street. The place-making and rhythm-making processes of the street are studied both from the 'inside' and the 'outside' of the

mobile practices: as subjective route-based practices (what are here called 'route narratives'; see section 3.2.1), and as intersubjective localised practices (as site observations; see section 3.2.2), as presented in the next chapter. As Robin James Smith and Tom Hall (2013: 91) write, focus on urban rhythms 'offers an opportunity to glimpse, and retain, something of the complexity of the urban everyday. Doing so requires the spatial and temporal to be viewed in relation to each other; and this - - requires an empirical attention to mobility.' Mobility rhythms provide a fruitful setting for the study of urban rhythms, as exemplified by the amount of mobility-oriented work on rhythmanalysis (see section 2.2.3), and to examine the spaces of everyday life and how they are assembled through the temporal connections between bodies, practices and larger temporal frameworks: the 'time of urban movement is *rhythm*' (Pasqui 2016: 49). This focus on the body also means moving past general notions of the 'slow' rhythms of the countryside and the 'fast' rhythms of the city that have coloured discussions on urban/rural dichotomies for long (such as Simmel [1903/2010], in Highmore 2002: 41–43), towards *heterogeneous and multiple times* (Crang 2001), understanding places as *constellations* (Mulíček et el. 2014) of various rhythms.

3   METHODS AND RESEARCH DATA

3.1   CASE: ROUTES, URBAN SITES

This chapter presents the empirical research methods, and the research data that was gathered in order to situate the mobile event in order to study the urban mobile assemblage. The research interest here is on the rhythmic temporal elements of the day-to-day mobile events. The study both examines the (inter)subjective place-making and rhythm-making aspects of embodied mobilities in day-to-day route-contexts, as well as the role of mobilities in the production of the everyday urban scene.

3.1.1   LOCATING THE MOBILE EVENT

How to grasp everyday mobilities from a qualitative research perspective is a rather difficult question. Above, Lefebvre's complex conceptualisation of the everyday life was brought up, but it is no simpler concept as a more *common term* either. Tracing the lineages of theories on the everyday, Ben Highmore (2002: 1) notes that the everyday can either be understood as activities – 'those most repeated actions, those most travelled journeys, those most inhabited spaces that make up, literally, the day to day' – or as a quality – as *everydayness*: 'Here the most travelled journey can become the dead weight of boredom, the most inhabited space a prison, the most repeated action an oppressive routine.' The everyday is something we all are inseparably part of, which makes the precise definition of it, as well as the study of it problematic (Ibid.; Pink 2012b; Hall et al. 2008). The (analytical) focus on the everyday, in a way, is precisely what *breaks* it (Highmore 2002: 17). This calls for methods that can approach phenomena as they open alongside them (Sheller and Urry 2006; Büscher and Urry 2009). Increasingly, calls for ethnographic approaches, in specific, are made to study the everyday complex city and to grasp the lived aspects of the environment (see e.g. Lees 2003; Jirón and Imilan 2018). Following in the framework of the 'new mobilities paradigm' (see 2.1.1) the work attaches to a growing number of research work that examine the mobile event directly *in the field*, sometimes broadly titled as

mobile ethnography (Büscher and Urry 2009), or more specifically, as *street phenomenology* (Kusenbach 2003; also Hubbard and Lyon 2018).

The methodical framework is divided into two distinctive parts – *interviews on informants' recurring routes*, and *site observations* – that form three different empirical data sets: walking interviews, driving interviews and videoed site observations. Both research methods, the in-depth interviews and the site observations, are here regarded as means to *understand* the mobile event from a rhythmanalytical perspective. The interest here, thus, is not to map *specific* spaces and their uses and their specific mobility cultures, nor to examine *specific* routes and their settings, but to draw more general notions through these real-life examples on the mobile assemblages (from the 'outside' and the 'inside', as outlined above). The focus here, thus, is on the *route* as a recurring body-environment context (though, naturally, the specific materialities of the locations *do* play a central part here), and on the mobile event from a spatial perspective (where, again, the specific materialities of the sites are important but the analytical view is not limited to any particular site). Research focus on such recurring and routine-like mobile practices and spaces is important – as highlighted earlier above – as they represent the most common ways in which we engage with the city and the urban environment. These are practices and spaces that most people participate in, many of us daily, and through these practices and spaces, we both perceive and read the urban environment – and urban life in general – as well as partially produce it through our own actions.

The practical study is situated in two cities in Finland – Tampere and Turku (see Appendix 1).[12] Again, the aim here is not to examine Tampere or Turku cities *per se* but to use day-to-day routes and ordinary mobility sites located in the two cities as practical examples: as real-life and tangible embodied contexts for ordinary, daily *mobile events*. The use of two cities (rather than a city), in the data gathering was to prevent city-specific characteristics to get the upper hand in the data. The two cities are more-or-less similar sized, providing appropriate settings for the research. The city centre areas are both compact enough to walk, and also facilitate car-use (except a few stretches of streets where car-use is [in some cases temporarily] prohibited in both centres). Both cities also have extensive public transport (bus) networks. The

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[12] Tampere is the second largest city (~230 000 inhabitants) in Finland after the Greater Helsinki capital area, and the largest inland city in the Nordic countries (by population). The city was founded in 1779, around the *Tammerkoski* rapids, which acted as a source of power for local industries. Turku is the country's third largest city (~180 000 inhabitants). It is also the oldest city in Finland, and a former capital, located on the banks of Aurajoki river, founded somewhere around the 13th century. Today, both cities are growing, attracting people – university and polytechnic students in specific – and businesses, as well as are strongly redeveloping their city centres (see City of Tampere 2018; City of Turku 2017).

cities are small in a global comparison, but such small cities (with less than 500 000 inhabitants) represent, though, the majority of urban dwellings globally (Tonkiss 2013: 35–36).

The research data, in total, includes:

– 10 walking interviews (Tampere=5/Turku=5) with local informants on their recurring walking routes[13], adding up to 16 hours of transcribed interview recordings, 169 participant-produced photographs[14], and 10 participant-produced route maps;

– 10 driving interviews (Tampere=5/Turku=5) with local informants on their recurring driving routes, adding up to 10 hours of transcribed interview recordings, 3 hours of video recordings of the drives with 36 participant-produced screen-captures of these videos[15], and 10 participant-produced route maps;

– 48 site observation sessions in 6 locations (Tampere=3/Turku=3), adding up to 15 hours of audio-video recordings, and brief pen-and-paper on-site fieldnotes.

The data was gathered between April 2015 and June 2016: the walking interviews were conducted between April and June 2015 (spring/summer), the driving interviews between November 2015 and March 2016 (winter/spring), and the site

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[13] *Ten* in-depth interviews, per selected mobility mode, was first considered, and later supported by the gathered data, as an adequate amount of interviews, in order to gain a sufficiently in-depth perspective to the day-to-day routes, and to gain an understanding of what kind of issues are recurring in the route narratives between different people. A higher number of interviews could arguably provide a more nuanced and varied picture of the routes and day-to-day body-environment relations, but it would simultaneously also produce more complex research data for the analysis, which would require a larger research premise.

[14] The number of the photographs amounted to 169 after 'duplicates' were removed from the total number of 219. Duplicates here refer to photos that were accidentally or for 'safety measures' produced, depicting the *same* framing and object as another picture(s). Such duplicates were skipped in the photo-elicitation interview – where each photograph was examined individually – usually as suggested by the informant himself/herself. It is worth to note here that of those 169 photographs, one informant alone produced a considerable number of the photos (60), the others averaging in 15 photos by informant.

[15] The number of the screen-captures amounted to 36 after 'duplicates' were removed from the total number of 39. Duplicates here, like above, refer to those screen-captures that were produced for 'safety measures', depicting the *same* framing and object as another screen-capture(s). It is worth to note here that even though the recorded driving video was watched and discussed with each informant, only in 8 of the 10 interviews screen-captures were produced for later study, mostly due to the fact that the practical research process was still taking its form. This, however, was not considered as a reason to discard the other two interviews from the used data.

observation between May and June 2016 (spring/summer). The schedule of the data gathering process was affected mostly by the overall schedule of the research process.

As noted above, the obvious question that is raised here is the role of the *everyday* in the empirical research process. The route narratives, in specific, highlight the problematic nature of the 'everyday' – the routines and habits – as a research focus. Can we capture everyday life through interviews – that require reflection on issues that are often not reflected on (see e.g. Buttimer 1976; Anderson and Harrison 2010), and that are for this very reason part of the *everyday* (Highmore 2002) – or through *any* research methods (whether qualitative of quantitative) for that matter, in all its complexity? The answer probably here is a 'no' (see Ibid.; Jirón 2010), but that, of course, does not mean that attempts at understanding daily life would be futile, or unnecessary, quite the contrary. In the below sections, whilst presenting the empirical research processes in more detail, I will discuss the limitations of the used methods in relation to the notion of the *everyday* and the *everyday experience*. It should be noted already here, though, that the selected approach to the research data is best understood through *non-representational thinking*. Non-representational theory (or NRT; first introduced by Nigel Thrift), in general, refers to a shift from representations towards performances, processes and events in the study of body-environment relations (Buser 2014). Ben Anderson and Paul Harrison write that 'the root of action is to be conceived less in terms of willpower or cognitive deliberation and more via embodied and environmental affordances, dispositions and habits.' (2010: 7). From a practiced or experiential perspective, the world, in other words, is not formed in the mind but through a continuous interaction with the world, in the moment (Ibid.). NRT, aiming to grasp embodied practices, *lived* experiences and their *affective* nature, de-emphasises the role of the rational and thinking subject in the formation of practices and experiences, and notes also the agency of the *material* and the non-human in these processes. It also approaches critically representations in the communication of such experiences, and the reach of conventional research methods that rely on representations in some form or the other (See e.g. Ibid.; Buser 2014; also Simpson 2008; 2012; Merriman 2012; Spinney 2014; Dewsbury and Bissell 2015; Jensen and Lanng 2017: 39–40). As introduced further below, the research methods used in this study *do* rely on traditional representations (speech, writing, visual material), and on conventional research methods (interviews, observations), but this notion on NRT is important from the point of view of what exactly is, or can be, represented through the collected narratives, visual materials, and observations, and what remains outside, and out of reach, of such representations.

To a degree, it connects with the postphenomenological focus on the body and the mediation of the interaction with the lived environments (see Ash and Simpson 2014).

With these reservations in mind, the empirical research process is presented further below. Before turning to the methods and research cases in more detail, though, I briefly focus on walking and driving as embodied practices – here examined in route contexts, and their interactions as central mobile events of the contemporary streetscape – as elements of the mobile assemblages. Even though here their role as *recurring embodied contexts* are in the main focus, they both are central in the fundamental questions about the city and how it is organized – about urban transportation, urban sprawl, organization of everyday life, sustainability, and social justice.

3.1.2   'WALKING AND DRIVING IN THE CITY'[16]

Recently, much has been written about walking and its relation to the experience of the city: 'Over the last 15 years, there has been a growing interest in walking as method and practice.' (Middleton 2018: 298.) Walking is an important issues as almost all movement in the city includes walking in some form or another (if not disabled): whether a 'whole' route between home and the local shop, few steps on the parking lot between the car and the building entrance, or inside a building (Urry 2007: 63). Walking is increasingly promoted in urban policies, partially to answer to the calls for more ecologically sustainable urban environments and lifestyles (Ibid.; Cervero et al. 2017; Middleton 2018; Kuoppa 2016: 29–33), as well as in the development of more socially inclusive and healthier neighbourhoods (Boyce 2010). A central term in such urban policies is *walkability* (deriving from the term 'walkable' [Forsyth 2015]), which refers to the level of walking possibilities that the environment facilitates, such as through the accessibility to different services, the amount of pedestrian-only zones, and the presence of *human-scale* environments (Ewing and Handy 2009). In walkability studies, the elements affecting these possibilities are often mapped and the overall walkability is 'scored' (Ibid.; Adkins Dill, Luhr and Neal 2012), and such scores are increasingly used in planning and

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[16] After de Certeau (1990/2013) and Thrift (2004), respectively.

policy-making processes to design dense built spaces (Middleton 2018; Kuoppa 2016: 33–38).[17]

What here is of interest is walking as an *embodied* practice that is both produced by the body, and regulated from the 'outside'. Even though walking seems like a natural mode for the human body, it is, though, a learned and a regulated practice, and afforded by various technologies (such as shoes and pavements) (Urry 2007: 65; see also Jensen 2013: 102).[18] Walking is a way to organize the everyday (urban) life, experience the environment, and to form meanings (Middleton 2009). As a relatively *slow* mode of movement, it provides opportunities to perceive details of the immediate environment. Here, vision and the haptic sense are important, and the movements are bound with reflexes and the automated body, such as routine, habits and repetitions, especially in familiar surroundings (Cappe 1987; Wunderlich 2008; Middleton 2018; van Eck and Pijpers 2017). Comparing, for example, the walking of a daily commuter to the one of a tourist highlights such automations of the body-environment relations. In walking, the body is open for social interactions, encounters, even conflicts – walking is a way to *write* and *read* the urban *text* (de Certeau 1990/2013). Walking is done for many purposes (such as work, leisure or exercise; or conducted as practices of actively reading the city through the practice of *flâneur* [urban wandering] or the critical *dérive* [drifting], see Lorimer 2011; Urry 2007: 63–77; Jensen 2009; 2013: 66–68) but here, as already defined above, the research interest is set on walking as a mode of *functional* and *recurring* movement: as a 'necessary', rather than 'optional' activity in the urban environment (Gehl 1971/2011; see also Wunderlich 2008), and as a central part in the organisation of daily life and its 'obliged time schedules' (Mareggi 2013: 8). Walking can also be oppressive, a chore (Ingold 2004), rather than something enjoyed, in specific in urban areas that favour other modes of transport (see Patton 2007). It is the context of the habitual passer-by, who is 'constrained' (Hägerstrand 1970) by various demands and requirements of daily life that is in focus here.

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[17] However, as Forsyth (2015) shows, the term walkability is used in different, and sometimes even conflicting meanings between practitioners, researchers and policy-makers: either as to describe the 'means' (physical traversability, safety, compactness, physical entice) or 'outcomes' (exercise-inducing, sustainable transportation option, lively and sociable environment) of the environment, or as a more general 'proxy' for a better urban environment (multi-dimensional, holistic solution).

[18] In a few excerpts from a Finnish cultural customs guidebook from the 1970's, for example, there seems to be many 'rules' of conduct in regard to walking that *should* be followed on the city street, such as conducting walking with a 'Good posture and brisk determined walking [pace] - -'; 'Other pedestrians on the sidewalk are usually passed from the right side'; 'One should not eat on the street'; 'One greets acquaintances on the street but one does not stay to talk for long - - '; 'If one moves on the street in a pair formation, the honorary spot is usually the one further away from the [motor] traffic side of the street'. (Seppälä and Virkkunen 1977: 252, translated into English by the author.)

This same research premise is set on the driving body too: the focus is on driving and car-use as functional movement, although driving too is done for many purposes. Similarly to walking, driving is also a way to organize the everyday (urban) life, experience the environment, and to form environmental meanings. As an embodied practice, driving, again similarly to walking, is not solely an active nor conscious practice but located somewhere between being present (observing the moment, reacting to the events) and automated routine (see Thrift 2004). The driving practice, however, provides a different kind of a relationship between the space and the body than walking, forming a distinctive 'driver-car assemblage' (Dant 2004), where the driver and the vehicle are inseparably linked together. Driving is also a highly regulated practice: driving is regulated through legislation, symbols and signs, as well as the physical elements of driving spaces. The body is also trained to drive beforehand, as a licence is often required to drive in most countries. The high-speed velocities of the car also strain the body's sensory capabilities (Laurier 2011), which have been increasingly alleviated by the development of automated driving technologies, sifting the role of the driver incrementally towards the one of a passenger (a development process which continues further as automated and self-driving vehicles are increasingly introduced). The driving practice is also enclosed inside the materialities of the car (Urry 2006; Haddington, Nevile and Keisanen 2012) that forms a physical edge between the outside environment and the enclosed space of the inside car – with its own soundscapes and social relations, producing a semiprivate (mobile) space (Thrift 2004; Bull 2004; see also Article #02 here). The enclosing character of the car, together with the speed of the travel, also affects how the driving environments are (or are not) connected to, and how the other cars and non-car users of the space are (or are not) interacted with, as it provides the possibility to speed-by areas (Madanipour 2004; Connerton 2009). The windshield also produces a 'filter' (Appleyard et al. 1964) for the environmental perceptions: here, perception is (mostly) limited to the visual field, which is affected by the speed (narrowing peripheral vision, fading foreground, blurring of the environmental details), rendering distant views more comprehensible than the immediate ones (Cappe 1987; also Halprin 1963/1972), especially in highways and other car-only spaces with higher speeds (Venturi et al. 1972).

Most of the common conflicts between walking and driving in an urban context stem from the fact that they are difficult to put together without producing some kind of friction for the other, whether this friction is related to movement, perceived quality of the (public) space, or health and safety issues (see e.g. Appleyard 1981; Patton 2007; Cervero et al. 2017). In a large picture, personal car-use can be seen as

one of the major causes for urban sprawl that has produced spatially dispersed and disjointed sites for daily life, or at least it acts often as the 'scapegoat' of such planning practices (Jacobs 1961/2011; Sheller and Urry 2000; Patton 2007) (see also section 2.1.3). As noted earlier, the personal car provides possibilities to draw complex, subjective spatiotemporal connections between different monofunctional sites over long physical distances in the city – thus facilitating an ease of movement, or, in contrast, traffic congestion – but it simultaneously produces these very same needs for such complex connections and long distances: it produces the *need* for the use of the personal car simultaneously at it responds to that same need (Ibid.). This affects most the ones *without* an access to a personal (or a shared) car, as they still too have to work under the same spatiotemporal *rules* in regard to the (expanding) urban time-space conditions (Ibid.; Urry 2006), producing perspectives on driving as a symbol for personal freedom and self-expression (Maxwell 2001), and transit-reliance often as the opposite.[19] Similarly, much of the ground area of a street is taken for (multi-lane) car-use, and other uses – such as walking and biking – are designated with less space, highlighting traffic hierarchies in design and planning practices (see Patton 2007).

Regardless of the friction between the two modes, they both still are prevailing means to move around in the contemporary city. What the two modes share in common is that they are both different incarnations of different kinds of human-technology *assemblages* (walker: feet-shoes-pavements; driver: feet-pedals/wheels-asphalt). They both also require some active orientation and reaction to events taking place around the mobile body, which means that the travel time cannot be completely devoted to *other* activities, such as whilst being a passenger (leisure/work activities; or being *cocooned,* as brought up above in relation to flying practices) (Middleton 2009; Miciukiewicz and Vigar 2013). These, and the fact that walking and driving are often set in the opposite ends of mobilities and urban planning debates, were the main reasons why these two modes were selected for the study of mobile assemblages (instead of the other urban mobility modes, such as bicycling, skateboarding; riding transit; use of movement supports). Rather than examining walking and driving through juxtaposition, they are examined here on one hand as modes of 'dwelling-in-motion' (Sheller and Urry 2006), and as spatial elements on the other. In other words, my interest here is on how such embodied practices are part of the formation of the temporary assemblages of the mobile event.

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[19] In the wake of increasing sustainability thinking in urban planning, different alternatives to petrol car use have been highlighted, such as car sharing services and mobility services, transit-oriented design, and the increasing use of electric cars.

3.2   EMBODYING THE STREET

The research methods used here can be situated under the general umbrella term of 'mobile methods', which refers to a vast range of methods that try to approach and unpack the temporary and fleeting nature of (embodied) mobilities, often by situating the researcher as part of the studied phenomena in one way or another (see Ibid.; Büscher, Urry and Witchger 2011; Hein, Evans and Jones 2008; Evans and Jones 2011; Murray 2009; Spinney 2014; Cresswell and Merriman 2011), which can 'open up new ways of understanding the relationship between theory, observation, and engagement.' (Büscher and Urry 2009: 99.) The 'go-along' and site observation methods used here – as introduced below – take both the researcher and the research informants *into the field*.[20] The methods used in the study have been selected due to the proposed research questions: other methods could be as beneficial to examine the everyday mobile events, albeit from slightly different perspectives. Other suitable methods include *shadowing*, autoethnographies, and various diary methods that could each further elucidate the practiced, experienced and affective urban mobilities (see e.g. Evans and Jones 2011; Jirón and Iturra 2014), or provide other kind of means to map a site's perceivable mobility patterns.

3.2.1   PART I: 'GO-ALONG' INTERVIEWS ON DAY-TO-DAY WALKING AND DRIVING ROUTES

The first part of the research data includes the study of repeating walking and driving routes in the city. The everyday mobile experience is *triangulated* by using three different methodical approaches: walking/driving interviews as 'go-along' interviews on the studied routes, photo-/video-elicitation interviews, and participant produced visual materials (photographs, video screen-captures, and maps). In the context of this study and the routes, the approach could be distilled into: 'introduce me to your route' -kind of a premise, examining the subjective reoccurring mobile trajectories as *urban narratives* (Jirón and Iturra 2014, following de Certeau 1990/2013).

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[20] As part of the research process, although not to any definitive conclusions, the use of Light Detection and Ranging (LiDAR) and laser scan data was very briefly experimented with to examine how point-cloud information could be utilized in the examination of the temporal environment (with the help of doctor Jorge García Fernández). The use of such virtual representations (together with other formats, such as *Google Street view* [see e.g. Badland, Opit, Witten, Kearns and Mavoa 2010]) are increasingly examined as substitutes for 'real' world audits, continuing from the work on physical models as representations of the city and urban spaces (see Bosselmann and Gilson 1993).

In a 'go-along' interview the researcher accompanies the informant in the studied practice, event or site (Kusenbach 2003).[21] Here, the researcher is introduced to the 'ordinary' uses, spaces and people engaged in the day-to-day events, and how they unfold both in space and time. 'Inquiries on the move - - enable questions about sensory experience, embodiment, emplacement, about what changes and what stays the same, and about the configuration and re-configuration of assemblies of objects, spaces, people, ideas and information.' (Büscher and Urry 2009: 110.) The general argument for using such a situated interview method is that the embodied engagement with the environment/practice/event can act as the *third* party in the discussion (see Jokinen, Asikainen and Mäkinen 2010): as Spinney (2014: 6) writes, 'go-alongs in their different forms assist recollection by connecting participants and researchers with the materialities of doing.' They provide room, both for the informant and the researcher, to reflect the situation, and the routines and habits *in situ* through the tangible material and social environment, and thus bring up notions, experiences and meanings that may often be difficult to communicate (or remember) in conventional interviews that rely on *memory* and verbal communication alone (see van Auken, Frisvoll and Stewart 2010). Thus, where the 'sedentary interviews' are more suited for autobiographical narratives, such mobile interviews can provide more *place-specific* information (Evans and Jones 2011).

A similar interview formula was used for both the 'walks' and the 'drives'. In previous research, there, though, seems to be significantly less focus on driving applications of the 'go-along' method than there are ones on the walking situation.[22] This meant that the study at hand had to apply some experimental attitude on the formation of the subsequent 'drive-along'. Driving, as a practice, requires attentiveness to the traffic situations, more so than walking, prompts possible

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[21] The terms 'go-along' and 'walking interview' mean quite similar things, although the latter suggests a more practice and place-oriented approach, whereas the former aims for a more holistic, context-sensitive approach (see Evans and Jones 2011). One key difference is that walking interviews can be conducted also in a researcher-led form – which could, for example, mean inviting people to walk areas previously foreign to them. *Go-alongs*, on the other hand, imply an ethnographic orientation: something already existing that the researcher joins, *goes along* with (Kusenbach 2003; see also Jokinen et al. 2010).

[22] There is increasingly research done on the interactions *inside* the car between the driver and the passengers (see Haddington et al. 2012 for a brief review; also Laurier 2011), but less so on the body-environment relations (as 'dwelling-in-motion' [Sheller and Urry 2006]; for an exception, see Jirón and Iturra 2014) or on the driving practice that examines its relation with the environment beyond the aesthetic (visual) experience of it (see Appleyard et al. 1964; Venturi et al. 1972).

difficulties for the interview.[23] For these reasons – and to produce further material for discussion – video recordings of the drives were used (see further below).[24]

The interviews – both the *in situ* interviews and the latter elicitation interviews (see below) – were formulated as semi-structured interviews.[25] A set of questions, under different themes relevant to the research questions, were pre-formulated, but the idea of the interviews was to let both the environment and the participant-produced visual material guide the discussion (inside the set frame of the study) (see Appendix 2–3 for the tables of questions used in the interviews). Here, the informant was seen as an *expert* of their own routes and environments, and the researcher was in the position of a *listener* and a learner (see van Auken et al. 2010).

In the recruitment of interviewees, the set criteria was that the informant had a recurring, *functional*, or goal-oriented route that is at least partially located in the central urban areas of the two studied cities. The route's 'purpose' beyond the functionality of moving between a point A and a point B (or possibly more points) was not here regarded essential: the studied routes are used for varying purposes, such as for commutes, errand runs and recurring trips to a friend's place. The idea here was to look for commonalities between different kind of routes that different kind of people use for different kind of purposes – to look for the basic elements of body-environment relations and their repetitions on a *functional* route – instead of framing the data through one or more pre-set social criteria (such as age, sex, occupation, level of education) or a specific type of a route (such as commutes, shopping trips).

The informant were recruited through email-lists of different organizations (such as housing associations, sports groups and university organisations), public bulletin

[23] In the interviews, there was a couple of situations where such attention-related issues came about. In one occasions the driver turned earlier than he would normally have, turning to 'another' route than the one presented, but was quickly recovered, which meant that for a few blocks the route was driven on the 'other' side of the block than normally. In another event, the dark lighting conditions changed traffic situations in a worksite area, and the hurry of the driver to get her child to the hobby in time as their start had ran late, resulted in a small negotiation / observation of driver-driver relation.

[24] During the drives, a video camera was set to record the route for later use. After the drive, the video was watched together with the informant in a video-elicitation interview, providing another look to the route, without the need for active driving practices. The drive, in a way, was here done twice: first in the 'real-life' situation, then through a laptop's screen. Here, the ability to pause and rewind the video was made use of. Participant selected screen-captures were also recorded for deeper discussion (see below).

[25] The interview method in walking context also relayed partially on my previous experiences on walking interviews (Tartia 2014), which here were further developed.

boards, public *Facebook* groups, and personal social media contacts.[26] The informants were 26–73 years old, both males and females, white, and from various occupational backgrounds (from students to teachers, unemployed and retirees) (Appendix 4). Some of the informants could be described as *active members* in urban policy issues through their involvement with local housing groups and associations. Finding informants proved to be a somewhat difficult and time-consuming process, especially in the case of the driving interviews, which might be due to the fact that the couple of hours needed for the interview, together with the focus on the (habitual) everyday routines, might seem as research setting that is difficult to approach as a volunteering informant.

After finding suitable informants to present their day-to-day route, a brief description of the structure of the interview event was sent beforehand to the participants (Appendix 5). In order to provide different means to convey the difficult-to-represent issues of the *everyday*, participatory visual methods were also used. The walking interviews incorporated the use of camera during the walk, where the informant had the possibility to take photographs of things of his/her interest along the way (Appendix 6).[27] These photographs were then examined one-by-one during the subsequent 'photo-elicitation interview', which, as a method, generally refers to the use of visual material in an interview (material that can be made/selected by the researcher or by the participant, or be otherwise pre-made) (Harper 2002; Clark-Ibáñez 2004; Murray 2009; Richard and Lahman 2015). Such interviews can potentially provide deeper and richer data than 'traditional' interviews (Harper 2002; van Auken et al. 2010), and help to 'anchor memories' (Ibid.; also Banks 2007). Photographs here are not treated as purely visual documentations but as multisensory representations of the environment and events (see Pink 2011). Douglas Harper (2002: 20) notes that photo-elicitation interviews that introduce a tangible issue that can be commonly 'shared' to talk about can be helpful in in-depth interviews, and can also ease the feeling of being put on the limelight from the informant's part by providing a more collaborative approach to the interview (Banks 2007). In the 'drive-alongs', the principle of using participant-produced visual material in a 'film-elicitation interview' (Ibid.; Murray 2009) was the same as in the walking situation but here a video – recorded during the drive (as noted above) –

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[26] Many of the driving interviewees were from housing associations (detached house owners), which might emphasise some issues or perspectives in the data.

[27] The subject/topic of the photo was not limited: it could be something that is of interest to the informant 'usually', something that they, on this particular walk/interview event, noted as having changed in comparison to the 'usual' situation, or something they noticed on our walk for the first time.

was used to 're-examine' the route, and the possibility for pausing the video and taking a screen-capture about the participant's own environmental/route-based interests (similarly to the taking of photographs during the walks) was provided (Appendix 7)[28].
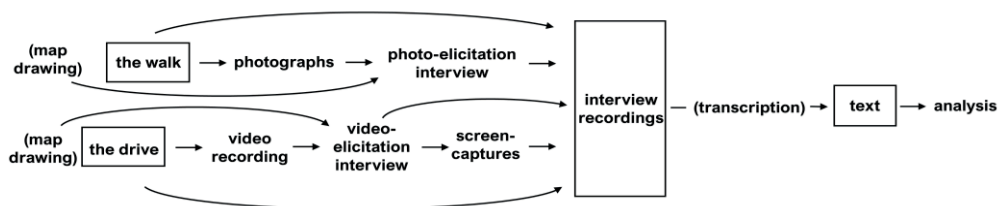
Figure 4. The data gathering and transcription process in the study of the routes.

Additionally, before the interview event, the informant was asked to draw a map of his/her route (and to send it by email in advance) (see Appendix 8; also Appendix 5). The maps are, similarly to the photographs/screen-captures, examined as additional means to tell the 'everyday story', rather than analysed as cognitive strategies or mental projections (see e.g. Hölscher, Tenbrink and Wiener 2011). In other words, the drawn map does not equate to the route and how people understand, or *experience* it[29], but the maps *do*, as shown by the empirical study here, help people to tell the 'everyday story' in more detail (although it might simultaneously direct the person to describe the route in a pre-learned way – *this is what maps are supposed look like* – rather than in what is intuitive to them; see Mäntysalo 2004).[30] During the elicitation interview, which began with the examination of the

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[28] Again (as noted earlier above in section 3.1.1), screen-captures were received from 8 of the 10 driving interviews as the application of the 'go-along' method into the driving situation was experimented with (as a practical research process). The 'screen-capture'-focus was only adapted from the third interview onwards.

[29] Using such *mental maps* in the study of environmental meanings (Gould and White 1974/1986; Appleyard 1970; Lynch 1960) has been criticised for painting a rather rational and logical picture of the mobile body (Mäntysalo 2004). In this study, similarly to what Raine Mäntysalo (Ibid.) highlights, the assumption is *not* that people would have a map projection in their head that they *follow* as they move in the city, and which would be analysed here, but that people habitually use the environment to momentarily orient oneself (through routine observations) in the familiar environment, and the recurring elements and areas produce some kind of an idea of the route and it's settings. Asking people to draw a map of their route, thus, is another kind of issue altogether than the orientation in the *moment* (see Ibid.).

[30] This issue was actually brought up directly by one of the informants, who described the initial difficulties she had with the map drawing task, and how she resolved those issues by starting to think the route through *cairns* (rockpiles in the mountains, used as landmarks since prehistoric times): what

printed-out map, the informant was also encouraged to add things to the maps (with a pen) if any had come to their mind during the walk/drive.[31]

In the end, the main interest in using the three different research modes was ultimately the same: what the informant tells (verbally) about their route. All the recorded interviews were transcribed into text (Figure 4) that was then analysed through content analysis that focused on different forms of temporalities: changes, differences, recurrences, repetitions and routines.[32] The content analysis of the interviews focused on words such as 'often', 'never', 'sometimes' and 'always', which were considered as central in identifying the temporal elements in the informants' narratives about their everyday routes. (*Rhythm* was a word that was avoided consciously and only talked about if noted by the informants themselves [see again Appendix 2–3]). In the analysis of the data, it was also essential to try and be attuned to the narratives as discussion that were taking place in an *interview situation,* and were framed by the 'introduction'-like approach to the route, in order to judge what issues, of the ones brought up, were part of the daily interactions with the environment, and what were 'shown' for the interviewee as part of the specific *event* of the interview. As noted above (section 3.1.1), the interview approach cannot achieve the *everyday experience* in full (which, perhaps, remains outside representation) nor the 'actual' event itself, as the interview situation changes the event. As also noted above, much of the *everyday* is beyond active reflection, even hidden from ourselves. Thus, the study of route narratives can only provide snapshots of the complex *whole* (see Jiron 2010), as much of it remains beyond representation and communication (Anderson and Harrison 2010).

The presence of the researcher obviously also affects the situation – the walk or the drive – considerably, and not only through the questions asked: as noted above,

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such cairns would be on her (commute) route. However, in general, the maps gathered for the study were varying in style, some being more based on movement, some more on the usual map-like presentation of environments, and some more illustration-like about different kinds of environments on the route.

[31] Verbal permits to use and publish the participant-produced photographs/screen-captures/maps were gained from all the informants in the end of the interview.

[32] The visual material could have also facilitated *visual analysis* and a 'reading' of the visual material as complex *representations* with different levels of meanings and levels of *production* (see Rose 2007; 2014). Here, however, the decision was made to focus on the informants' narratives as it was considered most relative to the proposed research questions about the mobile experiences. Some work on visual analysis was experimented with – mostly through identifying the urban materialities depicted in the photographs/screen-captures on a *denotative* level (such as classifying depicted types of pathways, environmental details, social activities, and specific buildings) – but these were not developed fully nor included in the finished study here.

it becomes more of a presentation of the route, than the *experience* of it. Similarly, the interview event itself, especially in the walking setting where the interview takes place *in the open* – two people walking side-by-side, one carrying a voice recorder –was often something noteworthy by the passer-byes (other pedestrians, drivers waiting in traffic lights; people spending time at squares) as manifested in interested gazes.

As noted above, one key benefit of the go-along method, though, together with the used visual material, is that it uses the environment as a third party of the conversation, where the body is placed *inside* the environments, interactions and events studied, which can lead to experiences and memories being triggered. This, of course, is not the everyday experience *per se* but a communicated and reflected narrative of *some* of those experiences and thoughts. The problematic issue, on the other hand, is that in-depth interviews are resource-heavy, both to set up and to conduct, and to analyse, as the amount of research material builds up fast (it can also easily become a burden for the informant, see van Auken et al. 2010). Conducting twenty interviews means over 26 hours of recorded interview material, which does not yet include time needed for interview preparations (including recruitment of informants), transcription and analysis processes. The twenty interviews also produce twenty perspectives to routes, which can, even if detailed and in-depth, only give a limited view – as twenty narratives – to urban mobilities, and body-environment relations. In short, much of the so-called everyday experience, thus, might remain outside such an empirical research setting. However, as the data shows, something important and insightful about the body-environment relations are also gained, despite some of the limitations of the study's empirical scope.

3.2.2   PART II: VIDEOED SITE OBSERVATIONS OF STREET SPACES

The second part of the research data comprises videoed site observations, focusing on the mobile event from a *spatial* perspective. Whereas route-narratives from *within* the mobile event can be used to approach questions related to meanings, affects and (inter)subjective experiences (see previous section), site observation data can answer to questions related to how different embodied practices, interactions and encounters come to produce and (re)shape spaces as mobile assemblages.

The study draws from the traditions of site observation and various ethnographic approaches, where one aims to, more or less, immerse oneself in the studied phenomena, *in situ,* as an observer. In urban context, such observational approaches have been used in urban studies, such as in 'public life studies' (Gehl and Svarre

2013) that often focus on the interrelations between the material form of the space and the social activities taking place in these spaces (see e.g. Ibid; Gehl 1971/2011; Appleyard 1981; Whyte 2000; A.B. Jacobs 1984), or, as more human-geography-based ethnographic and phenomenological approaches, on how the material and the social elements of the space interconnect with the definition of the space, highlighting questions such as social inclusion, control, and embodiment (see e.g. Seamon and Nordin 1980; Franck and Stevens 2007; Stevens 2007; Jensen 2010; Schwanen et al. 2012). In relation to rhythmanalysis, observation was also the mode of choice for Lefebvre in *Rhythmanalysis* (1992/2013), and this tradition has also been carried forward by a few recent studies on the matter (see Wunderlich 2010; 2013; Simpson 2012; Kärrholm 2017; Osman and Mulíček 2017), even though they each focus on the more concrete elements, interactions and uses of spaces (as is the case in this study as well) rather than follow rigidly Lefebvre's *reading* of the mobile street scenery (see Chapter 1 and section 2.2.2).

Six locations (referred to as *site I–VI*) were selected for observation (see Appendix 1, 9). As the interest in the observation was set on the mobile event, the observed sites could have been, in essence, located *anywhere* – as such mobile events take place on almost any city street – (see similarly Mulíček et al. 2014) but, as 'real-life' locations and material settings, are located *somewhere*: in this case, in the city centre areas of Tampere and Turku. The sites, of course, each possess their own histories and evolutionary processes, and social (mobility) cultures, which affect the site's materialities and social activities as well as mobile practices and patterns. It was not the attempt of the observation method to hide or downplay such elements, but neither it was to highlight them either. *Multiple* sites – and located in two cities – rather than a *single* site (as e.g. in Wunderlich 2010; 2013), were (partially) studied for this reason: to provide *variety* in the physical and morphological settings for the mobile assemblages, which (supposedly) helps to draw more general conclusions about the mobile events of the street.

The reasons for selecting these six particular sites were three-folded: (1) they are all *street* spaces (as mentioned earlier), situated in what could be loosely defined as city centre areas; (2) they each contain different modes of mobilities (walking, car-use, bicycles, public transport/bus), and an *intersection* that brings these different mobility modes to contact with one another, producing interactions and negotiations of movement (see Stevens 2007: 99–100); and (3) they each are part of the (one or more) above-presented walking and/or driving routes, and were brought up in the interview(s) as an interesting or meaningful site in one way or another by the informant(s), which ties the observation partially to the route narratives. In the

interviews they were also identified as mostly mobility-centred sites, even though most of the sites as intersections and street corners connect directly to more prominent 'places', such as market squares or train stations right next to the observed areas. My personal experiences, perceptions and (unconscious) preferences surely influenced the decision too, as well as the available statistics of number of streets users, provided by the open data banks of the cities, were used to draw a very rough idea of the general pedestrian and vehicular movements in the city areas (City of Tampere n.d.; City of Turku n.d.).

The choice was made to utilise video in the observation as *rhythm* directs one, quite easily, towards visual methods where the data can be re-accessed and its events manipulated temporally in some way (see Garrett 2011; Hubbard and Lyon 2018). The use of video in research has increased hand-in-hand with its applications in the society more broadly, especially during recent years (Pink 2007; 2012a; Murray 2009; Heath and Luff 2012; Luff and Heath 2012). Here, the work follows recent approaches in *visual ethnography* (see Pink 2007; Ball and Smith 2007), in specific 'videography' as a 'focused ethnography' that uses video simultaneously as a recording tool, a mode of fieldnotes and a framing device (Knoblauch, Schnettler and Raab 2012; Knoblauch, Tuma and Schnettler 2014). What video adds to site observation as a method, is the possibility to endlessly re-access the data (Murray 2009), to map out the uses in more precision than *in the moment* (limitations of the perceiving body, and the possible 'fallacy' of the memories and pen-and-paper fieldnotes or singular photographs, are all potential pitfalls of 'traditional' observation methods; see Garrett 2011), and to draw a more reliable account of the micro-interactions and chains-of-events as the scene can be manipulated (such as paused or played in different speeds) (see Gehl and Svarre 2013). 'Video is capable of recording an experiential stream of time in the field as a researcher, in the world as a participant, in the flux and flow of passage and encounter on a sliding range of scale, time and space.' (Garrett 2011: 522.) The recordings do not represent *rhythms* directly – of which Lefebvre (1992/2013: 45) warned a prospective *rhythmanalyst* about – but rather it records and (re)presents an animated scene *from which* patterns and rhythms can be approached. From a practical research perspective, the recordings also make it possible to 'postpone' certain elements of the field observation to a later period, such as the calculations of the uses and users, and the in-depth notation of the events (see Knoblauch et al. 2014).

The sites were examined during 48 separate sessions in total, each roughly 20 minutes in duration. Each site was observed twice during four pre-set timeframes of the day, loosely defined as *morning*, *day*, *evening* and *night* (6x2x4=48), to provide insight

to the mobile event throughout the day (see Appendix 12). The selected mode of observation can here be located between the definitions of a *passive* and a *moderate participation* (Spradley 1980): the sites were examined from a static spot (passive participation), trying not to affect the events in any major way through the recording set-up – though utilizing different spots during different observation sessions (see Appendix 10–11) – but also from the eye-level perspective, situated *amidst* the mobile event (moderate participation), rather than an elevated vantage position or the like. The observation took place over 11 days, in May and June 2016.[33] The warmer months of the year were selected both for research-practical (the development and schedule of the research process) and observational reasons (warm days and short nights of the Finnish summer, in contrast to cold and dark winter days, provide, hypothetically, more possibilities and variety for spatial uses).
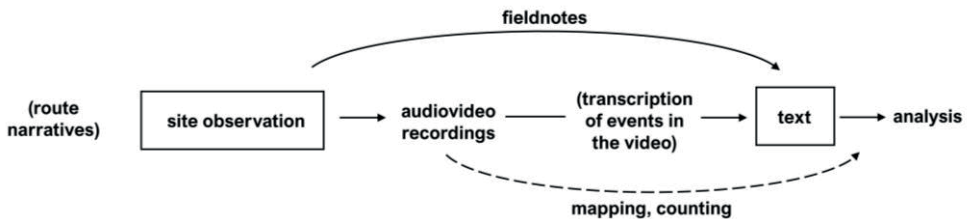
Figure 5. The site observation data gathering and transcription process.

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[33] The city centers of the two cities are currently (as of June 2019) going through major transformations. In Tampere, each of the three observed sites – all located along the main street of the city (*Hämeenkatu/Itsenäisyydenkatu*) – are fundamentally transformed as the city's first tramway lines (between the city center and the southern *Hervanta* suburb/Tampere University Hospital, with further plans to continue the line to the western *Lielahti* suburb) are currently being built. The tramway plan was approved by the city government in fall 2016, after the data collection of this work. The introduction of a new mode of public transport to the city transforms each of the three sites profoundly by redistributing the physical space for different uses, and by introducing new street aesthetics and mobile imageries. (See Tampere 2018). During the data collection, on-going construction projects – notably *Rantatunneli* highway tunnel on the northern edge of the city and *Ratina* shopping center in the center – were prominently brought up in the interviews as they affected the practical movement possibilities, as well as the daily aesthetics and imageries. In Turku, all the examined sites are similarly redeveloped (changes are both planned and in-progress). The Market Square – located next to one of the observed sites, is redeveloped, as a parking facility is built under the square, and the above-ground square area is fully re-worked (Turku 2018). The physical, use-related, and socio-cultural changes of the examined sites could provide a fruitful basis – and comparable research data – for further analysis in near future on how the mobilities and spatial appropriations, together with other site-specific rhythms, are affected and changed by such (physical) transformations of the spaces.

The (audio)video recordings were made with a small *action-camera* (*Polaroid Cube*) – that has a wide angle lens and a built-in microphone – in order to make the recording session easy and quick to set up.[34] Here, it was considered important that the videos were recorded by the researcher *in the field* (rather than using previously recorded material, or live video material from other kind of sources, such as video surveillance systems [see Heath and Luff 2012]).[35] This way one could, arguably, produce a more comprehensive perspective of the scene *through* the body, as partially recorded in the simple *in situ* fieldnotes made during the observation sessions. These fieldnotes covered issues that are more intangible and non-material (thus more difficult to record in video), such as issues related to experienced atmospheres, or to the happenings beyond the frame of the camera and things happening before or after the recording.

Through an interpretative analysis, the video (and audio) data was transcribed into text (Figure 5). One of the main problems for using video in qualitative research is that it is complex by default: a brief video produces vast quantities of information, and different kinds of information (visual, aural and kinaesthetic, see Garrett 2011). A range of different types of readings of it can also be made (such as focusing on the framing, production or editing of the video, or on the contents of the video) (Ibid.; Knoblauch et al. 2012; Lofland, Snow, Anderson and Lofland 2006; on visual analysis of representations, see also Rose 2007; 2014). Video also records that something happens, but not how or why something happens (Heath and Luff 2012), showing, in other words, the perceivable outcomes rather than the 'whole' picture. It is also important to note that video can never be fully objective, as it is always a *produced* material (such as through framing: Garrett 2011; Pink 2007; Luff and Heath 2012). Additionally, as sound is also recorded next to the video, the analysis can be extended to sounds as well, such as to soundscapes (Schafer 1977/1994) or to singular sounds, which opens a range of new questions and problems that determine both the right questions for the material as well as the appropriate level of depth of the analysis.

Here, the analysis consisted mostly of identifying perceivable embodied patterns (see Spradley 1980; also Knoblauch et al. 2014; Pink 2007). The interest in the

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[34] The use of a 360-degree camera, or a drone camera, were also considered for the videoed site observations, which would have naturally resulted to other kinds of approaches and perspectives to how the sites and the mobile events are conceptually framed, what kind of purposes the video-as-a-research-tool can be used, what kind of questions can be presented for the research data, and to the selection of the appropriate scope and depth of the analysis of the video material.

[35] It should be noted here that videoing and photographing in the public does not require a permission in Finland.

analysis of the data was thus similar to traditional (non-videoed) site observations that have been used to map out the uses and users of (public and urban) spaces (see e.g. Gehl and Svarre 2013). In specific, the analytical interest here was set on the modes and trajectories of movement, non-movement related activities, mobile interactions, identifiable spatial hot-spots of uses and users in the site, identifiable sources of sound, and general temporal differences and changes in the above. The focus, as noted earlier, was here mostly on the qualitative aspects of the recorded events but some preliminary calculations of the uses and users were also made in order to make out the general 'rhythmic profile' of the sites (see Osman and Mulíček 2017) – a general view of how the quantifiable uses vary through-out the day.

The analysis was conducted manually, which makes it a time consuming process, and this partially affected the decision on the appropriate amount of research data to be collected. The sessions (eight on each site) are arguably not enough to draw definitive conclusions of a particular site's uses, users, or temporal changes – in specific from a quantitative perspective. What the data can, however, do is to draw a broad picture of the mobile event – situated here in six different locations – and the assembly of such events as constellations of mobile practices and socio-cultural-material interactions; in other words, the collected data can highlight 'how mobilities spaces are composed by and entangled with lines of life, cultural and social formations.' (Jensen and Lanng 2017: 54.). The observation, could have been continued further – to cover more sessions, or more sites – which would have, presumably, brought additional insight to how the mobile event unfolds in these sites. Additionally, the sites could have been examined also during other daily and seasonal temporalities, providing more possibilities for a *comparative* study that could have highlighted temporal issues not covered here.

Using video in site observation also does not affect to the underlying limitations of observation as a method in general (in other words, *what* can be gained research-wise through *observation*), which could arguably be addressed by the use of other research methods and approaches. As with the route narratives above (section 3.2.1), the same *problem* of the 'everyday' representativeness remains in the observation situation too, even if it might be considered as a more 'objective' approach to the study of the mobile phenomena than the 'subjective' route narratives – and where the researcher's position is more clearly defined as to the one of an *observer* in contrast to the less clearly defined *interviewer/participant* role in the interviews. The recording session, though, did also affect the events on the scene – like the walking (and driving) interviews – as manifested in some interested gazes towards my own (in)activity at the scene. Most often, I was the only immobile user of the site, which

both highlighted the mobility-centrality of the sites and the reactions towards someone who was not acting in accordance with the site's presumed mobile *script*. It could also be argued that my own bodily presence in the space – as a mode of appropriating space – affects the mobile assemblage in ways that are difficult, if not impossible, to pin-point in detail, such as affecting how the space that I had appropriated during the recording sessions would otherwise have been used.

Regardless of these reservations, videoed site observations – together with 'go-along' interviews – provide research tools and subsequent research data for an in-depth understanding the day-to-day mobile assemblage, both from the 'outside' and the 'inside', respectively. In the next section, the analysis of the research data – presented in the research Articles (#01–04) – is briefly reviewed and summarized.

4   REVIEWING URBAN MOBILITY RHYTHMS

4.1   THE RESEARCH PROCESS

The work's empirical focus, as presented above, is on recurring walking and driving routes, and on mobility spaces as rhythmic urban mobile assemblages. Below, the previously published research articles – that present the main findings of the study – are briefly reviewed. All the articles address the same fundamental questions about the character of embodied place-making and rhythm-making in mobile contexts, the nature of urban mobility rhythms, and how such rhythms could be (qualitatively) mapped and understood in urban analysis. The articles focus, in specific, on the aforementioned *surfaces* where such rhythms of the moving body and the space meet (momentarily), and which – as noted earlier – often through friction, become momentarily perceivable. The focus here is on what kind of repetitions and reoccurring interactions, methods of synchronization, (inter)subjective knowledges about the temporalities of the environment, modes of organizing daily life, and localised material and regulative pacemaking processes characterize contemporary street spaces in mobile and embodied contexts.

The analytical approaches to mobility rhythms are divided into *walking, driving, route* and *site rhythms*. The articles present the research process in a chronological order: the phenomena of the mobile event were first approached through situated route narratives from *within* the mobile event, and then gradually moved from an 'inside'/subjective perspective towards an 'outside'/objective perspective that examined the mobile event *in* space (Figure 6; see also Chapter 3). The process began with the examination of walking and driving practices, and their interrelations. The research process then shifted the focus from the individual body and the route context towards mobility spaces.

The first three articles examine day-to-day walking (#01, #03) and driving routes (#02, #03) in the city, and focus, in general, on how people, through movement and a situated embodied context – the habitual walking/driving route – both produce and perceive the temporal environment. Taking an overarching perspective to the route narratives, the first two articles (#01–2) examine the route as a specific time-space *project* (Hägerstrand 1970; Pred 1984): as a spatially and temporally fixed

performance of the space through routine-like movement, where the streets are 'dwelled-in-motion' (Sheller and Urry 2006). Here, the temporal elements are experiential, (inter)subjective, related to the subjective route project, and perceived through the multisensory body and its situational context. The third article (#03) shifts the focus from the overarching route narrative to the urban morphology, and 'dissects' the route through the materialities of the routes in order to pinpoint shared

urban rhythms; rhythmanalysis as a research framework
focus: repetition (and *difference*), 'lived' temporalities — *THEORY*

mobility as rhythm; embodied practices
focus: public urban spaces
[postphenomenology; mobile methods] — *RESEARCH FOCUS*

mobile place-making
focus: spaces from **within** mobilities
['subjective' approach; interview data]

mobility as spatiotemporal elements
focus: mobilities **in** spaces
['objective' approach; observation data] — *PRACTICAL APPROACHES*

article #01 'the walk' article #02 'the drive' article #03 'the route' article #04 'the timespace' — *RESEARCH ARTICLES*

urban mobility rhythms;
rhythmanalysis as a framework for mobility studies;
urban rhythms — *NEW THEORY*

Figure 6.   A summary of the included research articles' perspectives in the research process. The process moves from the theory towards the empirical cases, and then towards new theory.

temporal layers between specific kinds of urban morphologies, or 'urban elements' (Lynch 1960; see 4.2.3). In the case of the third and, in specific, the fourth article, the perspective is flipped from the subjective body to the intersubjective bodies and spaces. The fourth article (#04), by making use of videoed site observation data, examines qualitatively mobile practices as spatiotemporal forms of the urban fabric: here, environmental temporal structures are related to embodied timespace patterns, including regulations of movement, social (habitual) interactions, temporal negotiations and appropriations of space as day-to-day (momentary) *territorialisation processes* (Kärrholm 2007). A narrative that runs through all the research findings is

the larger theme of how people, through their bodies and embodied (mobile) practices, both conform and contest the temporal mobile event, inscribe their own movement in it by momentarily claiming space, and (re)negotiate spatial uses, the way mobility is practiced, (inter)subjective meanings, and interactions and encounters along the way.

4.2   RHYTHMS OF THE MOBILE EVENT

In this section, the four research articles included in the thesis are briefly reviewed. The articles, in order, examine *walking rhythms*, *driving rhythms*, *situated route rhythms*, and *site rhythms*.

4.2.1   WALKING RHYTHMS (ARTICLE #01)

The first article examined the rhythmic body-environment relations on day-to-day walking routes. The research question here was, as formulated above (see section 1.3), *what kind of temporal patterns and repetitions structure body-environment relations on habitual urban routes?* The article examined how different kinds and levels of temporalities weave together the body and the environment in the context of the familiar, repeating walking route.

The studied walking routes utilize a variety of different kinds of public spaces, such as sidewalks, shared pedestrian/bicycle paths, bridges over highways, gravel paths in parks, pedestrian passageways next to car-heavy streets, and staircases in points of elevation. More *informal* paths are also used, such as the inner yards of apartment blocks and 'backdoor'-kind-of alleyways between buildings. As part of the assigned photography task (see section 3.2.1), the informants photographed pathways, scenic vistas, specific buildings, popular and livable, or 'empty', areas passed by, and environmental details that in a way or another had become relevant for them, such as sites of past experiences, points of frustration in relation to obstructed movement, aesthetically interesting sceneries or environmental details, or just something that had caught their interest.[36]

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[36] Sometimes photos were also taken of things that were *not* there, especially in the case of social interactions and encounters, which interestingly, did not come up as strongly in the data as one might assume, which might be due to the limitations of the interview as a method. It also somewhat calls back to the notions about the social indifference whilst moving in the public (Goffman 1983; see also

In the closer analysis of the walking route narratives, four distinctive themes were identified in how the route was 'introduced' (in the interview context) (see Appendix 13). The theme (1) *event/interaction* refers to the various interactions between the body and the socio-material environment, including encounters and temporary interactions with both the social and material elements during the walk, the knowledges needed to navigate through particular sites (material obstacles; crowds; busy intersections), and how the familiar route might have changed temporarily due to a street maintenance site or the like. In the interviews, phrases such as 'this is the place where always', 'usually, here you can find', or 'here, you don't often see' were often repeated. Here, environmental temporalities are 'interpreted' in relation to one's own functional/goal-oriented movement on the route. (2) *Path/embodied* refers to the embodied practices and routines, feelings of motion, the effects of environmental conditions on one's movement (such as weather, schedules, feeling-of-hurry), and the use of headphones or other similar technologies that are used to alter one's perceptions of the environment. These issues relate to the habitual practices of the walk, and how one 'inscribes'[37] ones subjective movement in it. (3) *Project/knowledge* refers to the route as a *whole* between the two (or more) points that are connected by it, and to the knowledges related to what happens (*usually*) during the route, including the practices of orientation: known obstacles, detours, or points of (expected) frictional encounters. These route knowledges were evident through the naming of the streets and passed-by locations, and through noting the distinctive areas or districts on the route. Here, the body-environment temporalities are 'set': scheduled, timed and internalized. (4) *Landscape* refers to the (mostly visual) perception-based relations with the environment, such as subjective memories and the multitude of different relations one has with particular spaces or buildings (such as walking past previous homes or work places), the (multisensory) aesthetics of the environment, and the way the sites' users and uses, are 'perceived' (as a backdrop or a stage) when the site is passed by or moved through.

The four themes work in two different kinds of temporal scales: the *immediate* and the *mediated*. The first two themes – 'event/interaction', 'path/embodied' – highlight the experience of movement *during* the walk, where the temporal connections take more immediate forms, unfolding *in situ*. These relations also include the small-scale (un)expected events on the walks: such as slightly bumping

Jensen 2013: 74–77). In a routine context, the social encounters and interactions might not be central to the mobile script of the route, or at least how it is introduced in such a research setting.

[37] Edensor (2010) also uses the term but more in relation to the formation of dominant rhythms and power relations than embodied practice.

into a passer-by, negotiating movements in intersections or in narrow passageways, or unexpectedly encountering a face-to-face campaigner, as each experienced during the go-along interviews. These immediate-level issues were often brought up during the actual walk in the two-part interview, which – through being in the environment and in the embodied situation – facilitated such fleeting and difficult-to-grasp body-environment relations to emerge. It highlights the aforementioned non-representational elements of movement, and how, through going *to the field,* the interview event can gain depth and insight to issues that are not on the front of the more vocalised narratives about the route. In contrast, the two latter themes – 'project/knowledge', 'landscape' – relate to the more *mediated* knowledges that are more easily reflected upon and communicated to others (e.g. in a 'traditional' interview setting). These were also issues that were brought up in the route maps as noted and anticipated (physical) elements of the route. These knowledges have been build up through repeated interactions, experiences and (different) spatial uses, and internalised and reflected upon.

This divide, of course, is a crude one, as are the definitions of the four themes above. They should not be understood as definitive frames but rather as means to unpack the temporal character of the route (see Article #01 for detailed description of the themes): to provide some insight to how everyday routes in the city are practiced, and how the environment is both 'read' (de Certeau 1990/2013) and 'dwelled-in-motion' (Sheller and Urry 2006) during the habitual routine walk. They help to make some distinction between issues that are more on the front of the walking practice and it's (embodied) experience (immediate and difficult-to-communicate) and those that are more acknowledged and easily communicated (mediated, representational), as well as between issues that are more individual and subjective notions of the environment, and in contrast, which are more shared and collective.

In a short summary, the article's focus was set on how people both inscribe their own movement in the space, and simultaneously, and in continuous interactive relation with the space, read the events around them. The analysis highlights that the walking practice is acted out in a three-way dialogue of rhythmic route-body-environment relations. To use Lefebvre's (1992/2013) terms, people work in relation to the *noise* of the city, and make sense of it through their own (routine) movements. Michel de Certeau (1990/2013) notes that people use their own 'tactics' (as embodied practices) against the set backdrop of top-down 'strategies' (regulation, social relations, material forms) to inscribe their own routes to the complex network of connections and trajectories, or what could be here regarded as urban

assemblages. (See also Middleton 2009; 2011.) These *temporal* 'tactics' are most evident in the brief moments of embodied play (Stevens 2007) – mostly as micro-scale interactions with street furniture – or as *informal* movements, where the space is used to move in other than the regulated or intended ways – such as utilizing various shortcuts (that are temporarily available). For example, one of the informants noted a middle-school yard that she uses to go through to cut the travel distance a little, but only during the times that the school is out when she considers it *possible*, or at least more appropriate. Brandon LaBelle (2010: 93) writes that body movements are negotiated with the surroundings: 'The sidewalk throbs with life, and the walker - - *beats back*.' This is not an active struggle but something that has formed into a habitual, expected and 'known' set of relations and practices. It is about the skills and knowledges one has to use in order to work in given time-space conditions, and to connect one's own uses of the space to the rhythms of street, such as finding and avoiding bottlenecks of movement, utilizing shortcuts, preferring aesthetically or otherwise more enjoyable paths, or about the feelings of familiarity (as all brought up in the research data). Only when this physical or social familiarity is changed (through construction sites, cultural events, or larger redevelopment processes and the redrawing of the street grid) – as set-from-the-above urban 'strategies' – the negotiation of ones movements in relation to the surroundings becomes more prominent (see also Edensor 2011).

What the analysis highlights in general is that, even though the particular embodied context of the route – the route as a specific timespace project – is connected to, and overlaps with, other spatiotemporal contexts, these spaces *along the route* are mostly performed through the overdriving functional and goal-oriented – contextualised – movement. In other words, the way urban spaces are interacted and engaged with is dictated by the mobile 'project'. The informants brought up that they seldomly have the opportunity to stop and take part in any events or social happenings in the public, or to go shopping or to grab a coffee on the way home from work (if it is not already part of the 'project') as other daily schedules, needs and (family and work related) responsibilities set 'constraints' (Hägerstrand 1970) for the movement and spatial uses.

The main findings here do not convey the walking experience on the habitual route *fully* in any meaning of the word. The angle the phenomenon is approached, the used methods, and the interview moment, all have a major effect on what kind of issues are, or can be, conveyed and put on the forefront in the conceptualization of the walks. The introduce-me-to-your-route premise of the research surely highlights such introductory elements of the narratives, rather than capturing the

(uncapturable) 'present' or 'everyday experience'. Many things are left unspoken, and the overall problem of reflection in relation to the everyday (and its representation) remains here central.

Nonetheless, the analysis of the walking interview helps us to understand the ways in which the urban environment is engaged with in a routine and recurring walking route context. The study could further be developed through a continued inquiry on the repeated routes through further interviews, which potentially could give a more nuanced view to the routes on each additional round of interviews (with the same informants), or by including more people and routes in the interviews to provide more variability. The seasonal effects could also be examined – the data was collected during the summer-time which surely affects the ways in which the walking practices, as well as the environments, are conducted and assembled. The analysis process could also be further expanded to include other approaches – and to answer different research questions – than the basic content analysis used here, including connecting the narratives to different street types and hierarchies (Marshall 2005) to draw a more spatially relevant perspective between the routes and the experiences, or by examining more closely the organization of the informants daily life, and how the route plays a part in it as a single piece in the larger *whole* (see Jiron 2010).

4.2.2   DRIVING RHYTHMS (ARTICLE #02)

The second article examined the body-environment relations on day-to-day driving routes. The presented research question here was the same as above: *what kind of temporal patterns and repetitions structure body-environment relations on habitual urban routes?* Like above, the analysis of the interview data focused on the temporal elements of the driving route narratives: how different kinds of temporal frames came up in how the informants perceived, and told about, their day-to-day environment, and the role of the particular route context (Appendix 14).

The driving routes consisted of repeated driving routes in city centre areas, or between the suburbs or outer central areas of the city and the centre. The routes consisted, in some occasions, of residential streets in the suburbs, or brownfield areas on the outskirts of the city, but they mostly consisted of highways and streets on urban areas, which were the main interest of the analysis. As part of the interview event, the participants produced screen captures of the driving videos (see section 3.2.1), which depicted mostly pathways (affected by the use of video as a method and the framing of the video, which depicted the scenery directly in front of the car),

specific buildings, vistas, and intersections as identified nodal points on the route, and as sites of different spatial uses. It should be noted here that the driving interviews we conducted during winter-time, which presumedly affects the data, in specific, in comparison to the other research data used in the study, which were collected during the spring/summer. It can be presumed that the winter-time activities in Nordic cities (like Tampere and Turku here) are affected by the cold temperatures and the low light conditions of winter-time, which affect what kind of observations and notes are, or can be made, of the environment and the events and happenings taking place there.

The driving practice steers the interest on the body-technology-relations – towards the hybrid 'driver-car assemblage' (Dant 2004) where the body, the car, and the demarcated driving spaces (including the driving lanes and parking lots, legislative signs and symbols) of the street form an interconnected mobile assemblage. The driving practice is (like walking above) acted out in a three-way dialogue of rhythmic route-body-environment relations, though here the body is substituted with the driver-car assemblage. In the driving practice, the concrete materialities produced by the body-assemblage are highlighted in the narratives from three perspectives: the flow of traffic and the continuous need to move *with it*, the limited possibilities for environmental perceptions (the car chassis as a 'filter') and engagements due to the delimited driving spaces, and the material and social interactions *inside* the car.

The analysis of the driving interviews highlighted three themes on the temporal and contextualised body-environment relations (examined in more detail in Article #02). The *first* one relates to how the driving practice (1) 'embeds' ones movements as part of the (motorized) mobility flows. The habitual driving practice, daily (subjective) schedules, the route as a more-or-less set collection of pathways, other practical route knowledges (slow or traffic-heavy paths, 'long' traffic lights, blocked pathways), and the overall reasoning for car-use (and the possibility for using other movement modes), connect to the routine-like performance of the route. In other words, the route knowledges are used to embed one's own movement in the environment. This also include practices what could be termed as route 'hacking', similarly to the walks above, where the informants brought up their know-how in relation to the environment and the movement in it, including knowing and using some of the *hidden* paths of the city, or knowing the times of busy traffic (such as the morning commute) and how to avoid them (if possible) by managing their own schedules or using alternative pathways. The *second* theme refers to (2) the 'perceived' temporal elements of the environment: the events and happenings in the

environment, traffic regulation, the perceived character of passed-by or driven-through areas, and the effects of the weather or the season on the environment. These elements provide a kind of a rhythmic backdrop for the drive – or a *set* stage (Jensen 2013) – that produce connections to the environment and the city in general, mostly through visual perception. It also includes notions related to specific buildings with subjective relations, experiences and memories, as well as notions of other embodied contexts the informants have for specific sites (especially in the city centre areas, where other uses, such as leisure time and shopping trips connect to the route and its specific context). The *third* theme relates to the temporalities in the 'middle' between the driver and the environment – the (3) 'interactions', unexpected events, the route as a process, and the micro-temporalities related to moving as part of the traffic flow. Here the driver's own 'blueprint' of the route (produced through knowledges and build-up experiences based on earlier goings) that is fit to the frame set by the material and regulatory elements of the environment, is actualised and performed. The continuous flow of the movement is dotted by specific localised points where different kinds of interactions have the potential to take place, such as having to watch out for young school children crossing the street, or being alert in relation to the driving practices of other drivers, or specific physical things one has to note when driving as part of the flow, such as the effects of street maintenance sites.

Similar mediacy/immediacy divide can be also identified here, as in the walking routes: the 'embedding' and 'perceiving' factors being more mediated – acknowledged, remembered and reflected elements that have become more or less part of the route's expected *script* due to repetitions. In contrast, the 'interactions' are more immediate elements of the environment, approached and engaged *in situ*. The happenings of the inside car space also play a key role in the driving practice and the performance of the route. The casing of the car, together with the forward motion of the car directs the perceptual (visual) connections between the driver and the environment towards the spaces opening in front, narrowing the body-environment relations into a more stretched out form, along the form of the driving lane. The driving practice is connected to the relations inside the car, in specific, if driven in a company (as was the case with some of the interviews). The semi-private inside space of the car – the 'bubble of territoriality' (Scollon and Scollon 2003) – provides possibilities to affect the experience of movement, and to produce new rhythmicities. The analysis highlighted driver-passenger relations (including the interview event itself), and the various micro-practices, such as listening to music or phone use, which are used to make the inside car space one's own whilst moving in the public;

whilst 'embedding' one's own mobile 'bubble' as part of the flow of the traffic (see also Bull 2004).

Continuing with the above notions of de Certeau's (1990/2013) tactics/strategies, the analysis focused, in specific, on the route as an embodied place-making and rhythm-making process, set against the set-from-the-above regulations, materialities and shared temporalities of the environment. The article made use of Jensen's (2013) notion of 'staging mobilities', where he highlights the role of the *material form* (and the design of it) in how mobilities are on the other hand set up from the above – as 'staged' – and on the other acted out from the below – as 'staging' (following the aforementioned de Certeau's conceptualisation of tactics/strategies). From a temporal perspective, such staged mobilities are *paced*, and through mobility, people *pace* their surroundings. As noted above, the design and planning of a car-dependent mobility system has had much to do with pacemaking the contemporary street (see section 3.1.2). Such pacemaking practices are visible in the day-to-day mobility, both as the set regulations and material forms of the space, which set the frame in which the driving practice takes place in, together with the subjective driving practices and route knowledges, where such set-from-the-above regulative frames are practiced *in situ,* and sometimes also challenged. In other words, the driver embeds rhythm to space through their embodied practice (the driver-car assemblage), which movement is simultaneously paced by environmental feedback, including the interactional flow of the traffic.

This interaction between the subjective driving practice, and the regulated traffic system one drives in, was evident beyond the route narratives as well: the driving practice itself, and moving as part of the flow of traffic, suggested an outlook on driving as something that happened in a continuous interaction with other cars (or in the absence of them). In one occasion, for example, the driver/informant stopped the car on a stretch of a four-lane street to provide me a clearer view to a construction site he had pointed out moments earlier, after checking there was no traffic in front or behind us, clearly rupturing the regulated and intended uses of the street, which in the case of other present traffic would have not have been 'possible' due to the pressure set by the flow of movement. In walking situations, such pressures of the traffic interactions were present much more limitedly, and confined to particular sites (such as a narrow shared pedestrian/bicycle lane in a boxed corridor next to an active construction site) – rather than the whole street network, as in driving – although here, in contrast, other kinds of interactions were possible (such as brief close-quarter gazes between passing people, quick reworkings of movement on narrow sidewalks in passing-by situations, physical bumping-ins, encountering a face-to-

face campaigner abruptly). The driving practice takes place in a continuous mobile relation with the environment and, in specific, other drivers. Here, the pacing of the (continuous) movement connects to the route as linear project with a distinctive arc – a beginning, an ending, and different sections in between – that are (partially) differentiated through the presence/absence of other car traffic.

Like with the walking data, the analysis themes presented here are not considered as definitive ones, but rather as one way of approaching the difficult-to-capture everyday experience of the driving practice and the body-environment relations on a day-to-day route. The interview event, together with the methods used, affects the way the route is presented and talked about. The specific problem with the driving interviews, as a method, should also be noted here: the car routes, in contrast to walking routes, are rather difficult to pin-point to the (quite small) central areas of the cities. The routes are, thus, not necessarily optimal for the interests of the research, as the time spend in the urban areas are limited here, but do provide valuable insight to the place-making and rhythm-making of the contemporary street space.

The analysis could be further improved and deepened by similar means as the walking routes (see section 4.2.1). Continued data gathering process would, undoubtedly, provide a broader and more nuanced view to the driving routes, the experiences of being in motion, and the habitual and recurring body-environment relations; and the analysis process itself could also be further expanded and connected to other approaches, including ones with a more spatial (road, street types), temporal (day, seasons), or subjective (route as part of the daily life) focuses.

4.2.3   SITUATED ROUTE RHYTHMS (ARTICLE #03)

Whereas the Articles #01–02 took the route 'project' as the unit of analysis, the third article turned to the *route* itself. The question here was: *what kind of temporal patterns and repetitions structure habitual urban routes?* Here, both the walking and driving routes were examined *together* by focusing on the materiality of the route as a set of interconnected pathways, and it's different identifiable (temporal) sections. The main idea here was to break down the route into spatial (morphological) components, and to identify micro-level body-environment relations that are part of the habitual route context, and thus to try to approach the interconnected *inner* (body, practices) and *outer* (environmental) rhythms of the embodied route context.

The visual material that the informants produced of their routes – photographs/screen-captures and route maps – were used as *anchors* that enabled the 'dissection' of the route into smaller sections, and to examine whether there were some commonalities (or differences) in how different material environments and route sections were understood from within both the walking and the driving practices. The analysis made use of Lynch (1960) renowned formulation of 'urban elements' (as *paths, edges, district, nodes* and *landmarks*) that acted as a basic categorisation of the physical urban space. In essence, the elements provide a basic visual vocabulary, a typology, or building blocks, of the urban morphology, compressing the physical environment into 'a mix of centres (landmarks, nodes), lines (paths, edges) and territories (districts).' (Dovey and Pafka 2016: 3). Here, Lynch's classification was also supported by Stevens' (2007) more recent 're-formulation' of these elements in the context of *embodied play* (as *path, boundary, threshold, intersection* and *prop* respectively) that provided further tools to take a body-centred approach in relation to the examination of the physical form of urban space and how it is interacted with.[38] What the focus on 'elements' here can add (to the route-based examinations found in articles #01–02) is the role of the physical sites (as socio-material assemblages) in the formation of movements, mobile experiences and social interactions.

To sum up briefly, in the visual data, *node/intersection*, *landmark/prop* and *path* elements were most prominently part of the route narratives (Figure 7; see Article #03 for a more detailed examination). The *nodes* and *intersections*, in short, were sections of the route where the space 'opened up' (Stevens 2007: 99): here, variety of different spatial uses were noted, different subjective contexts for the space were

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[38] This is not to imply that other kind of categorizations of the physical environment could not have been used, as there is no definitive categorization of urban morphology. Lynch's (1960) elements have gained a rather strong and lasting foothold in the field: 'Lynch's elements were picked up in practice because they resonate so well with the urban phenomenology of everyday life – we navigate streets, past intersections and landmarks, across boundaries and through different neighbourhoods.' (Dovey and Pafka 2016: 3). This, however, does not mean that Lynch's categorization has not been challenged too: recently, Marshall (2012), for example, has questioned the scientificity of Lynch's categorization, and notes that the 'elements' that Lynch supposedly identifies through interviews with people, are more Lynch's own ready-made categorizations rather than something that stems from the actual data. Furthermore, a problem with the 'elements' categorization is that they are contextual: a 'path' in one situation can be an 'edge' in another situation, or a 'district', 'node' or 'landmark' (and *vice versa*) (see Dovey and Pafka 2016), which Lynch, though, also already acknowledged himself. In this study, this issue was responded to by relaying on the informants' own accounts of their routes, rather than subjecting the visual material to a researcher-based 'reading' and classification. Stevens' (2007) reformulation of the elements, also used here, is also able to further tackle some of the problematic issues that have been noted in relation to Lynch's categorization of the elements, especially by focusing on the embodied and performative aspects of the urban morphology.

identified, and the intersection was also the site where different mobile interactions (between different modes) took place. *Landmarks*, on the other hand, were the identifiable visual cues in the environment that mostly were brought up in relation to affective relations, past life events, or as interesting media topics (such as redevelopment of the city, demolition/construction of a building), and also, to a limited degree, in relation to orientation in the environment. *Props*, identified in significantly smaller portions, refer to different objects and other details in the environment that could be interacted with, often in a playful manner (see Stevens 2007: 178). *Paths* were discussed mostly through the different choices one could take on the route, and which paths were 'good' or 'bad' ones for some reason (such as aesthetic preferences, [traffic] noise, narrowness, ease of access). Some specific paths were also highlighted through stronger emotional – affective – attachments, such as joy, boredom, irritation or unease (noted, for example, during the later hours of the day in a shady pedestrian-only way), or material specificities (ground cover, effects of rain/snow) although, in general, the paths seemed to act as the taken-for-granted backbone for the route.

path	19 %
edge / boundary	3 %
district / threshold	11 %
node / intersection	37 %
landmark / prop	29 %
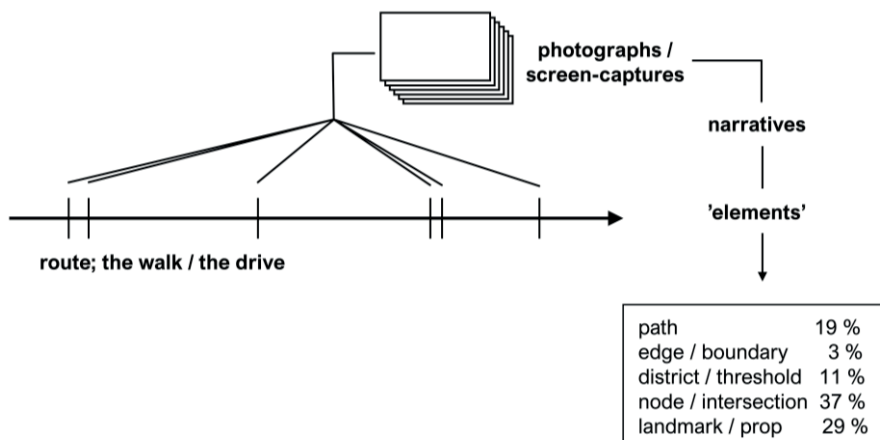
Figure 7. A sketch depicting the route 'dissection' through the participant-produced visual material.

The *edge/boundary* related notions were (expectedly) few, which further highlights the linear 'project'-like form of the route: the so-called script, and thus the pathways of the route are known, and the various edges and boundaries that limit movement or confines senses, are not essentially part of how the route is conceptualised, or encountered *in situ* (at least in such a 'introduce-me-to-your-route' kind of a research

premise). Here, they mostly referred to the various temporary construction sites and street maintenance sites that, especially in the walking situation, reconfigured the route by introducing detours or the need to use alternative pathways. The *districts/thresholds* were also less present in the narratives, mostly noted as either experiential thresholds of moving from a certain area of a route portion to the next (often demarcated by some material fixture, as noted in relation to the *intersections* above), or as some kind of a change in the perceived activity or people in an area (such as 'there's nothing here'; 'the elderly people of the area'). In the maps, such areas were frequently named and marked, often as *passed by* areas rather than areas where one moved in, which, as noted by the informants themselves, were mostly marked in the maps in order to make the drawing task (as part of the interview process) easier to carry out, rather than understood as truly *distinctive* areas with perceived unique identities.

It is important to note here that the 'elements' are not regarded as definitive categories, nor is the classification of the participant-produced visual material considered here as a definitive one – instead, the use of the elements help to analyse how the environment is experienced and engaged with by providing a way to categorise socio-material body-environment relations. Here, the most important focus was on *what kind of issues* were related to the different morphological elements on the route, rather than what kind of (and in what kind of percentual proportion) elements there were, (highlighting, again, the qualitative emphasis of the research approach), and to compare the walking and driving routes. Interestingly, the walking and driving practices incorporated similar connections to the urban elements. *Landmarks* brought out issues of subjective memories or past events, or awoke general aesthetic interest on both the walks and the drives. *Nodes* and *intersections* were also similarly perceived in both contexts: *nodes* as acting as sites of multiple and heterogeneous uses that, however, cannot be actually engaged with due to the route 'project' and its connections to the various social and temporal constraints of daily life (schedules, 'need to be somewhere'), even if the walking context provides more potentials for participation due to physical proximity with the environment; and *intersections* acting as central points of interaction between different mobility modes that bring the other mobility modes into close attention. In both situated embodied contexts, the route is known, and it is habitually and routinely performed – if not affected by construction sites that reconfigure the route and the way one moves in a particular space (although the car use was seemingly affected less by such changes).

Here, further interest was set on the *temporal* characteristics of the elements in relation to the route context. The narratives highlighted how the *paths* changed in

form during different parts of the day – the volumes of the traffic and number of other users oscillating throughout the day – and how such changes were incorporated into the aforementioned route knowledges. The changes in paths' ambience were also noted during different time of the day, as noted above, as well as the effects of other natural daily changes, such as weather, were noted in how the path and its qualities were understood: how it changed the route, and how one moves in it (such as slippery driving sections during the winter-time). Similarly, the nodes and intersections are animated: they transform during different parts of the day, which was often noted through other subjective uses the informant had for that *same* site beyond the functional/pass-through route context (that was introduced in the interview). In these sites, the multitude of different heterogeneous uses were also often noted, and how the space was used differently by different people during different times. Landmarks, in contrast to nodes and intersections, provided more long-term issues to come up, such as how the landscape is in the process of transformation, or has transformed over a certain stretch of time. The temporal notions related to the node/intersection and path elements, in general, were more about the immediate and cyclic temporalities related to embodied practices of movement, and how the movement was affected by environmental feedback, and the landmarks, in contrast, more about mediated and linear temporalities.

These notions on the temporalities of the urban elements led to two further insights that were here called as 'sequences' and 'polyrhythmia', borrowing from Lynch (1960) and Lefebvre (1992/2013) respectively, which were identified as central to the body-environment relations. *Sequences* refer to the connections between the material elements to the route project, and how they are weaved together in the route context. The main elements here are the paths and the intersections, which divide the route into a series of movements and stops. What here is central is the notions that the succession of elements is unique for the route, and can be different in other contexts, producing different kinds of temporal assemblages. The seams and surfaces of the elements – how they overlap and fuse into one another – thus are relational, as are the elements themselves (one place acting as a node in one context but as a path in another, and so on). This implies also knowledges of the particular sequences, brought up often by the informants in relation to the timings of particular sections of the route, or how intersections and the traffic light changes and other interactional elements in them worked together. What the article argues for is that the elements could benefit from being examined as part of a chain of elements – as a sequence, briefly brought up also later by Lynch (1984; see also Tonkiss 2013: 14–15) – rather than examined as separate entities. The second

temporal notion – *polyrhythmia* – on the other hand highlighted the different perceived rhythmicities and embodied contexts in specific passed-by spaces, and how the space was animated and changing throughout the day. Here, the various nodes were most visibly represented: specific squares, openings, or sections of the street that had heterogeneous uses and users. This included many of the intersections which, in addition to the noted interactions between different mobility modes, also had other uses (that were examined further in the site observation data and Article #04). Here, however, it should be noted that these polyrhythmias were mostly perceived rather than actively engaged with in the 'bounded' route context.

The different elements on the route are like specific kinds of beats on the route: spots of certain kind of socio-material interactions, perceptions, or parts of the route. What the analysis brings forward are the micro-practices and micro-interactions (both material and social) that are connected to the materialities of the urban space that here are connected by the route as a series of events. Again, though, this examination is not a definitive one but attempts to provide a temporal look to the route and the body-environment relations from an urban morphology perspective.

4.2.4   SITE RHYTHMS (ARTICLE #04)

Continuing from the material 'dissection' of the routes above, the next relevant question was: *what kind of temporal socio-material interactions and appropriations take place in mobile events?* Here, the interest was set on the elements of the urban mobile assemblage, and how they are formed through the practices, interactions and encounters of (mobile) bodies, and the embodied relations with the physical environment. Here, in specific, the question of spatiotemporal appropriation of the mobile event is a relevant question: as John Allen (1999: 60) writes, 'each part of the day, and indeed each part of the week, gives way to the next as groups displace one another or compete for the same space.' As the temporalities and body-environments can be seen as multiple and heterogeneous in the subjective route contexts, the argument here was that the mobile event itself is also multiple and heterogeneous, forming through the ongoing process of negotiation and appropriation of the street by a heterogeneous group of bodies in motion.

Focusing on six mobility sites, the analysis turned to the local rhythmicities and intersubjective place-making and rhythm-making processes. From the narratives, six sites were selected that could generally be either described as *paths* or *nodes* (following Lynch 1960). The (mostly) qualitative analysis of the recorded site observation videos

(see section 3.2.2) focused on what kind of rhythmic embodied practices, social interactions and encounters, regulations and materialities of the site – *polyrhythmia* – are produced as part of the daily mobile event. It also examined the different micro-practices related to the (re)negotiation of the (mobile) uses of the space, highlighted, in specific, by the changes of the time of the day, and the liminal temporalities in specific, which enabled more perceived flexibility in the assemblage of the mobile event, and the site in general.

Next to the analysis of the 'place-ballets' (Seamon 1980) of the mobility sites that aimed to understand the patterns and mobile elements of the sites in depth, the analysis examined what kind of interactions between people and the materialities of the site took place. Four larger themes were here identified: elements of embodied movements (as body-technology relations), the role of different time-space edges (as 'in and exits' between the public space and other [semi-]private spaces, changes from one movement mode to another), socio-material interactions, and negotiations of spaces and mobile patterns (see Appendix 15), of which the latter two became the most interesting and prominent themes, and which were examined closer in the article (see Article #04).

Interactions were identified both in motion and in more fixed forms. Most of the interactions related to movement practices between different mobile users, which were highlighted by the intersections found on each observed site that was the catalyst for much of the (visible and audible) interactions. The intersection both gathers people together momentarily (to wait), and manages inter-crossing movements between different mobility modes through regulation and symbols (see also section4.2.3). It can produce frictional micro-encounters, and it is also a site where different social norms and cultural codes are habitually utilised in how the mobile choreographies are organised and carried out. Different social encounters and interactions in mobile groups also took frequently place here, as the break in movement provided time and space for more focused interactions. The analysis made use of the concept of *pacemakers* (Mulíček et al. 2014) that refers to different sources that create temporal frameworks for specific places: certain overriding place-rhythms that are central in the definition of the temporal characteristics of a particular site. Here, the intersections acted as *micro-pacemakers* (Ibid.) at the sites, producing distinctive rhythms and potentials for interactions in relation to the more or less stable movement flows through the sites. Other material interactions, beyond the habitual movement practices, were limited, mostly brought up by different playful and informal practices, such as using the various street furniture as

environmental 'props' (Stevens 2007: 178), or as physical barriers that reconfigured ones movement at the scene, such as building sites and closed-off sidewalks.

Another point of interest in the analysis were the different spatial and temporal negotiations of the mobility patterns: the micro-practices that are used to challenge spatial or temporal orders, and to claim space (momentarily) through embodied practices. Following Kärrholm (2007), embodied practices – or the body in general – can be considered as (temporal) practices through which spaces are momentarily *appropriated* – such as through sitting, 'hanging out' or movement practices. From a movement perspective, such practices are mostly *adaptive* by character: they are means to manage the mobile body-environment relations amidst the 'staged' (Jensen 2013) urban environment – such as jay-walking, driving on the sidewalk, or cutting corners. These aspects were most visible during the early or late hours of the day when the 'pressures' of the city give away (see van Liempt et al. 2014), providing more room for such *alternative* takes on the mobile patterns (see below). The above-noted playful behaviour also challenges the instrumentality of the street space, what could be called 'resistant rhythms' (Edensor 2010: 16). The different longer and more stationary uses of the sites – that renegotiate the spatial uses and choreographies more prominently – related mostly to work-tasks, waiting practices, elements of *night-time economy* (NTE), or sitting and hanging-out practices (in both formal and informal seating configurations).

The article highlighted differences between the daytime spaces and what is here called the 'twilight spaces', or the dawn and dusk hours, situated between the distinctive day and night modes of the city (on the differences between the day and the night modes of the city, see e.g. Williams 2008; Gallan and Gibson 2011; Melbin 1978a). The research data was collected during different times of the day in order to examine how the rhythmicities of the site are affected by the time of the day – especially the changing volumes of activity in and through it. In the observation, the differences between the temporal modes of the city distilled mostly to the apparent spatial 'looseness' (Franck and Stevens 2007) of the twilight spaces, in relation to the 'tighter' form of the day-time space. The differences mostly appeared from two perspectives: the flexibility of the space due to the increase/decrease of movements and users (motor traffic in specific) and the lesser impact of the controlling *social gaze* (Foucault 1975/2005), and the possibility for various spatial appropriations (as noted above) of space due to this increasing flexibility during the early mornings and late evenings.

During the twilight hours, in other words, the environmental 'affordances' (Gibson 1979) are more flexible and varying in relation to spatial uses, and, thus, the

emergence of *alternative* mobility rhythms. Such 'crepuscular mobility rhythms' – as titled in the article – convey more variation and flexibility in the mobility patterns of the sites. During different times, the elements of the mobility sites – the flows, points of interactions, collective pacemakers, and spatial uses – are assembled differently, (re)transforming the space and its 'temporal architecture' (Osman and Mulíček 2017), although following a similar general frame in relation to their day-time counterparts. The observation data also brings up how the change from more or less steady movement flows of the day-time into the singular pedestrians or cars found during the early or late hours, changes the role of the mobile subject in the making of both the site's material form and atmosphere, making a singular body a distinctive marker: or, flows become events.

Together with the analytical interest on the assemblage of the 'ordinary' mobility site, the article also discussed the applicability of video-as-a-method in site observation situations, and in the process of 'recording rhythm'. As Lefebvre (1992/2013: 45) noted, urban rhythms as such are not recordable, but in the study of mobility rhythms, the use of video – and the ability to manipulate time – provides tools for examining various chains-of-events, temporal relations, and heterogeneous uses of the sites in ways that 'traditional' site observations relaying only on the perceptions of the researcher, cannot achieve. Here, though, the problematic issues of framing as well as representational issues related to any video material (as a *produced* representation) have to be noted in the research process (see also section 3.3). The video (with sound) also produces vast amounts of data, which can highlight issues related to the difficulty of finding the appropriate level of analysis, and the relevance of the posed questions for the data in relation to the level of analysis.

Again, as above, the results of the analysis are not definitive or exclusive, but rather give insight to the temporal and rhythmic processes of the everyday mobility sites. It highlights the way the mobility site is (re)created through each individual embodied trajectory, one person claiming space for a brief movement through the embodied mobile practices, and with a possibility for variation and alternative takes that are, in specific, provided by the more flexible, loose and 'permissive' liminal hours of the day where the continuous pressures of the traffic, as well as the *social gaze*, give away. Here, the embodied appropriation of space is rhythmic and temporal, and an essential part of the assembly of the mobility site.

5   DISCUSSION

5.1   ON MOBILE PLACE-MAKING AND RHYTHM-MAKING

The analysis, as presented in the four articles above, focus on the small-scale, or even micro-scale, rhythmic embodied practices, materialities, experiences and meanings that each play a part in the making of the ordinary, day-to-day mobile event. The study of everyday routes and mobility sites highlights the various temporalities that are part of the habitual and routine-like involvements between spaces and bodies, the reoccurring ordinary and mobile place-making and rhythm-making processes. What the analysis of the empirical research data has brought up are the mediacies of environmental temporalities in day-to-day route contexts, the pacings of the embodied movement and the environment, the situated interconnected temporalities between the route, the embodied mobile practices and the material environment, and the various temporary appropriations and interactions between mobile bodies, which each are part of the mobile assemblage.

Drawing together the conceptual underpinnings from the four articles, the analysis suggests, first, a notion of *mediacy* in such temporal relations. This mediacy refers to different forms of temporal body-environment relations: the linear process related to the (re)development of the built milieu, the repeating cycles of the embodied scale (routines, practices), or other linear or cyclical temporal phenomena, act each in various scales of mediacy. As noted above (section 4.2.1–3) some of these temporalities are *known* and reflected upon, such as the development and transformation of the built environment, whereas others are more difficult to identify and note, and are only revealed as part of the performance and practice of the route. In other words, there are (at least) two levels of temporalities – the mediated and the immediate (experienced *in situ*) – that contribute to the temporal experience of the environment in the context of the recurring, habitual and routine-like, route.

Second, the analysis focused on the interplay between the (embodied) mobility rhythms of the mobile subject (as examined both from the 'inside' and the 'outside' of the mobile practice) and the rhythms of the material and social environment, and the situated event. The analysis brought up the various 'strategies' and 'tactics',

'pacings', and 'pacemakers' that are part of the mobile event, and how embodied mobility is inscribed to the urban fabric. In other words, the analysis examined how people momentarily, routinely and habitually, claim space through embedding their own movement in it, and are continuously affected by the environmental feedback. The street is here a particularly interesting as it is something that is on the one hand difficult to *claim* in this way, such as through the sedentary means of sitting, playing, picnicking and hanging out, as found on squares, plazas or parks, but we *do* claim it all the time through our mobile (routine) practices, but only briefly and partially. It is, thus, a continuous re-negotiation between the *temporal* 'staged' (Jensen 2013) – regulated, controlled, planned – elements of the street, and the momentary practicing, 'enacting' (Ibid.) body that *appropriates* the street through (habitual and routine-like) movements (Kärrholm 2007). Additionally, the analysis identified connections between such appropriations with the time of the day, and how the form of the site is transformed during the twenty-four hours of the day. The 'crepuscular mobility rhythms' of the early morning and late evening times take different forms than the ones of the daytime, as the mobility pressures are more relaxed, providing room for individual appropriations both in and beyond mobility practices.

Third, such temporal qualities were located and situated in specific urban morphologies through the notion of 'urban elements'. By dissecting the route from a spatial perspective, 'sequences' and 'polyrhythmia' were identified as central elements in such temporal body-environment relations. The focus on the sequences and polyrhythmia of particular urban morphologies brings forward how the rhythms (and their mediacies and pacings) are connected simultaneously to the route project as well as to the situated physical context between the body and the environs it traverses.

Below, I draw together these notions on a more general level, and examine what are their implications for how urban (mobile) environments are approached, and what a rhythm-based thinking – that focuses on the micro-scale embodied practices and temporalities – in both urban research and planning could provide for our understandings of the built environment. First, urban mobility rhythms are briefly examined as *urban forms*. Urban mobility rhythms, as noted above, produce real-and-tangible 'temporal architecture' (Osman and Mulíček 2017) as shifting material trajectories and oscillating volumes. Next, the work briefly examines how the focus on mobile place-making and rhythm-making practices could contribute to practical urban planning and design paradigms. The analysis of the data suggests that spaces need to be understood as multiple and continuously (re)shaped assemblages, or

following Massey (2005), as *heterogeneous* spaces. As noted above, rhythmanalysis can set the focal point on the *intensities* of spaces, and how such intensities fluctuate the animated urban scene, opening another view on the city structure that, whilst being *material*, is not *fixed* but *animated*. Lastly, connections between urban spaces, rhythmanalysis and *qualitative mobilities* are briefly drawn. The argument here is that mobilities need to be seen as a central part of the *urban*, and examined holistically. A pragmatic approach to rhythmanalysis is here proposed as a relevant mode for such examinations.

5.2   ASSEMBLING THE (MOBILE) RHYTHMSCAPE

The analysis of the research data pushes three interconnected notions to the surface on the role of urban mobility rhythms as contextual urban forms: (1) the view on repeating routes as *rhythmic mobile places*, (2) the continuous pacing, or *negotiated rhythm-making processes* of mobility rhythms, and (3) the environmental *affordances* in relation to urban rhythmscapes. Each approaches critically notions of urban temporality as a singular entity, and sketch out a more pluralistic view on urban rhythms.

5.2.1   ROUTES

The first argument is that a day-to-day route – as a recurring context for body-environment relations – could be understood as a mobile place. It is through the repeated (embodied) practice of the everyday route, and the expected events and happenings on the way, where such a mobile place emerges, or the feeling and experience of 'dwelling-in-motion' (Sheller and Urry 2006). I echo here Edensor's notion that a rhythmic and mobile sense of place is formed on 'oft-repeated journeys' (2014: 165), and that 'The speed, pace and periodicity of a habitual journey produces a stretched out, linear apprehension of place' (Edensor 2010: 6). The argument here, though, goes further than the notion of a route as a *stretching* of a place (Ibid.; Middleton 2009), or as a specific moment of in-betweenness in relation to other places, or as social roles connected to such places (see Jiron 2010), and, instead, favours an outlook on the route as a specific situated and performed temporal place.

   The thinking here follows the works of Ingold (2009; 2011) who formulates that places should be understood as kind of spatial and temporal *knots* that are being *woven* by the continuous spatiotemporal *lines* that our bodies and their movements *draw*

(which then together form larger 'meshworks' [Ingold borrows this term from Lefebvre]). Places thus are not demarcated sites that we necessarily *enter* or *exit* – and by exiting, step into some kind of a space *in-between,* as suggested by the perhaps more common bounded notions of place (see e.g. Relph 1976; Tuan 1977; 1978; see also Ash and Simpson 2014) – but that places 'are delineated by movement, not by the outer limits to movement.' (Ingold 2011: 149.) In a mobile sense, rather than thinking a route as a dotted line of *meaningful* 'pauses' (as *places*) (as suggested by Tuan 1977: 161–166; 1978; see section 2.1.2) and some undefined moments in-between, the line is a continuous one: one moment weaving into the other. Places are, as Massey (2005) argues, continuous processes that keep unfolding and happening (but which, as Malpas [2012] notes in a critical approach to Massey [Ibid.], are not *only* processes of flows and movements but also located and (inter)connected).

This thinking, on a practical level, resonates somewhat with Hägerstrand's (1970) time-geography (see section 2.2.1), where the mobile body is constrained and facilitated by the limitations and possibilities set by available time-use, shaping partially what kind of engagements, perceptions, interactions and encounters in the space become possible. In other words, as brought up earlier above (section 2.1.2), places are created through bodies: places are not defined by the bounds of specific singular sites, but the (routine) practices of the body in relation to the environment.

The route narratives (as examined in Articles #01–02, also #03) highlight such familiar place-like qualities – both the mediate and the immediate – that are part of how the environment is engaged with, although they might not be on the forefront of the (communicated) route experiences. The mobile place here is composed of multiple recurring elements: the familiar physical environment – such as the used pathway(s) on the route – the anticipated and expected social relations in, and beyond, the route – encounters and interactions, shared timetables, family schedules – and the habitual and routine-like embodied mobile practices (even if the time of the day when the route is traversed varies). Each of these elements contribute to the familiarity of the timespace relations, to the temporal and rhythmic knowledges about the environs; though always having the possibility for change and surprises (see Anderson and Harrison 2010; Dewsbury and Bissell 2015). Changes and transformations of these familiar fixtures – such as various construction sites brought up in the interviews – contrarily, create discontinuities in this sense of belonging and wake active interest on the everyday route. The embodied context of the route does connect to other uses and modes of knowledges (media, history, collective narratives), but there is a performative script for the assembly of the specific, situated, body-environment relations of the more or less stable specific

route. Here, the engagement with the material is highlighted by the notion of *sequence* (see section 4.2.3; Article #03), and how the route project is comprised of interlocking and inseparable pieces. The body-environment relations also vary: not only between different people, or the different times of days, but also with one's own embodied context of being in that place at a particular time, and where one is going next – something that the informants also brought forwards themselves whilst discussing the passing-by kind of an attitude, or rather a requirement due to other needs, responsibilities, tiredness and the like, they had towards the spaces on the route. As a mobile assemblage, a place is not a rigid, singular place, but a vibrating, *multistable* (Ihde 1977/2012) place(s). Such places are not necessarily *intimate places*, with intimate private experiences (see Tuan 1977: 144–147), but more public, relational and contextual places that are woven through the body *in situ*.

Whether or not something is categorized as a place is not the main point here – what is, is that places are where the 'urban life' takes place in, and thus the repeated journeys, and the mobility spaces that dot the contemporary city warrant closer examination as it is these contexts and sites where much of the 'urban life' actually takes place in: and such places matter.[39] The argument here is that what 'places' *are*, requires a broader conceptual and practical perspectives, and that such place-like elements are found in repeated everyday travel, regardless of place-like attributes of the passed by spaces/'places'.

5.2.2   PACEMAKING

The second argument relates to the question on the plurality of rhythms – the polyrhythmia – of space, the *multitude* of pace(s) of spaces, and the role of the body in such assemblages. The analysis of the data showed some of the ways people pace the environment through their movement (knowledges, familiarity with the environs, embodied practices, playful behaviour), and are paced by the environment (material design, regulation, socio-material interaction), and the notion of pacemakers was also used to examine the relations between different rhythms. It is the qualitative and body-centred aspect of urban rhythms and pacemaking which I want to stress here: what does the overdriving rhythms of a space mean for the ones inhabiting it, how we subjectively relate to these rhythms, and how these rhythms shape our experience

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[39] Evans and Jones (2011), for example, note that 'sense of place' has been noted as a key component of making sustainable communities in (UK) policy. Similarly, the creation of places for meeting and social activity have been noted in the future strategies of both Tampere and Turku cities (City of Tampere 2018; City of Turku 2017).

of space? The work at hand has not directly examined such variations in subjective or intersubjective experience of rhythms, but the route narratives highlight different subjective temporalities that, as argued here, can give some glimpse of the multitude and variety of the temporalities of any particular site.

The argument here is that, from a 'lived' perspective, a rhythm (if it is possible to differentiate *a* rhythm) is not necessarily a consisted interval or frequency, experienced the same, but changes and shifts in relation with the overall rhythmicity, as people themselves are 'rhythm-makers' (Mels 2004: 3), and rhythms are relational to the body (which, as noted above, acts as a 'metronome'). This relationality means that rhythms possess qualities – such as fast/slow, frequent/infrequent, over-encumbering/hidden – *in relation* to the other rhythms to which it is compared to, including the ones' of the body (Lefebvre 1992/2013), and, thus, also the embodied and situated (mobile) context of the body-environment relations. Any particular rhythm *takes form* in the moment of interaction with other rhythms: rhythms do not only join or connect to other rhythms but *change* in the process as they connect to different polyrhythmicities. This is another way of saying that the polyrhythmicity of a space is not something that can be easily mapped out as each people always have their own temporal connections with the *lived rhythms* of the environments they inhabit.

In the research data, the route – as a specific time-space project – highlights *one* type of such subjective variation of a site's rhythmicity. Here, specific spaces, such as a crowded section of the route, or an intersection where one has to wait for a long time before one can continue their journey, become central rhythmic elements from a subjective perspective, including how the route – as a whole – is performed, and how different sites are 'weaved' (Ingold 2011) together. Whereas the route narrative data mostly highlights such subjective variations – including the different spatial and temporal contexts a subject can have for specific sites, as noted in the interviews – the site observation data, in contrast, provides a broader perspective on the various rhythm-making factors at the sites, but cannot really convey how such different paces are assembled in any particular embodied context. But the idea here is to think of those spaces as a collection of such infinite number of different assemblages, where each body forms a different kind of an assemblage.

This notion reworks, to some degree, the concept of pacemaker, which, as noted above, refers to the different shared, and often institutionalized and stable, rhythm-making factors – such as daily timetables, collective social activities (rush-hours, crowds), and clock-time in general (Mulíček et al. 2014; see also Osman and Mulíček 2017; Parkes and Thrift 1978; Schwanen et al. 2012). These institutionalized

pacemakers *do* create rhythmicities that govern much of the events and happenings of certain places by, for example, enabling and controlling flows of people (public transport and timetables, traffic light frequencies) and managing possibilities for activities (opening hours of shops and services), manifested on the grassroot-level through different materialities (bodies, vehicles, crowds, congestions). However, what the focus on such collective and shared pacemaker perhaps lacks, to some degree, is the relevance of the body and the embodied context in the making of the place, and place-rhythms, as rhythms are experienced subjectively. In other words, the experienced *intensity* varies. A *spatial* perspective on pacemaking (see Mulíček et al. 2014), or place-rhythms in general (see Wunderlich 2010; 2013), might undermine the body-centred understandings of pacemaking and place-rhythms, where the perceiving body is integral to the 'rhythmic profile' (Osman and Mulíček 2017) of the space. Rhythms, in other words, are experienced differently from people to people, who are *rhythm-makers* themselves. The rhythms of the environment connect with the rhythms of the body/subject differently; or, in other words, the rhythms of the body and environment are inseparable, always being part of the rhythmic assemblage(s). As noted above, rhythms can only be grasped comparatively, meaning that there is no *one*, or an objective or *true* rhythm. There are 'dominant' rhythms (working hours, opening times) of a site that can be identified (as in Lefebvre 1992/2013; also Wunderlich 2010; 2013) but they are not necessarily the ones that define the individual experience of the site. People are not just compliant or resistant to rhythms, but affect such rhythms through their own engagement with the assembly of such rhythms. This notion connects directly with the third and final argument below.

5.2.3   AFFORDANCES

How can we, then, approach the heterogeneity of street rhythms in relation to the embodied context? Here I refer to Gibson's (1979) concept of environmental *affordances* (see also section 2.1.3) that refer to the different (positive or negative) offerings of the environment; or the *complementarity* between an organism and the environment (Scarantino 2003). Whereas the role of affordances has been examined in relation to landscapes (Heft 2010), the argument here is that affordance could possibly also be a useful concept in the analysis of *rhythmscapes*. The interest here is on the day-to-day street space, and affordances as *relational properties* (Heft 2010) for the mobile bodies: 'Affordances are the *functional properties* of an environmental

feature for an individual. - - They [affordances] indicate what one can do in some setting, and what activities may be ruled out.' (Ibid.: 20, italics in original.)

In reference to the research data, and urban rhythms, affordances can be thought of in a two-folded manner. First, the route project, as noted above, sets constraints on how the space is practices both temporally and spatially, and how the events and other happenings taking place in and around the route are (or are not) engaged with. The project-like form of the route comes to limit direct engagements between the body and the environment beyond functional movement (the route 'project'), even if it provides possibilities for various perceptual experiences, and the building up of various environmental knowledges (vistas, changing landscapes, atmospheres; new services, social gathering places, and so on). Second, the liminal temporalities of the day (the dawn/dusk hours examined here in this study) provides more variation and alternative approaches to both mobility rhythms and spatial uses, as the day-time traffic pressures of the mobility-oriented sites give away, and the social schedules facilitate more staying-like practices and leisure activities. The liminal temporalities, in other words, provide different kinds of spatial (temporary) uses, at least from the studied observer's perspective, as recorded in the data as increasing variety in spatial and temporal uses of the sites.

The notion of affordance can provide some insight to the relations between context, space-time and the body, and how these relations change (or oscillate) between different temporalities, such as through the different times of the day or seasons. It might help us to understand similarly, how any 'single' rhythms (if one can really be identified in separation from others) can change – or be multiple simultaneously – depending on different embodied contexts, and how they weave together multiple rhythmic assemblages. This is more of an exploratory notion, and requires further and more focused inquiry, but some preliminary notes can be brought up.

This ties closely together with the notion on pacemaking in the previous section above, but highlights that spaces are not only experienced differently but that the possibilities for engagements with the space change as well. The space – as a site of possible activities – changes both temporally and contextually. Similarly, Mattias Kärrholm and Gunnar Sandin (2011) examine the affordances of different *mobile timespaces of waiting* (transport hubs) for different kinds of uses and durations. They investigate what such spaces can offer to the body in waiting; *what actions can be taken* in different kinds of waiting-sites. The interaction with the other bodies and social schedules provide, as noted above, dominant rhythms (opening/availability of services, appropriation practices [groups hanging out in specific places], social

interactions) that affect the affordances of the environment, but the embodied (and situated) context in which one engages the space matters as well. In other words, the different pacemakers – as collective and shared elements creating temporal orders and structures – have different kinds of effects on the body in different contexts. From an urban environment perspective, rather than places having *a* pace (Lynch 1972), or being 'slow' or 'fast' (Wunderlich 2013), there are numerous *paces*, differently captured, engaged, and experienced in relation to the body: the 'measure' of the rhythm (Lefebvre 1992/2013), in other words, changes depending on the body as the rhythms of a space (or a *place*) are tied to the rhythms of the perceiving body, and to the context in which the body engages the timespace. This means that place-rhythms not only change and oscillate throughout the day, or seasons or other shared temporalities, but through different embodied contexts – through different micro-temporalities – in which the space is engaged in. A site's rhythmicity does not just appear differently in different embodied contexts, *it is different,* it is a different kind of assemblage.

This is, of course, not something that can directly be drawn from the (limited) empirical research data here, but the route narratives, together with the observation data, lead to such conceptual conclusions, or openings. Drawing from Ihde's (2009) take on postphenomenology, when approaching a phenomena, the ('perceptual-bodily' [Ibid: 12]) point of view is important, as 'the *same* configuration could be seen quite differently' depending on the view – as *multistable*. Moving in a site in different times of the day, and moving in it in different contexts, might each open up the 'same' space differently. Of course, it is no news that people experience spaces differently, but the subjective experience (as socio-material relations and affordances) can be different in different subjective day-to-day conditions, and thus *multiple* in form, and it is this multiplicity that requires attention in research and in design and planning practices. Spaces are to be understood as 'fields of emergent potentialities' (Crang 2001), or as a 'realm of possibilities' (Lapintie 2005; following Massey 2005). We need to move from a focus on spatial organization towards a focus on actions (Anderson and Harrison 2010), or different *capacities* (Anderson et al. 2012), in understanding how space opens up differently, and how the temporal intensity of the space is experienced and engaged differently.

These are movements away from a singular rhythmic-profiles of a space towards more heterogenous understandings of the *rhythmicities* of a space, and how they are assembled differently *alongside* and simultaneously with one another, and even might be conflicting or contradictory with one another.

The role of such heterogeneous temporalities and context-specific approaches in urban planning and design practices are examined next.

5.3 RHYTHM-BASED THINKING IN URBAN PLANNING AND DESIGN

In this section, I will briefly draw notes on the role of rhythmanalysis, and a rhythm-based thinking in general, in urban planning and design. A few *open threads* for prospective future studies are also presented on urban temporalities and intensities that have been somewhat infrequently examined so far.

5.3.1 RHYTHMIC SPACES: INTENSITY OVER DENSITY?

In this study, the focus on urban rhythms has been on the mobile, experienced, embodied, practiced and appropriated temporalities of the street. This, of course, is only one piece in the larger puzzle of urban temporalities, but plays a key role in the making of the 'lived' – the experienced and the bodily engaged – environment. From a practical urban planning and design perspective, as brought up above in the context of this study, rhythmanalysis offers some prospective tools for focusing on the temporal elements of an urban site, in specific on the (mobile) practices and the co-constitutive relations between spaces and bodies, and the multiplicity of temporalities. The issue here is about how to approach the fluid and mobile socio-material patterns of spaces, and to treat them analytically as complex *lived* patterns rather than as only *movement* or *activity* patterns, in order to understand the temporal form of the city and the everyday spaces we dwell in. Here, I return to the aforementioned notion of *intensity*.

As noted above (Chapter 1), intensity means the focus on the internal forms and processes, and external relations of mobile flows, rather than on their frequencies or volumes (as often found, for example, in transportation studies). Intensity can be approached through one of the key terms of urban studies: *density*. Density is often considered as one of the most central measures for livable and functional cities and neighbourhoods, sometimes even *equated* to what the city is (as dense human settlements) (see McFarlane 2016: 630). Jacobs (1961/2011) noted over fifty years ago that dense and mixed-use neighbourhoods were central to lively and social urban environments, and cities in general. Density has been lifted to a key role, as a key

element for the development of walkable and transit-oriented areas (see A.B. Jacobs and Appleyard 1987; Hillier 1999; Dovey and Pafka 2014; McFarlane 2016), as well as for economically, ecologically and socially sustainable cities that can, for example, lead to lower car-use and favour low-carbon options, such as (electric) public transit, walking and biking (Tonkiss 2013: 37–40). Density, though, can also as easily lead to unwanted and negative effects, such as slumming and congestion (Ibid.; McFarlane 2016). Whether or not density is good or bad – it can surely be both – I will here, instead, highlight the question of the *experience* of such densities. Density is often taken as a given, although research on the experiences of density, and how it changes throughout the day and seasons, is somewhat lacking (Ibid.). Density, in other words, is not here a fixed, rigid number but an oscillating measure of urban space (as proximity, crowdedness). Tonkiss writes that instead of looking at purely spatial perspectives on densities, we need

> an understanding of densities that includes mobility as well as dwelling; non-economic uses as well as patterns of employment; spaces we pass through in less purposeful ways, as well as points A to B on the daily journey to work. These densities – or rather *intensities* – of city life are harder to map.

(Tonkiss 2013: 49; italics in original.)

Focus on such fluctuating intensities is not a new idea: Murray Melbin (1978b: 100), for example, wrote on urban spaces that 'We can speak of *density in time*. We can perhaps measure it according to the number of different activities and the number of people involved in them hour by hour' (italics in original), and, by doing so, form a perspective on the urban 'temporal ecology' (Ibid.). But the argument here is that such intensity can be more than changes in *volumes*. On a street-level, these intensities come to refer to the mobility flows and their oscillations, and how they are experienced and engaged with. Kim Dovey and Elek Pafka (2014: 72) write that "urban 'intensity' can be defined as the experience of intensive encounter in public space that may or may not emerge under conditions of density." This is not only a question about the 'movement potentials' or levels of accessibility created by the street grid (Hillier 1999: 177) – affecting on their own part on the type of things that can happen on the street, mobile or otherwise – but a more complex matter: 'Intensity is an emergent effect of the connections, alliances, interactions and differences between the people, practices and built forms that comprise the city.' (Dovey and Symons 2013: 11). Some of these *urban intensities* have been examined

here above, such as the experiences, meanings, route-projects, spatial appropriations, and liminal temporalities of everyday urban mobilities. The temporal examination of Lynch's elements (see section 4.2.3) has also provided some direct, practical, possibilities to pursue such a focus on the urban intensities over the densities.

Using rhythmanalysis, as a *methodology of processes and flows* (see Shields 1997), could be the key to approach such intensities from a design and planning perspective. Intensity, as a concept, might further benefit, in specific, from the analogue of *music*, as favoured by Lefebvre (1992/2013) in rhythmanalysis. What rhythmanalysis manages to do – at least on a conceptual level – is to highlight the multiplicity and the dissonances between the different 'tones' or compositions that are found in urban environments. As noted above, the *rhythmanalyst* was the key for Lefebvre's rhythmanalysis: the rhythmanalyst 'seeks to know how this music is composed, who plays it and for whom.' (Lefebvre and Régulier 1986/2013: 94.) Here, people are both the perceivers and the producers of such urban rhythms (Lefebvre 1992/2013; see also Mels 2004), or the complex and polyphonic 'Urban Score' (Mareggi 2013). This is not to suggest that the such analogues would be limited to Lefebvre's thinking. Examining urban mobilities, Lynch (1960: 99) noted that 'paths' (as the aforementioned 'urban elements') should be organised *melodically* (see also Jensen 2013: 180) to create human-friendly environments; Michael Haldrup (2011) compares the (time-geographical) *path* to music, where all pieces along the way are not necessarily connected but are, nonetheless, part of the whole composition; Seppo Aura (1993) notes that *the episode of movement* in the city comprises melodies and the interplay of different notes; and Shuhei Hosokawa (1984/2012) examines the 'tone of the city' and what it will or should be like. However, it is the multiplicity and contesting temporalities found in the core of rhythmanalysis that provide some key insight to the urban composition. In practical means, Filipa Matos Wunderlich (following Lefebvre 1992/2013), for example, has approached rhythms as urban aesthetics 'akin to music' (Wunderlich 2013) by examining the multiplicity of such different rhythms. These rhythms 'offer urban places temporal structure, metrical order and pulse' (Wunderlich 2010: 54), creating both harmonious *and* competing relations between different rhythmicities.

The argument here is that such an examination can be broadened from aesthetics elements to other issues as well, examining rhythms – as the interrelations between spaces, times and actions – in a more holistic sense. What the analysis of the mobile event in this study has brought up is that, from a mobile embodied perspective, 1) the proximity of the 'music' and the diverse urban beats varies, it is both mediate and immediate, different patterns are more in the front, and others located more in

the back, or others are more related to being-in-the-world and others to different knowledges; 2) it is regulated, composed both from the above and from the below; 3) the beats are context-related, forming sequences and polyrhythmia specific to the embodied context of the route project; and that 4) the beats are produced by a variety of sources, with competing notions, appropriations, and the changes in both volume and frequency throughout the day (see section 5.1).

Above, the work has also argued, following Massey (2005), that a space, or a place, is not a coherent whole, a singular unit, but simultaneously multiple – similarly, the tempo of a place is not a singular one but many (Crang 2001). It suggests an understanding of a continuous (re)assembly of space and its rhythms, as rhythms are interpreted from an embodied perspective, a situated (mobile) context (whether this context is the one of an analytical observer, a daily user, or a first-time traveller). Put together, the overall composition is transformed into simultaneous compositions – into the multiplicity of timespaces (Massey 2005), or stories of the city (Simonsen 2004), or multiple intensities. It is not a singular music that is played but many. I would argue that urban space is not the *symphony* that Lefebvre concluded on (1992/2013: 32, 41; also Wunderlich 2008; 2010) but rather the *noise* he began his analysis with. With 'noise', I do not here mean the negative connotations of the word (as used by Lefebvre), but rather the coming together of multiple, incoherent, even incompatible, units, which form not one but multiple 'wholes', or multiple symphonies. This *noise* can be melodic and harmonious, as well as frictional and disharmonious – it is not something that is in any stakeholder's control, but a more or less infinite number of different heterogeneous elements. Intensity here, thus, is not only the change in volume or the pace of movement, but the existence of multiple and heterogeneous, and contextual, temporalities. This does not mean that *everything* is contextual and subjective, but that we need attunement for such multiplicities and dissonances. This all highlights that the *temporal question* of the city needs to be approached not only from the 'above', but also from the ground-level, from experienced and appropriated temporalities.

5.3.2   URBAN INTENSITIES: OPEN THREADS

Next, a few thematic paths are highlighted that present some open threads in relation to the research and study of urban rhythms. They all have been brought up above briefly as part of the analysis of the day-to-day mobilities and urban mobility rhythms, but which could benefit from a more attentive and specified research focus,

in specific with regards to practical urban planning and design questions. Together, they could provide further understanding about the taken-for-granted, but essential, *rhythmical* and *temporal* aspects of urban space that are central to the *lived* experience, and how the heterogeneous nature of spaces (as noted above) could be approached from different interrelated angles.

The first one is the role of *informal mobilities* in the making of the city. Traditional focus on travel time and route choices, as noted earlier, often draws a picture of the mobile body as a rational agent that manages and negotiates timespace for one's needs and wants in the pre-planned and pre-created network of streets (see section 2.1.2). A qualitative focus on day-to-day mobilities can provide a more *embodied* perspective to movement (as routine, habitual, unconscious), as well as help bring out other kinds of factors of mobility to view, such as the playful, the non-optimized, and the affective elements of it. Doing so, it can also reveal hidden spatial forms of the city: how people make shortcuts, defy restrictions, 'find' new pathways, and create 'desired paths' on both the site-level *and* the city-level. In other words, it can highlight how people use spaces in unintended, contesting, and creative ways. Rhythmanalysis, as a mode of focusing on other kinds of temporalities – the informal, marginal, lived temporalities – could provide here essential insight to such forms. These aspects were partially examines as part of the day-to-day routes here as well, but a further and a more focused study on such *mobile urban informalities* could further reveal the kinds of forms of the (mobile) city that are not in the plain view. (See also next section on qualitative take on mobilities.)

This also connects partially to the increasingly relevant issue on the *augmentation* of the city environment. Michael Bull (2008/2012: 203) notes, in relation to the common use of headphones, car stereos and other similar sound technologies in the public, how people 'replace the multi-rhythmic and hence unmanageable nature of urban life with their own manageable mono-rhythms', contributing to an 'aesthetic colonisation of urban space' (Ibid.: 198). Such 'augmenting' technologies date back at least to the *Walkman* stereos (Hosokawa 1984/2012) and the 'boomboxes', but are arguably more and more relevant factors in the contemporary city, as various AR (augmented reality) technologies are increasingly available, and thus more habitually and mundanely used. Such technologies – whether the *Walkman,* or the *Pokémon GO* app on the mobile phone – make it possible for people to increasingly etch personified nuances to public spaces, connect virtually to other people (regardless if that person is right next to the other person or far away), and transform their sensory perceptions of otherwise commonly *shared* spaces (see e.g. Ratti and Claudel 2016). These technologies have an increasing effect on the polyrhythmicities of (public)

sites, and on how much of what takes place in the public actually remains collective and shared beyond the physical presence and proximity of bodies using these augmenting technologies (in motion). Examining such 'mono-rhythms' warrants increasing attention from studies interested in the fabric of (public urban) spaces: rather than a singular *isorhythmic* beat, as prompted by Koch and Sand (2010), the contemporary urban space fosters a more heterogeneous and increasingly complex rhythmicities (Smith and Hetherington 2013; see also Allen 1999), and the digital realm plays here a major part.

Aural and other *non-visual senses* also require more focused attention in the study of the experience of the city and its temporalities. Sounds' relation to time is especially intriguing, as sound is sometimes noted as a *temporal element*, whereas the visual is considered more as a *spatial* one (see LaBelle 2010: xxi–xxiii). Sound studies on urban spaces, in general, have gained stronger foothold only quite recently, often in multidisciplinary contexts (see Ibid.; see Schafer 1977/1994 for one of the first focused studies on 'soundscapes'). Sound – as an analogue to rhythm – could provide important, and critical, insight to how we understand and approach other-than-visual urban patterns and rhythms: 'urban sound, even in its complexity, has a tendency for repetition and spatial order which, while not fixed, also displays a patterning and persistence' (Atkinson 2007: 1906). This means that the research focus in studies examining urban sounds, and their relations to mobilities, does not need to be set on (traffic) *noise* (as aural discord) or its negative effects on the human body, but that it can also examine urban sounds in broader and more inclusive sense.

The *synchronization* processes of urban temporalities also warrants closer examination. One day-to-day temporal element of the urban environment that directly affects the street users, and which was brought up in the research interviews frequently, is the *disruptive* character of different urban construction projects. 'Disruptive' here does not necessarily retain negative connotations, but refers more to the (continuous) change and transformation of the built environment. The construction projects and sites are unique events in the everyday urban space. They produce interest, distain, pleasure, disgust, frustration and other affective relations. They have an effect on the everyday travel in concrete (as in detours, obstacles, barriers), representational (as topics of discussion), and experiential (as memories, experiences and affective relations). The synchronization and co-timing of such projects with other, both different and similar, projects, in order to manage their effects on the street spaces and mobilities, or issues like economic viability of shops and services during those projects, are increasingly discussed. Michael Batty (2013: 277) writes how 'many groups are concerned with how cities function more routinely

over the day but this has not been considered part of urban planning except in terms of urban operations research for emergencies and related services.' For Batty, the answer can be found in *big data* and quantified temporal organization, but the argument here is that we should not forget, or push to the margins, the qualitative, or 'lived' aspects of time either. This examination could further be extended to other temporary and *ephemeral* qualities of cities and urban environments, or the planned-to-be-only-temporal disruptive elements that have become more or less permanent.

The *liminal temporalities* of the city, including the night and the aforementioned twilight temporalities (see section 4.2.4), also warrant more focused attention. The focus on liminal temporalities – partially examined here also as 'crepuscular mobility rhythms' (see Article #04) – is able to highlight how an urban site's form is elastic and dynamic, changing and transforming throughout the day, both in the personal experiences (as conveyed in the route narratives) and in the 'temporal architecture' of the space (as noted in the observation analysis). The design and planning of these *other-than-daytime* spaces is an increasingly topical question, as contemporary societies foster more fragmented, heterogeneous and individualized lifestyles throughout the twenty-four hours of the day, as noted earlier. The city, however, is still mostly planned and designed for the daytime use – daytime here substituting for the 'normal' (see Gallan and Gibson 2011). What has perhaps earlier been framed as 'abnormal', has increasingly become the norm as lifestyles and global connections have produced temporal alternatives for the everyday, producing possible out-of-synch experiences, for example, for the nightshift worker (Crang 2001). There are also underutilized design possibilities in relation to the materialities of both the twilight and night spaces in the city that could partially invoke changes in the affective relations, and, thus, also atmospheres of such ordinary urban sites, beyond the organization of night-time economies or the appointment of Night Mayors, as are increasingly on cities' agenda (Shaw 2014). This notion also connects to seasonal liminalities and differences, such as taking urban winter spaces as core design elements in cities located in the Northern latitudes, providing a more comprehensive temporal view on the city.

Lastly, the various *scales* of rhythm need to be examined with a closer focus on how rhythms affect and weave together bodies and mobility practices in and between the different levels and spheres of cities. This includes moving between the micro-scales and macro-scales of rhythms, both in spatial (between the individual subject, the family and household, the neighbourhood, the district and the city [and beyond], and how they connect together, producing possible frictions both in and out of mobile practices) and temporal means (hours, days, weeks, months, years; seasons;

evolutionary/historical processes). Such rhythms include cultural and social rhythms that pace societies and the shared temporalities between different people and groups. It requires a broad approach towards different temporalities of the city, both the cyclical and the linear, on different levels.

5.4   ANIMATED MOBILITY RHYTHMS[40]

Lastly, further connections between rhythmanalysis and the urban mobilities frameworks are made on the basis of the carried out study. Here, the focus is on how rhythm-based thinking – that highlights rhythms as *lived temporalities* – in the analysis of urban mobilities can open essential views to how mobilities are assembled, experienced and produced. A few central notes are also listed for prospective tools in the further study of qualitative mobilities.

The key argument here is that mobility needs to be connected to the understanding of the city comprehensively, which means that one has to reach beyond its functional measures (whilst, though, keeping them as a central part of the picture) and examine the full scope of what mobilities means and 'does' for spaces, and *vice versa*. In other words, it means the appreciation of both the quantitative *and* the qualitative factors of mobilities. A qualitative focus on mobilities does not here refer to a focus on the *qualities* of mobility, or only the *mobile experiences*, but on the overall *composition* of mobilities – that include the materialities, socialities, practices, experiences, agencies, meanings, legislation and the like. This calls for a more fundamental shift towards an approach that takes issues of temporality, rhythm, the body, and the co-productive form of body-environment relations as its basis. What rhythmanalysis does, by focusing on the body as the 'metronome' of rhythms, is that it can reveal the multiplicity of such body-environment relations as part of situated mobilities, and, thus, can also be used to 'inform research designs' (Hubbard and Lyon 2018: 11). Jensen (2018) notes that a situational approach to mobilities needs to be incorporated in mobilities design, in order to bridge the long-existing disciplinary gaps between mobilities and architecture in the making of the city (see also Jensen and Lanng 2017). The argument here is that such an approach can be taken through rhythmanalytical thinking, as presented above together with the research articles #01–04. It is, as argued earlier above, important to keep eyes open for the heterogeneous character of spaces and temporalities, and to move past the treatment of time as a linear (singular and homogeneous) measure in the context of

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[40] Following Mels 2004: 36.

urban mobilities, towards multiple (simultaneous and heterogeneous) temporalities, as well as their processes of *production* (Lefebvre 1992/2013; Simonsen 2005). In other words, it means that mobilities are not examined only as physical trajectories, nor through the subject, but through the body in a more holistic sense, treating the body both as an assembler of mobilities as well the one being assembled – or, as thoroughly animated.

Considering the 'route' in its entirety as a central unit of 'lived' space – it's mode, context, situatedness, socio-material interactions, as well as the various 'constraints' that affect movement and body-environment relations in the city (Hägerstrand 1970) – could help to understand urban mobile assemblages in somewhat new light. In specific, it could help us to re-examine, to some extent, how public places are (re)created *through* practices, embodiments and the *dwelling-in-motion* practices – through various socio-material processes and events – rather than being pre-fixed settings for mobilities to take place in. It is impossible, of course, and unnecessary, to take *everything* into account in a plan or a design process, but a sequential, or route-based understanding of place-design could open new insight to how spaces – or more broadly the 'city' – are encountered *through* movement – instead of looking at a space as a static container, and movements as mere trajectories. This could provide new insights to the creation of mobility-centred spaces that are more attractive and inclusive in order to, for example, change mobility routines and habits to more 'greener' and low-carbon alternatives (see Murray and Doughty 2016), or to facilitate social encounters *on the move*, not necessary by making people stop and linger at public sites (as promoted by e.g. Gehl 1971/2011), but to do so amidst the movements (as also prompted by Jensen 2009; 2013), invoking new kinds of mobile and urban cultures. This calls back to earlier approaches, such as Gordon Cullen's (1961) 'serial vision' – where Cullen examined the visual experience whilst moving in the (built) environment – or Aura's (1993) 'episodes of movement' – where Aura suggests that 'A successful environment - - affords many opportunities to construct - - *episodes of movement*.' (Ibid.: 61.) Whereas Cullen's approach to these series of vistas, and Aura's to episodes respectively, are both mostly *aesthetic* ones – that focuses on visual perception, and highlights the importance of the *planner* to see the whole visual sequence, or the whole episode, (relating here mostly to architecture as a professional discipline) – such approaches could be further developed towards perspectives that take the whole body – and importantly the situated embodied context (and the constraints and affordances this context brings along with it) – into account. Aura, for example, does make a note of the importance of the *beginning*, *internal tension*, *temporal rhythms* and *ending* of the episode as key elements for the mobile experience,

which could be carried over to a more comprehensive approach in urban mobility design, as well as in mobilities research (in some fashion attempted here in this study), extending beyond questions of aesthetics and accessibility that are currently more commonly discussed.

The point here, in other words, is not to focus on how space opens up aesthetically or sensorially (visually), but to take a more holistic and embodied perspective on how the space is assembled. This calls somewhat back to Lynch's (1984; see also Tonkiss 2013: 14–15) initial (but not really that fleshed out) formulation of a 'sequence design', or his earlier notion of 'Time Series' (Lynch 1960: 107) of subsequent connected 'urban elements', which, as initial design ideas, would examine human movement as the core design elements of the urban environments. The focus on such 'sequences', or motion and movement in general, highlights that places are not isolated space-time boxes but connect to other *places* (whether framed as such or as non-*places* or *spaces*) next to it, and beyond, reaching to the city-wide and regional scales (Mulíček et al. 2014; Osman and Mulíček 2017), in a one continuum, and forming recurring, familiar, mobile places (as noted in section 5.2.1). How such connections are 'weaved' (Ingold 2011) together through movement is the key question here. The answer to such connections, however, is not always a straightforward one:

> The random and fragile connections, the dead-ends and private jokes that steer a subject in space, are like so many maps of the city – written over and folded badly, consigned to routine or made up as you go along.
>
> (Tonkiss 2005: 128, 130.)

This is not a call for engineered or pre-designed experiences, complete sequences of mobile practices, or social interactions in the public space (see similarly Jensen 2018; also Amin 2008), but rather a call for the appreciation and acknowledgement of the different, co-existing *variations* of space (as highlighted by phenomenological excursions, see Ihde 2008).

Returning to the inherent *materiality* of flows (Shields 1997), urban design – that directs, manages and controls such flows – is one piece of the larger issue of what cities, as *lived environments*, are, but as Jensen (2013; see also Jensen and Lanng 2017) has argued, should not be neglected nor taken for granted either. What kind of urban spaces are created and produced (both the 'places' and the 'spaces in-between') matters, having a direct effect on how the urban lives are choreographed and

organized. This also relates to the overall argument that such mobile places, the 'spaces in-between', are essential in the making of 'urban life', even if they might gain lesser attention from a planning perspective than the more designated public arenas of the city, or the sites sprouting up more organically from the 'below', from community or neighbourhood-based needs and actions. This, however, does not mean that such day-to-day mobile places should be necessarily *celebrated* but rather that they should be acknowledged and worked *with* (rather than *against*). Arguing against the myth of homogenization of modern urban spaces, Thrift (2000) notes that similar looking spaces can be used in a number of dissimilar ways, and that the looks alone cannot tell us what meanings the spaces convey, even with the contemporary 'non-places'. We should not be too hasty to designate a site's supposed meanings and uses on pure surfaces alone. The meanings, interactions and engagements of the 'dullest' (Jensen and Lanng 2017: 51) sites read from the *outside* cannot convey the full picture of what these sites – their material and social elements – mean from the *inside*, from the routine and habitual contexts of daily life.

Finally, a few aspects are highlighted in how a *rhythmic* view on *mobilities* and *lived spaces* could be incorporated into practical planning and design questions. These aspects include:

1. A more clearly defined attention on different mobile *sequences*. The role of sequences can be identified at least on three different (though interconnected) levels:

    a. the level of the *body* – how the mobile practices are linked together as one continuous performance inside the route project;

    b. the level of the *space* – how the (physical) spaces intertwine into a chain-of-spaces in the route project, or how one space is used and encountered in relation to the one before it and the one after it (and the ones before and after them); what are the edges of the spaces, and how are the boundaries between spaces practiced;

    c. the level of the *route* – the overall arc of the route, which produces a distinctive temporal script for both the body and the interaction and engagement with the spaces; or a mobile place.

2. Noting the role of the *embodied context*, which affects the possibilities for interactions, encounters and engagements between the body and the environment, affected by the constraints of the route project. Such contexts are multiple for any particular space, as well as for the subject, as the embodied context can change in a moment.

3. Taking the route as a *unit of analysis* (by combining the points 1 and 2 from above). This means moving the perspective from the space to the body and practices – moving from questions of accessibility and travel time towards how people construct *urban lives* on the move, weaving together their own experiences with the environment; or how interactions, encounters, potentials for participation, and engagements with spaces and people take place on the recurring routes, instead of thinking these issues as separate from the day-to-day mobilities.

4. Examining spaces as specific rhythmic space-time-action assemblages that are *relational* to the actional body, and *continuously remade*.

5. Thinking temporalities through mediacy: different temporalities work on different levels of mediacy (such as short and long term temporalities, happening in the moment and reflected-upon-temporalities, spatial [shared] and subjective temporalities).

6. Approaching the temporal pacemaking of a site as both spatial (shared) and route-contextual (subjective).

7. Taking 'intensity' as the key concept through which to examine the spatial and temporal assemblages – and their continuous and rhythmic processes of re-making.

These aspects emerge from the research process, where the theoretical rhythmanalytical framework has been connected to practical urban mobility questions, in order to draw out some possible tools that could be used to connect the two on a conceptual level. This is in no means a comprehensive list for aspects that are integral to embodied mobilities, or to recurring mobile body-environment relations, nor something that could be applied directly *in the field*, but understood more as prospective linkages between theory and practice in a planning and design framework.

6 CONCLUSION

The temporality of the city is an endlessly intriguing topic. Whether one calls the (often invisible) temporal elements that *stick things together* – creating daily choreographies and patterns in both space and time – as the city's rhythm, tempo, pace, or beat, the basic principle of *things repeating* remains the same. This work's argument has included the notion that when speaking about the rhythms, tempos, paces, or beats of the everyday city, one does not have to examine only the quantifiable or mappable aspects of such repetitions, but that one can examine them analytically and systematically from qualitative perspectives as well. Most of these temporal reprises are so deeply engraved into the practices of daily life that grasping them analytically presents a difficult task, especially, when things go as expected and accustomed. When they break, or some kind of friction emerges, then these temporal orderings, patterns and structures become more visible, questioned, re-negotiated, and politicized – they become *cases*, and, thus, more easily graspable analytically – but might leave much of the *day-to-day* happenings outside the frame. The argument here has been that the *everyday* – the ordinary and mundane urban spaces, practise and experiences where nothing really 'breaks down' – *matters* as well. How the urban environments of daily life are assembled, is an important question in order to understand the processes and outcomes that are produced through them, which warrants increasing analytical attention as the global urbanization process progresses. It is the small departures and offsets that matter – the negotiated, the playful, the creative happenings (Stevens 2007) – and how we come to define such departures and offsets as focal research interests (see Thrift 2000). The work here has aimed, in specific and in the scope of the research, to open new insight to the (micro-)temporalities of the everyday urban mobile assemblage.

In a short recap and summary, there were two main objectives that were set for the work (as noted in Chapter 1): the development of rhythm-based research framework on day-to-day mobilities through empirical 'real-life' research cases, and the critical examination of urban mobilities as (embodied) modes of place-making and rhythm-making. The work has examined how a methodological framework based on a pragmatic approach towards rhythmanalysis – that is connected to other approaches on urban temporalities, together with a mobilities-centred approach –

could be used to analyse urban mobile assemblages, and to approach the underlying heterogeneous (micro)temporalities that are essential to the daily remaking of the built environment. The work first argued in favour of mobilities as essential parts of contemporary urban life, by following in the lines of the 'new mobilities paradigm'. The work then reviewed previous theoretical and methodical approaches towards urban temporalities, time-geography and Lefebvre's rhythmanalysis in specific, in order to formulate a postphenomenological, rhythm and body-centred research framework to study the *mobile event*. The point of view was, in specific, fixed on the multisensory walking and driving bodies, and the materialities and temporalities of the city street, and the work made use of mobile ethnographic research tools to approach the rhythms of the street in practice. In the analysis of the research data, different mediated, organized and negotiated (paced), and localized rhythmicities, were identified in the situated mobile event of the habitual walking and driving routes (Articles #01–3). The work also identified rhythms of spatiotemporal appropriations in the assembly of the mobile event in mobility-centred public sites (Article #04). Drawing from these findings, and underlining the multiplicity and heterogeneity over a singular understanding of urban temporalities, the work examined the role of rhythmanalysis in both urban research and practical urban planning and design questions.

As highlighted above (see Chapter 3), examining 'everyday life' is difficult from a research perspective, as any attempt to approach it tends to also change or alter it simultaneously – if it, as habits, routines and unconscious actions, can be reached at all. This, as noted above, though, should not be taken as something that would make the study of it unnecessary, or unsuccessful, but rather as something that needs to be taken carefully into account *through-out* the research process, from the initial setting of the research questions to the data gathering and analysis stages.

The work's other major challenge has been the fact that the discussion and debate on rhythmanalysis and its uses both as a theoretical framework and as a practical tool-set is still mostly ongoing. Utilizing *rhythmanalysis,* and 'urban rhythms' concepts in general, in the research process has thus required an explorative research approach that brings much uncertainty with it into the picture. It poses direct challenges for a practical research case, with which this work has also struggled with to some degree throughout the process. How rhythm should be defined; how rhythm should be measured, mapped and analysed; and what implications rhythm-based thinking has for the urban space, are all questions to which previous research work not been able to give any clear answers to, or guidelines to be followed directly. Simultaneously, rhythm is something we all are familiar with on some level as part of our daily

experiences (as noted by Lefebvre and Régulier 1985/2013: 86) but the rigorous analysis and conceptualisation of rhythms, at least in urban context, have been less examined.

The analytical outcomes of this work on urban temporalities and mobilities should not, thus, be taken as definitive demarcations of a phenomenon but as notions that have emerged from in-depth and systematic study of the day-to-day mobile event and its temporalities. It has attempted to approach those everyday experiences and events we are all familiar with – the everyday urban mobilities – and open some of their key elements through systematic analysis. Different research materials and methods could be used to tackle the question of the nature of urban rhythms and urban mobility rhythms, as noted above, and the work at hand has presented only *one* possible approach to decode and understand the (endless) complexity that is the urban environment, continuing in an emerging research lineage presented above on the interconnections between rhythmanalysis and mobility studies (see section 2.2.3). The rhythmanalysis framework still needs further development in order to, in specific, ground the practical research and analysis methods of 'real-life' situations to the, perhaps already more discussed, theoretical and conceptual frameworks. This does not imply that rhythmanalysis should be approached *literally*, as a set theoretical framework, but rather as a research *mode* (Elden 2004a: xii; Koch and Sand 2010; Middleton 2009), and to use it in combination with other theoretical, methodical and conceptual frameworks (as noted recently by Brighenti and Kärrholm 2018). This work has attempted to answer to this call on its own part, and to provide practical means that can be used to approach urban mobility rhythms analytically and qualitatively – in order to draw out (step-by-step) a more cohesive research narrative on urban rhythms. As many have brought up, *rhythm* could potentially be a key concept in unpacking and discovering the urban phenomena in a new light, but the means to get there are still developing (see Mels 2004; Amin and Thrift 2002; Crang 2001; Wunderlich 2013; Brighenti and Kärrholm 2018; also Buttimer 1976). Time-oriented approaches in the urban analysis, as noted earlier above, are increasingly important as more and more people live in urban areas, which, in turn, are underlined by increasing complexity, heterogeneity and mobility (Smith and Hetherington 2013). As Paola Jirón and Walter Imilan (2018) have recently noted, the uncovering of the contemporary city requires multidisciplinary approaches that are not confined to (fixed) delineated spaces but are build-around the mobile phenomena.

The gist of the work from an urban planning and design perspective is that we need much more focused attention to practical urban mobilities and mobility spaces

as sites of everyday urban life. Regardless of technological developments and an increasingly (digitally) connected world, we still have the need (and the desire) to move: how we move, how we interact with the spaces we move in, and with each other, are not irrelevant questions, nor questions that can easily be approached. The focus on urban mobilities often includes themes such as urban sprawl, density, accessibility, connectivity, and walkability that sometimes compress the urban environment into a few measurable (quantifiable) units in academic discourse, but such approaches do not communicate accurately the role of mobility in the contemporary city as a whole. Here, instead, the focus has been on the rhythms and the intensities that are difficult to map and measure.

What is also somewhat lacking in the current discussion on both urban mobilities and the city in general, is the appropriation of the day-to-day routes, and those spaces we pass-by in such routine ways, *as* central parts of the lived (public) city. The mobilities framework often focuses on the unique spaces – such as airports, transportation terminals, or popular city squares or streets – or on specific mobile issues – such as safety, inclusivity, or (economic, social, ecological) sustainability – but less so on the taken-for-granted street spaces – on the day-to-day mobile experiences and practices, or on the general sustainability of mobile environments as larger assemblages – on how these spaces and practices are choreographed and managed both from the 'above' and from the 'below', or on what kind of spaces such practices produce for social interactions and subjective experiences and *vice versa*, and what they mean for how we think about the *city*. These issues have been on the urban research agendas, of course, before (as described above) but their study needs to be a continuous process in order to understand the ever-fluctuating and changing urban life.

Returning briefly to the three themes presented in the Introduction – temporality, street space and mobility – the argument here is that we need to examine the three as co-constitutive elements, as rhythm, and to take into account both the quantitative and the qualitative factors of each, in order to examine the temporal (and temporary) city. This work has, in specific, highlighted the role mobilities in the city, especially its *qualitative* aspects. Qualitative approach to mobilities goes beyond examining critically the contemporary car-dependent urban mobility sites and their negative effects on social exclusion and sustainability, or promoting walkability as an answer to problems of urban ecological sustainability, but to examine mobilities in a more holistic sense: to ask, what kind of spaces are produced through embodied practices and spatial appropriations of the day-to-day mobility event. Mobility is not a separate, individual piece in a larger urban puzzle, but fundamentally merged with

the life of people partaking in such urban patterns. One central approach to mobilities, as suggested here, is the focus on routes, and how the urban environment is weaved together in such mobile context that create a mobile sense of place (see Chapter 5), overcoming utilitarian and rational focuses that covers much of the literature on urban mobilities (see Miciukiewicz and Vigar 2013). This does not promote a direct design or engineering perspective on such routes and experiences, but that such complex and often temporal structures would be incorporated into the question about the 'good urban space': how the planning and design question, or perhaps more importantly, the initial *formation* of the planning and design questions, are approached in the first place – how they are formed, framed, and situated. Through a qualitative and 'lived' approach to urban mobilities, transportation of people (and goods) can be better incorporated into the time-space structures of the city: not only through notions of connectivity, accessibility, synchronized timings, or the availability of service – which are all included in current paradigms of transportation geography and engineering, and rightfully so – but as essential ingredients in the way the (lived) city works.

As noted earlier above, much of the place-making processes of the city are not the regulated or conscious attempts to create a (shared) sense of place but something that happens idiomatically through spatial uses (see Dovey 2010; Tonkiss 2013), including mobile practices (Jensen 2013). Much of the collective or the public city *are* the mobility spaces we enjoy, encounter daily and feel familiarity to, or the ones we hurry through, cannot wait to get away from, attempt to 'close' ourselves out off through headphones or the sheltering casing of the car and do not think twice about of (see also Jensen and Lanng 2017). These mobility spaces are not singular or homogeneous sites of movement *devoid* of life, but heterogeneous *lived* mobile places, as this research also suggests, even if overdriven by mobility. The city, sure, is highlighted by specific fixed 'places'*,* conscious place-making process – related to the ideals of *new urbanism* (such as grass-roots community development) – or traditional hierarchical developments (sites of remembering, symbolism, collective cultures and histories). The argument here is that we need to appreciate the so-called spaces in-between in a similar manner. If we only pay attention – whether research, design or policy-wise – to the sites deemed as (traditional, fixed, bounded) *places*, we can only reach a part of what the city is. Mobility, unlike many commercial or social possibilities that the contemporary privatized and commercialised city environments provide, is a *necessary* activity. It is something that people cannot opt out of as it is still in many cases a prerequisite for the organization of daily life. The day-to-day habitual routes and the intersections and street corner spaces experienced in passing

require the same kind of interest, analytical focus and appreciation as the other spaces of the city. We need to consider more seriously the role of temporality and the day-to-day 'non-special' spaces – that are often experienced, used and performed in motion. We need to expand the scope on the 'urban life' beyond the physical structures (architecture) or the community-based social structures, to examine the haphazard, occasional, mundane and habitual relations between the bodies and the spaces they (momentarily) inhabit as part of the routines and patterns of the daily life.

Urban planning and design processes (mostly) aim for a shared, singular goal: for a better tomorrow. It is a continuous fluctuation between the utopias and dystopias of the urban futures (see Rajaniemi 2017). The not-so-original claim here is that only through an intricate understanding of the structures of spaces and practices – including the temporal structures, and the time-sensitive (embodied) performances of practices supporting (or contesting) such structures – can we begin to approach efforts that aim for a better situation than the one now, approaching the design, planning, production and performance of 'good' – more sustainable and just – urban environments.

The work has noted, following a similar thinking as Brighenti and Kärrholm (2018) that, in regard to rhythmanalysis and Lefebvre's original ideas, we should perhaps move 'beyond' rhythmanalysis and think of its application, use and insight by combining it with other approaches – in other words, to not *remove* it from Lefebvre's original thinking, but not to confine it to it either (see also Smith and Hetherington 2013). Rhythmanalysis, through its focus on the body and the social production of temporalities (as argued above), provides key insight to the (temporal) urban phenomena, and conceptual and theoretical building blocks, which different frameworks interested in spaces and temporalities, and their *lived* attributes, can be built on. It provides a fruitful framework for the attunement towards the postphenomenological 'multistabilities' (Ihde (1977/2012) of urban spaces, as well as towards the character of the 'lived' qualities of urban environments.

Rhythmanalysis, as argued here, can provide critical insight to the multiplicity of urban time-spaces and situated mobile contexts, and to reveal the complexity and heterogeneity of rhythms of contemporary street spaces. In short, this requires focus on the ground-level urban temporalities – on the experienced, practices and appropriated temporalities, and the mobile assemblage of the street.

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APPENDIXES

APPENDIX 1

The research areas in the two studied cities. (On this page) Tampere (above) and Turku (below) cities. The locations of informant-produced photographs and screen-captures, together with site observation locations, are marked inside a 2km diameter area around the city centres, depicting the 'central' areas of the cities (next page, above: Tampere; below, Turku). (Map layouts: National Land Survey Finland [NLS].)
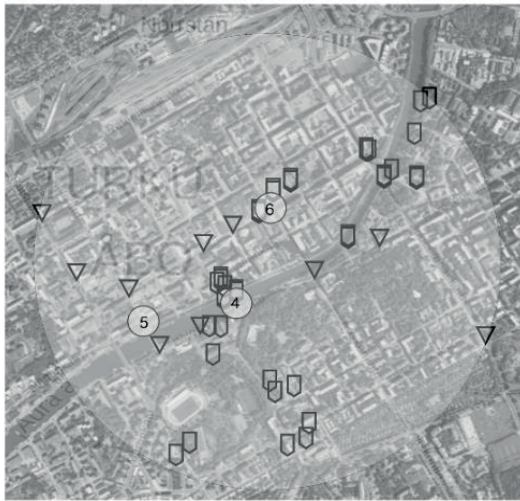
Photographs from the walking routes

Screen-captures from
the driving routes

Site observation
locations (1-6)

APPENDIX 2

The interview form for the walking and photo-elicitation interviews (translated into English from Finnish).

QUESTIONS FOR THE WALKING INTERVIEW (SEMI-STRUCTURED INTERVIEW)

ROUTE

- Could you tell me about this route in your own words?
- How long has this route been part of your daily life? How has the route evolved into its current form?
- How long does it take to walk the route?
- Does the route vary? How? Why?
- Do you walk the route always during the same time (of the day)? What other times? Why?
- Do you usually walk the route by yourself? With whom? Why?
- Do you use other modes to travel in your daily life? Which?
- Is it your 'own decision' to travel the route on foot? What other mobility options are available to you?
- How does this route connect to your daily schedule in general? What happens before 'departure', and after 'arrival'?
- What are the preparations you need to do before departure? How does the different seasons affect these preparations?
- Are there any (possible) waypoints on the route?
- Is there other uses for the route than reaching the destination? (Going to the store on the way, running errands etc.?)
- What kind of changes in your own life / in the environment there has been that have affected this particular route, the daily schedule in general, or your mobility otherwise?
- Are there/Has there been any momentary/temporary and/or unexpected changes on the route (used pathways etc.)?
- What kind of memories and experiences are related to the route or to specific points/sections of the route?

MOVEMENT

- Do you listen to music/radio on the way? Do you use the phone otherwise while walking? Camera?
- How fast do you walk? Does it vary? Why? How does our current walking pace compare to the 'normal' situation?
- How does the walking feel? What does walking mean to you as a mode of movement?
- What kind of walking regulations are there on the route? (Street crossings, traffic lights, separation of the sidewalk for pedestrians and cyclists.) Do you pay attention to them?
- Do you have any physical/bodily handicap that affects walking? What? How does it affect walking practices? Has it affected your route choices, the perception of the environment (etc.)?
- What kind of shortcuts are there on the route? What kind of sites of 'play' are there on the route?
- What is the general mood on the walk?
- On what kind of issues is your mind and thoughts at usually during the walk?
- What things affect to how fast you walk/travel the route as a whole?
- What issues affect your speed?
- Does your walking speed vary during different times (seasons)? Why?

TIME AND ENVIRONMENT

- Do you usually spend time at the different sites that are passed by on the route? Which? What purposes? How?
- How does the different seasons of the year affect the route?
- What kind of people you encounter on the route? What kind of relations are there between you and the other people/other users?
- What kind of events or happenings you encounter on the route? What kind of relations do you have with the events around you?
- What kind of positive/negative sites/locations/stretches of street are there along the route?
- What kind of things of interest are there on/along the route?
- What kind of things do you pay attention on the route? Generally? Details?
- What kind of factors would you bring up that describe or characterise the route/areas passed by well?
- What kind of details are there on the route?
- What kind of memories do you have about the route?
- What does it sound like on the route (specific sounds, soundscapes)?
- How do the sounds affect you?
- What it looks like on the route (landscapes, positive/negative aspects, general appearances)?

PHOTO-ELICITATION INTERVIEW (AFTER THE WALK)

(Examining the map together with the informant.)
- Could you tell me about this map in your own words?
- What kind of an (overall) image does the map present of the route? And of the environs?
- What kind of details have you marked in the map?

(Examining the informant's photographs from the walk together with the informant.)
- Could you tell me about this photo in your own words?
- What made you take the photo?
- What is happening in the photo?
- How does the happenings in the photo compare to the 'usual' experience?
- How does the event in the photo compare to the time you usually move on the route?
- What kind of details are there in the photo?
- What does the photo tell about the route?
- Anything else that comes to your mind about the photo?

APPENDIX 3

The interview form for the driving and video-elicitation interviews (translated into English from Finnish).

QUESTIONS FOR THE DRIVING INTERVIEW (SEMI-STRUCTURED INTERVIEW)

ROUTE

– Could you tell me about this route in your own words?
– How long has this route been part of your daily life? How has the route evolved into its current form?
– How long does it take to drive the route?
– Does the route vary? How? Why?
– Do you drive the route always during the same time (of the day)? What other times? Why?
– Do you usually drive the route by yourself? With whom? Why?
– Do you use other modes to travel in your daily life? Which?
– Is it your 'own decision' to travel the route by car? What other mobility options are available to you?
– How does this route connect to your daily schedule in general? What happens before 'departure', and after 'arrival'?
– What are the preparations you need to do before departure? How does the different seasons affect these preparations?
– Are there any (possible) waypoints on the route?
– Is there other uses for the route than reaching the destination? (Going to the store on the way, running errands etc.?)
– What kind of changes in your own life / in the environment there has been that have affected this particular route, the daily schedule in general, or your mobility otherwise?
– Are there/Has there been any momentary/temporary and/or unexpected changes on the route (used pathways etc.)?
– What kind of memories and experiences are related to the route or to specific points/sections of the route?

MOVEMENT

– Do you listen to music/the radio on the way?
– Do you use a navigation apps on this route? Other activities inside the car?

– Could you describe what happens inside the car during the drive? Other activities than those related to driving practices? Interaction between you and (possible) passengers?
– What is you usual driving speed? Does it vary? How does the current pace of the drive compare to the 'normal' situation?
– Could you describe the feeling of driving? What does driving mean to you as a mode of mobility?
– What kind of driving regulations are there on the route? Do you pay close attention to them, or have they become habitual/known?
– Do you have any physical handicap that affects your driving practice? What? How does it affect the route choices, the perception of the environment, or the decision to drive (etc.)?
– What is the general mood on the drive? What kind of issues affect it?
– What kind of issues is your mind and thoughts at during the drive?
– How is your driving speed determined?
– What kind of issues affect your speed of travel?
– Does the speed of travel vary during different time? Why?

TIME AND ENVIRONMENT

– Do you usually spend time at the different sites that are passed by on the route? Which? What purposes? How?
– How does the different seasons of the year affect the route?
– What kind of people you encounter on the route? What kind of relations are there between you and the other people/other users?
– What kind of events or happenings you encounter on the route? What kind of relations do you have with the events around you?
– What kind of positive/negative sites/locations/stretches of street are there along the route?

– What kind of things of interest are there on/along the route?
– What kind of things do you pay attention on the route? Generally? Details?
– What kind of factors would bring up that describe or characterise the route/areas passed by well?
– What kind of details are there on the route?
– What kind of memories do you have about the route?
– What does it sound like on the route (specific sounds, soundscapes)?
– How do the sounds affect you?
– What it looks like on the route (landscapes, positive/negative aspects, general appearances)?

VIDEO-ELICITATION INTERVIEW

(Examining the map together with the informant.)
– Could you tell me about this map in your own words?
– What kind of an (overall) image does the map present of the route? And of the environs?
– What kind of details have you marked in the map?

(Let's go through the video. We'll watch the video together from the beginning. All comments related to the environs, movement, events and happenings are welcome. Let's stop the video at points of interest, we can also rewind the video if necessary.)

(Questions to bring up comments/discussion.)
– What is happening in the video? What kind of an event is taking place? How does it compare to the 'normal' situation?
– What kind of details are there in the landscape/in the route?
– How does the scene in the video compare to the usual event/time?

APPENDIX 4

Details of the walking (this page) and driving (next page) interviewees and their routes.

	sex	age	city	route	lenght (one-way) in total / inside the designated 'city centre area' (km)	how often is the route walked?	optional modes	weather conditions on the walk	lenght of the walking interview (min.)	lenght of the photo-elicitation interview (min.)	total lenght of the interview (min.)	number of photographs [with duplicates]
H1	F	26	Tampere	home – friend's place (walked both ways)	1,4 / 1,0	couple of times a week	bike	→+5°, cloudy, strong winds	33	44	77	12 [14]
H2	F	59	Tampere	work place – home	2,5 / 1,8	weekdays	car, bike	<+10°, wind	89	47	136	60 [78]
H3	F	60	Turku	home – errand run	2,3 / 1,7	once a week	car, bike, bus	<+10°, rain, some wind	52	48	100	11
H4	F	73	Turku	home – errand run	1,1 / 1,1	often, daily	-	<+10°, heavy rain, some wind	43	38	81	7 [10]
H5	F	37	Tampere	home – work place	2,6 / 2,0	weekdays	-	>+10°, sun	35	89	124	34
H6	F	62	Turku	home – work place	2,2 / 0,7	weekdays	bike	>+10°, sun	50	63	113	26 [29]
H7	M	70	Turku	home – errand run	2,2 / 1,7	2-3 times a week	bus	>+10°, sun	45	32	77	5
H8	F	30	Turku	work place – home	3,8 / 3,4	weekdays	bike, bus	>+10°, sun	49	35	84	10
H9	F	27	Tampere	home – errand run / work place	2,8 / 2,8	almost daily	bike, bus	→+15°, sun	39	71	110	20
H10	M	25	Tampere	home – place of study	1,5 / 1,5	couple of times a week	-	~-20°, sun	31	38	69	8

	sex	age	city	route	lenght (one-way) in total / inside the designated 'city centre area' (km)	how often the route is driven?	optional modes	weather conditions on the drive	length of the driving interview (min.)	lenght of the video-elicitation interview (min.)	total lenght of interview (min.)	number of screen-captures [with duplicates]
A1	F	55	Tampere	work place – home	15,7 / 3,2	daily	-	~+10°, cloudy	29	46	75	n/a
A2	F	36	Tampere	home – (child's) hobbies	12,3 / 2,7	couple of time a week	-	~+10°, sun	27	57	84	n/a
A3	M	63	Tampere	home – errand run (inc. taking grandchildren to playschool)	9,5 / 4,6	once a week	-	~+3°, cloudy	26	38	64	9
A4	M	45	Tampere	errand run – home	3,2 / 1,9	couple of times a week	walking, bike	~+1°, light rain	11	44	55	4
A5	F	54	Tampere	home – (child's) hobbies	2,8 / 2,5	couple of times a week	-	~+1°, cloudy, light rain	9	42	51	4 [5]
A6	F	37	Turku	home – work place (driven both ways)	6,1 / 3,8	weekdays	-	-25°, sun	28	40	68	4
A7	M	64	Turku	home – hobbies (driven both ways)	6,5 / 4,5	once a week	bus, skateboard	~-0°, sun	34	42	76	4
A8	M	32	Turku	work place – home	3,9 / 3,4	weekdays		~+7°, sun, wind	16	41	57	5
A9	F	48	Turku	home – errand run (only partially driven here)	2,8 / 2,0	once a week	-	~-2°, sun	14	40	54	5
A10	F	26	Turku	work place – home	5,3 / 3,6	weekdays	bike	~-3°, sun	14	41	55	3

APPENDIX 5

A brief description of the interview event (in Finnish), sent for the volunteering informants before the interview. Description for the walking interviews in Tampere (this page) and Turku (second page), and for the driving interviews in Tampere (third page) and Turku (fourth page).

TIETOJA JA OHJEITA HAASTATTELUUN OSALLISTUMISESTA, päivitetty 21.4.

Työssäni tutkin kaupunkiympäristön kokemusta ja kävellen liikkumista arjessa. Kiinnostuksen kohteena on kävely liikkumisen muotona ja tapana siirtyä kaupunkiympäristössä paikasta toiseen. Haastattelun tavoitteena, tiivistetysti, on ikään kuin päästä matkaasi mukaan arjessa toistuvalle kävelyreitillesi, mukaan arkiseen liikkumiseesi kaupungissa. Haastattelu koostuu yhdestä ennakkotehtävästä (n. 30 min.) sekä kolmiosaisesta haastattelutapaamisesta, mihin yhteensä kuluu noin 1,5–2,5 tuntia aikaa.

Reittisi suhteen vaatimuksina olisivat, että reitti painottuu Tampereen kaupungin keskustan alueelle (noin Pyynikki-Kaleva, Käpylä-Viinikka väliselle alueelle) ja reitti on käytännöllinen siinä mielessä, että käytät sitä arjessa säännöllisesti siirtymiseen eri paikkojen välillä. Esimerkiksi tavalliset työmatkat tai matkat kaupan/oppilaitoksen ja kodin välillä ovat sopivia reittejä tutkimuksen kannalta. Myös muunlaiset, *käytännöllisiksi* mielettävät, reitit ovat sopivia. Reitti voi myös sisältää linja-autolla kuljettavia osuuksia mutta olisi hyvä jos reitin kävelyosuudet olisivat sen verran pitkiä, että niihin kuluisi aikaa 15 minuuttia tai enemmän.

Sovitaan ajankohta, milloin haastattelu voitaisiin tehdä. Kerro myös hieman reitistäsi: mistä reitti alkaa, minne se päättyy ja minkä tyyppinen reitti on kyseessä (esim. työ-/koulu-/kauppamatka). Kun ollaan sovittu tapaaminen, pyytäisin sinua tekemään lyhyen ennakkotehtävän:

Ennakkotehtävä (n. 30 minuuttia). Tehtävä: Piirrä kartta (kuva) siitä samasta arjen reitistäsi, jonka tulemme tapaamisemme aikana kulkemaan. Piirrä kartta ikään kuin henkilölle, joka ei tunne reittiä ja sen läpi kulkemia alueita entuudestaan. Toteutus on vapaa: voit piirtää kartan käsin tai tehdä sen esimerkiksi tietokoneella. Tavoitteena ei ole siis sijoittaa reittiä perinteiselle karttapohjalle vaan piirtää omaan kokemukseen pohjautuva kartta.

Tehtävään ei tarvinne kuluttaa 30 minuuttia kauemmpaa aikaa. Lähetä valmis kartta minulle kuvana (mieluiten tavallisena .jpeg kuvatiedostona) sähköpostilla ennen haastattelutapaamistamme: jani.tartia@tut.fi. (Voit skannata paperin tai ottaa digikameralla kartasta kuvan jos piirrät kuvan perinteisesti paperille. Jos tämä ei onnistu, voit myös ottaa paperisen version mukaan tapaamiseen, ilmoita tästä minulle.)

Haastattelutapaaminen (n. 1–2 tuntia):

1) Tapaamme sovitusti reittisi alkupisteessä. Käydään käytännönasiat pikaisesti läpi ja lähdetään liikkeelle. Kävelemme tapaamisen aikana yhdessä reittisi kokonaisuudessaan ja keskustelemme samalla reitistä, liikkumisesta ja kaupunkiympäristöstä. Haastattelu nauhoitetaan.
2) Lainaan digikameran kävelyn ajaksi sinulle. Tehtävänäsi on ottaa kävelyn aikana valokuvia liittyen reittiisi, kaupunkiympäristöön ja omaan liikkumiseesi. (Voit halutessasi ottaa myös oman digikamerasi mukaan tapaamiseen jos koet sen käyttämisen luontevammaksi, kunhan ottamasi kuvat voidaan siirtää tietokoneelle heti kävelyn päätteeksi irrotettavan muistikortin, USB-piuhan tai vastaavan avulla.)
3) Käveltyämme reitin loppuun, siirrytään jatkamaan haastattelua johonkin läheiseen kahvilaan, jossa tarjoan kahvit/teet. Tällöin käsitellään yhdessä ennakkotehtävänä tekemääsi karttaa ja kävelyn aikana ottamiasi valokuvia kannettavan tietokoneen ruudulta, sekä jatkamme tarvittaessa keskustelua muista kävelyn aikana esiin nousseista teemoista. Tämä jälkimmäinen haastattelu vienee noin 1-1,5 tuntia, riippuen valokuvien lukumäärästä.

Haastattelut ovat luottamuksellisia ja kerättyä aineistoa käytetään vain tutkimukseen ja väitöskirjatyöhön liittyvään työskentelyyn. Haastateltavat esiintyvät nimettöminä ja mitään mahdollisia haastateltavaa yksilöiviä tietoja ei tuoda julkisesti esiin missään.

Kaikissa kysymyksissä ja mietteissä työhön liittyen voi olla yhteydessä minuun.

TIETOJA JA OHJEITA HAASTATTELUUN OSALLISTUMISESTA, päivitetty 5.5.

Työssäni tutkin kaupunkiympäristön kokemusta ja kävellen liikkumista arjessa. Kiinnostuksen kohteena on kävely liikkumisen muotona ja tapana siirtyä kaupunkiympäristössä paikasta toiseen. Haastattelun tavoitteena, tiivistetysti, on ikään kuin päästä matkaasi mukaan arjessa toistuvalle kävelyreitillesi, mukaan arkiseen liikkumiseesi kaupungissa. Haastattelu koostuu yhdestä ennakkotehtävästä (n. 30 min.) sekä kolmiosaisesta haastattelutapaamisesta, mihin yhteensä kuluu noin 1,5–2,5 tuntia aikaa.

Reittisi suhteen vaatimuksina olisivat, että reitti painottuu Turun kaupungin keskustan alueelle (noin Satama–Kupittaa / VI–Vähäheikkilä väliselle alueelle) ja reitti on käytännöllinen siinä mielessä, että käytät sitä arjessa säännöllisesti siirtymiseen eri paikkojen välillä. Esimerkiksi tavalliset työmatkat tai matkat kaupan/oppilaitoksen ja kodin välillä ovat sopivia reittejä tutkimuksen kannalta. Myös muunlaiset, *käytännöllisiksi* miellettävät, reitit ovat sopivia. Reitti voi myös sisältää linja-autolla kuljettavia osuuksia mutta olisi hyvä jos reitin kävelyosuudet olisivat sen verran pitkiä, että niihin kuluisi aikaa 15 minuuttia tai enemmän.

Sovitaan ajankohta, milloin haastattelu voitaisiin tehdä. Kerro myös hieman reitistäsi: mistä reitti alkaa, minne se päättyy ja minkä tyyppinen reitti on kyseessä (esim. työ-/koulu-/kauppamatka). Kun ollaan sovittu tapaaminen, pyytäisin sinua tekemään lyhyen ennakkotehtävän:

Ennakkotehtävä (n. 30 minuuttia). Tehtävä: Piirrä kartta (kuva) siitä samasta arjen reitistäsi, jonka tulemme tapaamisemme aikana kulkemaan. Piirrä kartta ikään kuin henkilölle, joka ei tunne reittiä ja sen läpi kulkemia alueita entuudestaan. Toteutus on vapaa: voit piirtää kartan käsin tai tehdä sen esimerkiksi tietokoneella. Tavoitteena ei ole siis sijoittaa reittiä perinteiselle karttapohjalle vaan piirtää omaan kokemukseen pohjautuva kartta.

Tehtävään ei tarvinne kuluttaa 30 minuuttia kauempaa aikaa. **Lähetä valmis kartta minulle kuvana (mieluiten tavallisena .jpeg kuvatiedostona)** sähköpostilla ennen haastattelutapaamistamme: jani.tartia@tut.fi. (Voit skannata paperin tai ottaa digikameralla kartasta kuvan jos piirrät kuvan perinteisesti paperille. Jos tämä ei onnistu, voit myös ottaa paperisen version mukaan tapaamiseen, ilmoita tästä minulle.)

Haastattelutapaaminen (n. 1–2 tuntia):

1) Tapaamme sovitusti reittisi alkupisteessä. Käydään käytännönasiat pikaisesti läpi ja lähdetään liikkeelle. Kävelemme tapaamisen aikana yhdessä reittisi kokonaisuudessaan ja keskustelemme samalla reitistä, liikkumisesta ja kaupunkiympäristöstä. Haastattelu nauhoitetaan.

2) Lainaan **digikameran** kävelyn ajaksi sinulle. Tehtävänäsi on ottaa kävelyn aikana valokuvia liittyen reittiisi, kaupunkiympäristöön ja omaan liikkumiseesi. *(Voit halutessasi ottaa myös oman digikamerasi mukaan tapaamiseen jos koet sen käyttämisen luontevammaksi, kunhan ottamasi kuvat voidaan siirtää tietokoneelle heti kävelyn päätteeksi irrotettavan muistikortin, USB-piuhan tai vastaavan avulla.)*

3) Käveltyämme reitin loppuun, siirrytään jatkamaan haastattelua johonkin läheiseen kahvilaan, jossa tarjoan kahvit/teet. Tällöin käsitellään yhdessä ennakkotehtävänä tekemääsi karttaa ja kävelyn aikana ottamiasi valokuvia kannettavan tietokoneen ruudulta, sekä jatkamme tarvittaessa keskustelua muista kävelyn aikana esiin nousseista teemoista. Tämä jälkimmäinen haastattelu vienee noin 1-1,5 tuntia, riippuen valokuvien lukumäärästä.

Haastattelut ovat luottamuksellisia ja kerättyä aineistoa käytetään vain tutkimukseen ja väitöskirjatyöhön liittyvään työskentelyyn. Haastateltavat esiintyvät nimettöminä ja mitään mahdollisia haastateltavaa yksilöiviä tietoja ei tuoda julkisesti esiin missään.

TIETOJA JA OHJEITA AJOHAASTATTELUUN OSALLISTUMISESTA
päivitetty 23.10.2015

Työssäni tutkin kaupunkiympäristön kokemusta ja autolla liikkumista arjessa. Kiinnostuksen kohteena on autolla ajaminen liikkumisen muotona ja tapana siirtyä kaupunkiympäristössä paikasta toiseen. Haastattelun tavoitteena, tiivistetysti, on ikään kuin päästä matkaasi mukaan arjessa toistuvalle ajoreitillesi, mukaan arkiseen liikkumiseesi kaupungissa. Haastattelu koostuu yhdestä ennakkotehtävästä (n. 30 min.) sekä kaksiosaisesta haastattelutapaamisesta, mihin yhteensä kuluu noin 2 tuntia aikaa.

Reittisi suhteen vaatimuksina olisivat, että reittisi sijoittuu ainakin osittain Tampereen keskusta-alueelle (ks. kartta) ja reitti on käytännöllinen siinä mielessä, että käytät sitä arjessa säännöllisesti siirtymiseen kahden (tai useamman) paikan välillä. Esimerkiksi tavalliset työ- tai asiointimatkat ovat sopivia reittejä tutkimuksen kannalta. Myös muunlaiset, käytännöllisiksi miellettävät, reitit voivat olla sopivia.

Sovitaan ajankohta, milloin haastattelu voitaisiin tehdä. Haastattelussa liikumme yhdessä reitilläsi, käytämme sinun autoasi, sinun ajamanasi. Kerro myös reitistäsi: mistä reitti alkaa, minne se päättyy, kenen kanssa reitin yleensä kuljet ja minkä tyyppinen reitti on kyseessä (esim. työ-/asiointimatka).

Kun olemme sopineet tapaamisen, pyytäisin sinua tekemään lyhyen ennakkotehtävän:

Ennakkotehtävä (n. 30 minuuttia) Tehtävä: Piirrä kartta (kuva) siitä samasta arjen reitistäsi, jonka tulemme tapaamisemme aikana kulkemaan. Piirrä kartta ikään kuin henkilölle, joka ei tunne reittiä ja sen läpi kulkemia alueita entuudestaan. Toteutus on vapaa: voit piirtää kartan käsin tai tehdä sen esimerkiksi tietokoneella. Tavoitteena ei ole siis sijoittaa reittiä perinteiselle karttapohjalle vaan piirtää omaan kokemukseen pohjautuva kartta.

Tehtävään ei tarvinne kuluttaa 30 minuuttia kauempaa aikaa. Lähetä valmis kartta minulle kuvana (mieluiten .jpeg kuvatiedostona) sähköpostilla ennen haastattelutapaamistamme: jani.tartia@tut.fi. (Voit skannata paperin tai ottaa digikameralla kartasta kuvan jos piirrät kuvan perinteisesti paperille. Jos tämä ei onnistu, voit myös ottaa paperisen version mukaan tapaamiseen, ilmoita tästä minulle.)

Haastattelutapaaminen (n. 1–2 tuntia): 1) Tapaamme sovitusti reittisi alkupisteessä. Käydään käytännönasiat läpi (varaa tähän ylimääräistä aikaa noin 10 minuuttia) ja lähdetään liikkeelle. Ajamme tapaamisen aikana yhdessä reittisi kokonaisuudessaan ja keskustelemme samalla reitistä, liikkumisesta ja kaupunkiympäristöstä. Haastattelu nauhoitetaan.

2) Ajon ajaksi asetan pienen videokameran auton konelaudalle kuvaamaan auton tuulilasin läpi avautuvaa näkymää. Kameraa ei tarvitse erikseen asentaa mitenkään vaan se toimii sellaisenaan pienen kokonsa ansioista. Kamerassa on tavanomaista laajempi linssi, joka kattaa lähes koko auton etunäkymän. Videon tavoitteena on tarjota toinen näkökulma reittiisi ja videosta keskustellaan haastattelun seuraavassa osiossa.

3) Saavuttuamme reitin päätepisteeseen, siirrytään jatkamaan haastattelua perinteisesti pöydän ääreen. Tällöin käsitellään yhdessä ennakkotehtävänä tekemääsi karttaa ja ajon aikana kuvattua videota kannettavan tietokoneen ruudulta, sekä jatkamme keskustelua muista ajon aikana esiin nousseista teemoista. Tämä jälkimmäinen haastattelu vienee noin 1-1,5 tuntia. Haastattelu nauhoitetaan.

Haastattelut ovat luottamuksellisia ja kerättyä aineistoa käytetään vain tutkimukseen ja väitöskirjatyöhön liittyvään työskentelyyn. Haastateltavat esiintyvät nimettöminä ja mitään mahdollisia haastateltavaa yksilöiviä tietoja ei tuoda julkisesti esiin missään.

TIETOJA JA OHJEITA AJOHAASTATTELUUN OSALLISTUMISESTA
päivitetty 23.11.2015

Työssäni tutkin kaupunkiympäristön kokemusta ja autolla liikkumista arjessa. Kiinnostuksen kohteena on autolla ajaminen liikkumisen muotona ja tapana siirtyä kaupunkiympäristössä paikasta toiseen. Haastattelun tavoitteena, tiivistetysti, on ikään kuin päästä matkaasi mukaan arjessa toistuvalle ajoreitillesi, mukaan arkiseen liikkumiseesi kaupungissa. Haastattelu koostuu yhdestä ennakkotehtävästä (n. 30 min.) sekä kaksiosaisesta haastattelutapaamisesta, mihin yhteensä kuluu noin 2 tuntia aikaa.

Reittisi suhteen vaatimuksina olisivat, että reittisi sijoittuu ainakin osittain Turun keskusta-alueelle (ks. kartta) ja reitti on käytännöllinen siinä mielessä, että käytät sitä arjessa säännöllisesti siirtymiseen kahden (tai useamman) paikan välillä. Esimerkiksi tavalliset työ- tai asiointimatkat ovat sopivia reittejä tutkimuksen kannalta. Myös muunlaiset, käytännöllisiksi miellettävät, reitit voivat olla sopivia.

Sovitaan ajankohta, milloin haastattelu voitaisiin tehdä. Haastattelussa liikumme yhdessä reitilläsi, käytämme sinun autoasi, sinun ajamanasi. Kerro myös reitistäsi: mistä reitti alkaa, minne se päättyy, kenen kanssa reitin yleensä kuljet ja minkä tyyppinen reitti on kyseessä (esim. työ-/asiointimatka).

Kun olemme sopineet tapaamisen, pyytäisin sinua tekemään lyhyen ennakkotehtävän:

Ennakkotehtävä (n. 30 minuuttia) Tehtävä: Piirrä kartta (kuva) siitä samasta arjen reitistäsi, jonka tulemme tapaamisemme aikana kulkemaan. Piirrä kartta ikään kuin henkilölle, joka ei tunne reittiä ja sen läpi kulkemia alueita entuudestaan. Toteutus on vapaa: voit piirtää kartan käsin tai tehdä sen esimerkiksi tietokoneella. Tavoitteena ei ole siis sijoittaa reittiä perinteiselle karttapohjalle vaan piirtää omaan kokemukseen pohjautuva kartta.

Tehtävään ei tarvinne kuluttaa 30 minuuttia kauempaa aikaa. Lähetä valmis kartta minulle kuvana (mieluiten .jpeg kuvatiedostona) sähköpostilla ennen haastattelutapaamistamme: jani.tartia@tut.fi. (Voit skannata paperin tai ottaa digikameralla kartasta kuvan jos piirrät kuvan perinteisesti paperille. Jos tämä ei onnistu, voit myös ottaa paperisen version mukaan tapaamiseen, ilmoita tästä minulle.)

Haastattelutapaaminen (n. 1–2 tuntia): 1) Tapaamme sovitusti reittisi alkupisteessä. Käydään käytännönasiat läpi (varaa tähän ylimääräistä aikaa noin 10 minuuttia) ja lähdetään liikkeelle. Ajamme tapaamisen aikana yhdessä reittisi kokonaisuudessaan ja keskustelemme samalla reitistä, liikkumisesta ja kaupunkiympäristöstä. Haastattelu nauhoitetaan.

2) Ajon ajaksi asetan pienen videokameran auton konelaudalle kuvaamaan auton tuulilasin läpi avautuvaa näkymää. Kameraa ei tarvitse erikseen asentaa mitenkään vaan se toimii sellaisenaan pienen kokonsa ansioista. Kamerassa on tavanomaista laajempi linssi, joka kattaa lähes koko auton etunäkymän. Videon tavoitteena on tarjota toinen näkökulma reittiisi ja videosta keskustellaan haastattelun seuraavassa osiossa.

3) Saavuttuamme reitin päätepisteeseen, siirrytään jatkamaan haastattelua perinteisesti pöydän ääreen. Tällöin käsitellään yhdessä ennakkotehtävänä tekemääsi karttaa ja ajon aikana kuvattua videota kannettavan tietokoneen ruudulta, sekä jatkamme keskustelua muista ajon aikana esiin nousseista teemoista. Tämä jälkimmäinen haastattelu vienee noin 1-1,5 tuntia. Haastattelu nauhoitetaan.

Haastattelut ovat luottamuksellisia ja kerättyä aineistoa käytetään vain tutkimukseen ja väitöskirjatyöhön liittyvään työskentelyyn. Haastateltavat esiintyvät nimettöminä ja mitään mahdollisia haastateltavaa yksilöiviä tietoja ei tuoda julkisesti esiin missään.

APPENDIX 6

Examples of the participant-produced photographs from the walking routes. Source: informants.

APPENDIX 7

Examples of the participant-produced screen-captures from the videos that were recorded during the drives. Source: informants.

APPENDIX 8

Examples of the participant-produced walking and driving route maps (cropped). Source: informants.

APPENDIX 9

Details of the observed sites.

	Location	Type (Lynch 1960)	Key characteristics	Notes
Site I	Intersection of *Itsenäisyydenkatu* and *Yliopistonkatu / Tammelan puistokatu*	Path / node	Major driving route through the city Commercial buildings, bars and terraces Close to market square, university and railway station Multiple bus stops	Shared pedestrian / bicycle path closed on the northern side of *Itsenäisyydenkatu* due to a building construction site
Site II	Intersection of *Hämeenkatu* and *Rautatienkatu*	Node	Next to the railway station and main (shopping) street (*Hämeenkatu*) with bars and terraces Underpass connections to *Itsenäisyydenkatu* (towards 'site I') Multiple bus stops, a parking lot, a taxi stand	Eastern part of *Hämeenkatu* as a *public transport only* –street during 07/2015-12/2016
Site III	Intersection of *Hämeenpuisto* and *Hämeenkatu / Pirkankatu*	Path / node	Park / boulevard Next to the main municipal library Major driving route through the city Multiple bus stops Commercial buildings, bars and terraces, ice cream kiosk during summer	
Site IV	*Itäinen Rantakatu* and pedestrian bridge *Teatterisilta*	Path / node	*Aurajoki* –river, popular recreational area Restaurant boats / bar terraces, ice cream kiosk during summer *City Theatre*, commercial buildings Differentiated motor / nonmotor traffic Bus stops No light guidance at the crosswalk	*City theatre* under renovation: part of the shared pedestrian / bicycle path closed on the southern side of *Itäinen Rantakatu*
Site V	Intersection of *Myllysilta / Koulukatu* and *Linnankatu*	Path	Multi-lane driving road / bridge Main pedestrian route of the site located by the river, going under the bridge Small green area with a snack bar; limited commercial buildings Bus stops	
Site VI	Intersection of *Eerikinkatu* and *Aurakatu*	Node	Next to the main market square Adjacent commercial buildings, shopping centres Main local transport hub for buses Restricted private car use in the area Diagonal crossing; pedestrian scramble	

APPENDIX 10

Overhead images of the six observed sites. In each series of three images, the 'naked' scene is first presented (image on the left), then with the utilized observation/videoed perspectives (marked by white dots and cones) (middle), and finally with the area of the scene that is covered by all the utilized perspectives/observation sessions, is highlighted (right). (Map layouts: National Land Survey Finland [NLS].)
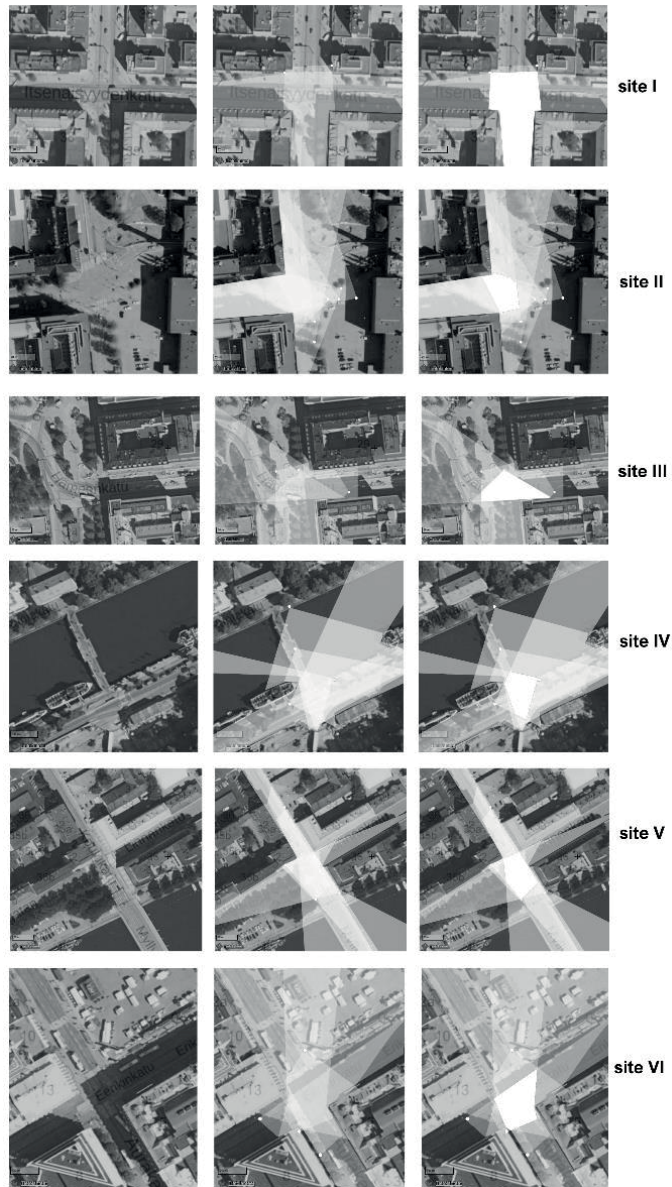
APPENDIX 11

Scenes from the observed sites. Screen-captures from the recorded observation videos.

site I

site II

site III

site IV

site V

site VI

The schedule and times of the observation sessions (n=48).

time	site I	site II	site III	site IV	site V	site VI
(early) morning 1	Tue 24.5. 04:48-05:08	Tue 24.5. 05:12-05:32	Tue 24.5. 05:39-05:59	Thu 16.6. 06:56-07:06; 07:27-07:40	Thu 16.6. 07:09-07:20	Thu 16.6. 06:34-06:51
- - 2	Thu 9.6. 08:55-09:12	Thu 9.6. 08:35-08:51	Thu 9.6. 08:07-08:24	Mon 27.6. 09:19-09:39	Mon 27.6. 08:49-09:09	Mon 27.6. 09:46-10:06
(after)noon 1	Tue 24.5. 11:04-11:24	Tue 24.5. 11:29-11:49	Thu 19.5. 11:40-12:03	Tue 14.6. 11:45-12:05	Tue 14.6. 12:11-12:31	Tue 14.6. 12:41-13:01
- - 2	Wed 25.5. 13:17-13:37	Wed 25.5. 12:53-13:13	Tue 24.5. 12:01-12:21	Thu 16.6. 12:29-12:45	Thu 16.6. 12:08-12:25	Thu 16.6. 12:48-13:05
late afternoon / early evening 1	Thu 26.5. 17:36-17:56	Thu 26.5. 17:59-18:19	Thu 19.5. 16:23-16:43	Tue 14.6. 14:58-15:18	Tue 14.6. 15:22-15:42	Tue 14.6. 14:32-14:54
- - 2	Fri 27.5. 19:24-19:44	Fri 27.5. 19:01-19:21	Fri 27.5. 18:34-18:54	Wed 15.6. 18:48-19:08	Wed 15.6. 18:25-18:42	Wed 15.6. 19:13-19:30
evening/night 1	Wed 25.5. 22:19-22:39	Wed 25.5. 21:29-21:49	Wed 25.5. 21:54-22:14	Tue 14.6. 20:52-21:09	Tue 14.6. 21:11-21:27	Tue 14.6. 20:32-20:48
- - 2	Tue 7.6. 20:40-21:00	Tue 7.6. 21:03-21:20	Tue 7.6. 21:29-21:49	Wed 15.6. 20:46-21:06	Wed 15.6. 20:22-20:42	Wed 15.6. 21:10-21:37

APPENDIX 13

Decoding the walking route data.

immediate	*event / interaction*	encounter with a person (or an animal) direct interaction with the material environment unexpected events on the route unexpected changes on the route social rituals, habits perceived social activity shortcuts issues related to moving together with someone perceived playful activities weather conditions and its effects on other people temporary/momentary route changes
	path / embodied	feel of movement bodily restriction practices in motion (e.g. listening to music, photographing, phone use) affects personal rituals, habits social roles movement as exercise body reactions (e.g. sweating, clothing) route as 'own time' weather and its effects on the self own playful activity the effects of timetables (incl. hurry) to own movement other personal contexts in passed-by sites
mediate	*project / knowledge*	route variation, other uses seasonal effects on environment seasonal effects on the self time of day, effects on the environment time of the day, effects on the self route choices route phases good pathways problematic pathways sites requiring special attention (potential hazards etc.) route as part of the organization of the day known obstacles on the route choices of mode of movement
	landscape	symbols, conveying specific actions positive / negative landscapes (or other sense-'scapes') details of the environment (multisensory) memories/past experiences related to passed by sites memories/past experiences related to the route 'types' of movers, specific to the site, other people seasonal changes in the environment and perceived activity site atmosphere noting and following the changes in the built environment (i.e. construction sites) material manifestations of power (i.e. land use) long term changes of the environment and the route

APPENDIX 14

Decoding the driving route data.

'below-top'	*'pacing' practices and processes*	driving practices daily schedules alternative stops on the route route choices other routes reasons for driving activity inside the car route knowledge route as an automated practice route 'hacking'
	interactions	interaction between motor vehicles pedestrians and cyclists as traffic movement as part of the traffic flow *in situ* events, unexpected events (during the interviews) route phases
'top-below'	*'paced' practices and processes*	weather and season events in the environment details of the environment traffic regulation construction sites active following of the changing landscape sites, other contexts and uses (beyond the route) site knowledge (i.e. perceived character, history, users) negative landscapes positive landscapes specific buildings (i.e. contexts, uses, histories)

APPENDIX 15

Decoding the site observation data.

embodied movement	objects, technologies
	    movement supports; bags, other 'equipment' (umbrellas, sunglasses, walking with bike); headphones; body functions
	    movement as effort, signs of fatigue; eating, smoking (on the move); phone use (on the move)

edges	changes of mode of movement (walking→bike; waiting→bus etc.) enclaves (private/public, doorways, terraces etc.) in/exit from the site

interaction	physical environment
	    leaning; 'pushing buttons' (in intersections)
	movements
	    regulation; between (different modes of) mobilities (walking, biking, driving)
	interaction inside a mobile group
	    pair interaction; group of 3 or more interaction (talk, movement)
	encounters (social)
	    meetings; continuous interaction; interaction with the camera/researcher
	physical obstacles (re-routing ones movement, returns to the site)

negotiation, different uses of space	active negotiation of space
	    running red lights; 'own' path choices, challenging the norm; speeding (cars); claiming space
	hurrying
	playfulness (interaction with material environment)
	work tasks
	non-mobile uses
	    hanging out; waiting; other (window shopping etc.)
	sports, leisure
	    jogging/exercise; dog walking

PUBLICATIONS

Publication 01   Tartia, J. (2017) 'Mobile place-making on an everyday walking route: rhythm, routine and experience.' In *Urban Mobility – Architectures, Geographies and Social Space*, edited by A.E. Toft and M. Rönn. Nordic Academic Press of Architectural Research [Online]: 85–107.

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PUBLICATION
01

**Mobile place-making on an everyday walking route:
rhythm, routine and experience**

Jani Tartia

In *Urban Mobility – Architectures, Geographies and Social Space*, edited by A.E. Toft and M. Rönn.
Nordic Academic Press of Architectural Research [Online]: 85–107

MOBILE PLACE-MAKING ON AN EVERYDAY URBAN WALKING ROUTE: RHYTHM, ROUTINE, AND EXPERIENCE
Jani Tartia

ABSTRACT

The article takes a closer look at the rhythmic qualities of everyday urban mobilities. The focus is on mobile place-making: how places are produced in and through movement. The research makes use of a set of mixed ethnographic and participatory research methods to examine narratives from within everyday urban mobilities, the research material comprising a set of qualitative data gathered during a series of go-along interviews on habitual and routine walking routes. Drawing from a rhythmanalytical framework, the analysis focuses on different rhythmic habitual practices, materialities, interactions, and experiences. The article examines how people use, make sense of, and give meaning to the urban environment in a temporal and momentary setting of the walk, and how various scales of urban rhythm – both the immediate and the mediate – come into play. The research aims to develop further the understanding of the complex spatiotemporal character of everyday urban spaces.

KEYWORDS

Rhythm, mobility, place, everyday, walking

INTRODUCTION: MAKING PLACES AND RHYTHMS

Notions of cities being in motion and on the move have long been, and still are, commonplace, as motion and movement are seen as a key element of urban life, as the pulse of the city.[1] Cities are understood as the main sites of a global twenty-four-hour society, as nodes of different cultural trends and cycles, and as material and concrete settings for mobile uses of spaces,[2] of which the latter is in closer examination here. People move in the urban milieu, habitually connecting and joining together different meaningful places and sites of different uses in various contexts, often as part of the daily grind and routine, such as commutes and errand runs. Embodied mobility – whether carried out on foot or by other means – is a mode in which many contemporary urban spaces are engaged in and thus a key factor in the formation of relations between the body and the city, and the focus of this article.

Mobility is more than just going from point A to point B: it is always infused with a diverse set of meanings, experiences, and chance encounters that present it as a complex event,[3] even if they are – in the context of the everyday – often part of the hum and habitual routine. This article focuses on ordinary street spaces and on mobility as "mobile place-making", as Paola Jiron formulates,[4] with an aim to examine mobility in itself as a meaningful activity that produces and shapes spaces, when spaces are understood as social processes, relational and always "becoming",[5] rather than fixed physical sites. As Kirsten Simonsen writes: "The city contains living and moving bodies, but they are not bodies moving through time-space, they are performing it and making it."[6]

Motion takes place both in space and time, thus producing *rhythm* as people locate/dislocate in time-space.[7] Rhythmic patterns emerge in different forms and scales in the urban setting, such as in how streets (and other urban spaces) are stages of various users for various uses during different time frames, providing possibilities/restrictions for different activities.[8] The article builds on the notion of urban space as rhythmic and temporal, examining how urban rhythms are produced and perceived in a specific context of habitual embodied mobility: an everyday walking route in the city. Instead of looking at spatial rhythms from afar, as happening *in* space, the article examines them from *within* a spatial practice – a walk – by utilizing "rhythmanalysis"[9] as a research framework. Rhythmanalysis can here help to further develop our understanding of momentary and fleeting relations with our everyday environments by putting emphasis on the perceiving body, temporality, and space as both material and social, thus providing a new look into the matter of urban experience that has surely been on the research agenda before. Rhythmanalysis, as Ben Highmore points out,[10] is a research orientation rather than a strict methodology, but as a theoretical framework it provides intriguing possibilities which are discussed below.

PRACTICING PLACES TEMPORARILY ON THE MOVE: THEORETICAL FRAMEWORKS FOR THE ANALYSIS OF URBAN RHYTHMS

Although rhythm as a word is often used in urban studies, it is still rather undefined as a more detailed concept, or as a mode of research:[11] one attempt to formulate it is the aforementioned Henri Lefebvre's *rhythmanalysis*.[12] However, Lefebvre's work on the matter is quite brief and was mainly published after his death, which left his formulation of rhythmanalysis as a rather unclear, unfinished, and abstract concept, as, for example, Highmore notes.[13] Still,

Lefebvre's work provides ample ground to develop the analysis further, and to examine urban rhythms in more concrete and empirical terms.

For Lefebvre, rhythms are everywhere – where there is space, time, and energy, there is rhythm. Footsteps on the street, the opening hours of stores and offices, and the changing seasons of the year are all examples of rhythms in different forms and scales in the urban environment. However, it is not possible to say where exactly one rhythm ends and another one begins, as rhythms are always part of other rhythms, of "polyrhythm" (or the wholeness, the "oeuvre"[14]). Lefebvre establishes two main categories that help to explain their extent: "cyclical" and "linear", referring either to various repeating cycles – usually of natural character – such as the night/day alteration; or to the various activities – usually of social character – that as practices have a somewhat noticeable beginning and an ending, a more or less linear form, such as working during specific hours of the day.[15]

The multisensory body is the main tool of measurement of rhythms for Lefebvre. This is because the various properties of rhythms are relational to other rhythms, as noted above, and thus to the body as well: the qualities – such as the frequency of rhythm, or how *fast* or *slow* a rhythm is – is defined in relation to other rhythms and their mutual interplay, including the rhythms of the perceiving body. Bodies do not only measure rhythm but produce them, too, both inside and outside of the body.[16]

One way to engage with space in an embodied manner is walking. Walking as a practice connects the body directly to the environment and opens it for both material and social encounters and interactions.[17] Walking is a characteristic form of movement for the human body,[18] and thus it is not a mode of just moving but a mode to also produce meaning, to communicate and to exercise power in social settings.[19] In a rhythmanalytical sense, walking is about producing spatial rhythms, and simultaneously about observing, being influenced by and experiencing rhythms.

So how does walking then relate to the spaces being walked? Allan Pred writes that places are produced through social activities and the coming-together of intersecting paths of individual bodies and objects that are shaped by the cultural and social environment and varying power relations.[20] David Seamon famously writes of "body ballets" and "time-space routines": the routine patterns and flows of body movement (such as walking) and the habitual

bodily behaviour extended in time (such as a walking route). The body ballets and space-time routines together form "place ballets": interactions with the individual routines with others, "rooted in space" (and time).[21] Places are like "knots" where the movements of its users are tied together more closely and tightly than elsewhere, if movement is understood as continuous strands being woven by the body.[22]

The city street, for example, in this case can be understood as the coming together of these place ballets, and as knots formed by interlinking strands of moving bodies. Various other social activities, in the form of timekeeping and social production of time, come to set a pace for the practices to play out, producing "place-specific" rhythms.[23] Here, the comings and goings of people form structures of different practices and their interrelations that come to set certain perceivable rhythm to space through repetition – through loops of activities and practices, such as walking, encountering, working, and hanging around. The interplay between different intensities of these spatial practices – both the movement and the *stillness*[24] – provide the basis of rhythms to emerge, and to be examined. What Lefebvre's rhythmanalysis thus facilitates, as a theoretical framework, is that it helps to perceive the multitude of (contested) time-spaces by attuning to different (and simultaneous) temporalities, as both Mike Crang[25] and Kirsten Simonsen[26] have noted.

Nonetheless, how rhythmanalysis should be conducted empirically, and how urban rhythms are to be measured or represented, still remains rather undefined.[27] The rhythmanalytical framework, as a more loosely defined approach, thus provides possibilities for a broad set of empirical and analytical research tools. By putting emphasis on the perceiving and experiencing body, and the material and concrete world, rhythmanalysis shares similarities with recent "post-phenomenological" orientations,[28] which can guide the rhythmanalytical orientation as a research practice. As Simpson notes: "the undertaking of rhythmanalysis or any analysis of social rhythms needs to be a multi-sensory experience based on actual lived experience."[29] One take on this is introduced next.

ETHNOGRAPHIES OF URBAN RHYTHMS: METHODS AND DATA
Drawing from the rhythmanalytical framework described above, I will next introduce a study that took place in two major cities in Finland. The study illustrates a methodological approach in examining the ways spatial rhythms are produced, interpreted, and interacted with in the context of everyday mobilities.

Everyday practices as such are not easily approached as the focus of any research, for the *everyday* is something that people are inseparably a part of.[30] Everyday mobilities are made of routines, habits, and relations that are often beyond active thought and reflection,[31] which prompts practical difficulties for research: How can the everyday experience be conveyed? Here, the research approach borrows partly from the growing discussion around *non-representational (or more-than-representational) theory* that notes some of the representational issues that embodied (and multisensory) experiences and habitual behaviour might have with communicating these experiences.[32] *Mobile methods* – referring to a range of practical methods of conducting research of/in movement – can help to make these accounts of the everyday and routine more clearly visible by engaging directly with the actual studied mobile practices by going into the field.[33]

The study borrows practical research methods from the ethnographic research tradition by producing a take on "street phenomenology", as introduced by Kusenbach.[34] The qualitative research data comprises "go-along interviews" on everyday walking routes in the city, and photographs and maps produced by the informants. Go-along interviews take place in the environment, as part of the practices being studied, and provide information directly from the field.[35] Moving in the environment while interviewing can aid in conveying experiences: "go-alongs in their different forms assist recollection by connecting participants and researchers with the materialities of doing."[36]

The research data was over-all formed in an *introduce me to your walking route* – a kind of a premise to provide narratives from the street-level of everyday urban practices. Ten interviews were conducted on the everyday walking routes of the informants in the city centre areas of Tampere (approx. 220,000 inhabitants) and Turku (180,000) during late spring of 2015 (five interviews in each city). The two cities are the largest by population in Finland after the capital region area. The city centres are, however, quite compact in size, comprising areas that are in walkable distance. The informants were mostly found with the help of email lists of local organizations and different channels of social media. The informants were both females (eight) and males (two) and aged from their mid-twenties to early seventies. The routes we embarked on were ordinary commutes to work or the place of study or else trips to run errands or go to a friend's place.

The go-along interview – where the route was walked and discussed – was followed by a *photo-elicitation interview* that revolved around visual materi-

al produced by the informant: maps produced beforehand and photographs taken amidst the walking interview. The aim here was not to over-emphasize the visual side of the experiences (which the use of maps and photographs could entail), or to over-encumber the informant with different things to do, but to provide easily approachable and useable tools to convey experiences with. Photo-elicitation interviews can provide information that can be difficult to attain otherwise by providing another point of view to the discussed matter and a concrete physical (or virtual) object that can be commonly discussed.[37] Lefebvre notes that photographs or videos cannot retain the true form of rhythms in their complexity,[38] but as Simpson argues, visual data can still work as an *aid* in uncovering spatial rhythms.[39]

In total, the research material amounted to over sixteen hours of recorded interviews, over two hundred photographs, and ten maps. The sample of ten is small in number but, as in-depth interviews, provides rich and ample data. Subjective variation is of course always present with qualitative data – there are as many takes on personal experiences as there are people – but the data is broad enough for various common and shared themes and types to arise. The material was examined with content analysis that was based on the rhythmanalytical framework described earlier. The data was divided into larger themes, of which the key themes are presented below, which provide brief notes or flashes from the myriad experiences that, as already mentioned above, often lay somewhere between the conscious and unconscious, active and passive, being.

EVERYDAY SCENES FROM THE STREETS: RHYTHMANALYZING WALKING ROUTES

The analysis concentrates on the narratives of everyday travel on the walking routes in the city. The focus is on how material street spaces are used and interacted with, how various social activities and other place-specific rhythms are perceived and encountered, how rhythms of different scales shape everyday travel, and how people situate themselves within the present through different temporal connections.

The rhythms at play on everyday walks can here be divided into two groups based on their scale and mode: the mediate and the immediate, the former relating to notions where knowledge about the route and relations with the environment are built up in a more mediated way, and the latter relating to the more immediate and momentary relations that take place on the move

in the lived street space. This division is of course quite crude as all experiences contain qualities of both: they are both remembered/expected/built upon and lived in the *moment*.[40] Still, this division helps to open the mesh of polyrhythm that the everyday mobilities – as a context for body-environment relations – are made of. The mediate/immediate themes are presented briefly below in sub-subsections as *setting/perceiving and inscribing/interpreting rhythms* respectively, and brought together in the third subsection, which sketches urban environment as a complex and rhythmic ensemble.

SETTING AND READING THE EVERYDAY SCENE
Setting Rhythms: Building Blocks for the Route

The everyday routes, embarked on with the informants, have clear temporal and spatial structures, and a somewhat fixed place in the organization of the everyday life on a daily or weekly level. These routes are specific: they are separable from other routes and other uses of public space as particular commutes, errand runs, or other functional routes. These are what could be called "projects":[41] specific "paths" in both time and space, with particular restrictions and possibilities in regard to movement, time, and space.[42] The project-like quality of the route comes to set the framework in which the route is practiced and performed.

The routes are often travelled during a similar time frame (during daytime) and using the same pathways between home and the place B. The time it takes to walk the route is known (between 15–50 minutes), as are the alternative pathways that could be taken, and how these variations would affect the travel time. The routes are occasionally travelled by other means of transport (private car, public transport, or bicycle) depending on weather, mood, and availability of time. Some of these routes are also occasionally travelled (fully or partially) with someone else – kids, friends, or the family pet.

The presented walked routes are foremost goal-oriented and functional, as means of getting from point A to point B. Filipa Matos Wunderlich notes, while distinguishing different forms of walking, that "purposive walks" present walking as a "task" that is mainly practiced to connect points together and often is made of a constant and rapid walking pace. Indeed, notions in the interviews relating to rapid walking pace, avoidance of detours, knowledge of shortcuts (through various yards and alleys), and the intention to keep one's movement continuous – by avoiding locations and objects that could interrupt the movement in one way or another, such as light-guided

street crossings and heavy crowds along narrow passageways – all highlight the underlying functionality of the route. Walking takes many forms and is practiced for different uses (as Wunderlich also notes), but on these routes walking is mostly purposeful.

The purposefulness of the walk stems from the route's central part in the organization of everyday life: the route connects to other practices, events, and tasks before and after the walk. Different shared and individual timetables – such as the nine-to-five working day cycle – set a time frame in which the route is to be operated. The way *back* (after work/errands) allows more variation and even playful behaviour, but the different timetables and activities of the rest of the day often come to restrict how the route plays out. The informants frequently brought up how they come to use the places we passed
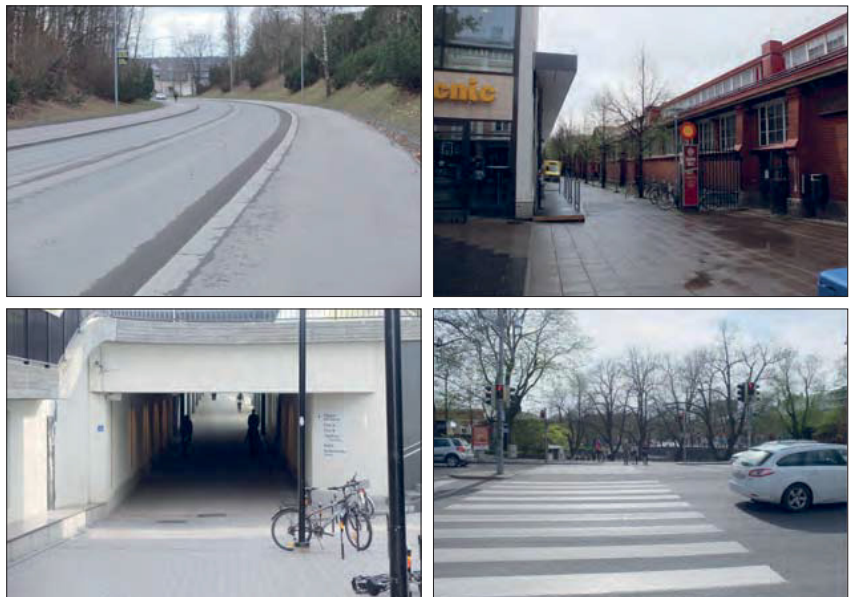
Figure 1 Examples of different sections of the routes. (Upper left) A portion of the route where there "is nothing", and the transitions to this section of the route are marked by specific buildings at both ends as visual cues; (upper right) the route either is travelled through the often vacant outdoor pedestrian-only street space or inside the indoor market hall (on the right) that is buzzing with people, activities, and narrow passageways, and often avoided for this reason; (lowerleft) an underpass that leads to a university campus area, marking a point of transition between two different areas with different perceived atmospheres and the beginning of the final phase of the route; (lower right) a broad intersection separates two different areas and marks the beginning of a new phase in the middle of the route that is also aesthetically the most enjoyed part, as it runs along the popular and central riverside that has various things of interest along the way and provides a break from the busy motor traffic that characterizes the previous phase. (Photographs by informants.)

by/through in different contexts: streets, squares, parks, and shopping malls as (semi-)public spaces are used in different ways outside the route, as part of other routes, activities, and temporalities. The interaction and encounters in these places often depend on the context: whether or not to stop and listen to a street musician, to window shop, to pass by places in a hurry, or to sit down on the street-side bench for a while, as the informantsbrought up. Since the routes are goal-oriented, these interactions here often happen on the move (more about interaction further below).

The route also has a temporality of its own with material, social, or performative transitions from one phase of the route to another (Figure 1). Material passageways – like tunnels, bridges, crossings of wide streets, and the edges of parks and squares – were often regarded as material points of transition between different portions of the route or as stepping between locations or districts with a different kind of perceived activities, peoples, soundscapes, visual characteristics, and atmospheres. Some of these phases of the route are experienced as more intense – with a cavalcade of events, people, things of interest, and interactions – while others in turn are experienced as more loose and even devoid of having "anything of interest" (informant, female, 62) or as where one can "just walk" (F25).

The account of one informant (F37) presents the transitionary and sequential form of the route clearly: her morning commute to work often begins by walking her children to a school nearby, and then changes in mode as she continues the rest of the way to work by herself. The active interaction between her and the kids changes to her own, often work-related thoughts on this latter part of the route. The first part of the route in the sense of walked pathways is clearly defined, and travelled beforehand mostly with the safety of the children in mind (such as favouring light-guided street crossings), but the part of the route she continues to travel by herself is less clear and less defined but, by habit, often very similar.

This notion of the project-like quality of the route might be emphasized by the premise of the study and by utilizing maps as a mode of data collection (Figure 2), highlighting the route as a specific temporal and spatial practice. Still, these routes can be seen as having a clear beginning and ending, and a specific set of temporal events for the parts between, both as embodied and performed practices and as perceived spatial practices. The routes are known, predictable, and habitually performed.
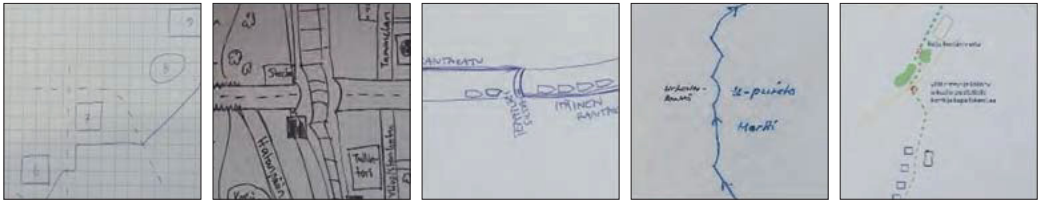
Figure 2 Examples of maps by the informants depicting small portions of the walked routes. The maps often came to form a backbone for the two-part interview. The informants often referenced what they had drawn in the map while walking on the route, and in many cases took photographs of the same points that they had marked in the map earlier. Later, the locations, alternative pathways, and varying details of the landscape, which were discussed during the walk but missing from the original map drawing, were added during the photo-elicitation interview as the map was otherwise discussed. Many of the informants noted how the environment closest to the route's starting and ending points were more easily drawn to the map and more detailed than some of the other sections in between them, where the details and scales and distances were not so easily imagined. The maps clearly acted as points of reference for the informants, which seemed to help bring up notions of and remarks on the environment, the route, and the daily practices in detail. (Maps by informants.)

Perceiving Rhythms: Multisensory Landscapes

Above, the project-like movement is described as mostly goal-oriented, but this does not mean that the actual act of walking itself is the same. The walking route is not, even as a purposeful walk, only a functional task, conducted in isolation from the environment or the body itself. Walking as an embodied practice is about producing spaces and forming places, as already noted above: one key element here is the multisensory landscape that is habitually engaged with.

The informants frequently brought up different relations they have with the material and social landscapes, such as relations with certain buildings, other material constructs, nature, vistas, or perceived atmospheres, and they often photographed them. These relations were based on sensory experiences – how something looked or sounded, even smelled – on past experiences and memories, or on imagined or represented readings of the urban milieu. The camera acted as a tool in making these thoughts and experiences visible (Figure 3). However, in many cases the photographs of the material environment also stood in for social activities, events, or people that were absent from the picture but were regarded as part of the ordinary course of events on the route and discussed in the photo-elicitation interview. Material environment that is often rather fixed might be easier and more comfortable to photograph since the encounters and interactions between people are often more fleeting and temporary in nature.

The informants identified how different groups of people usually inhabited the passed-by locations during different times: such as the crowds of commuters during the morning and afternoon, and the elderly people and school groups at noontime. However, these notions were not that frequent as the people, similar to the built environment, worked more as a background for the walk. The notions often came up in certain locations where the presence of other people was more (in)directly interactive, such as sights of the masses gathering at certain riverside areas on sunny days, or the soundscapes of various different languages that groups of exchange students produced near university campus areas, among others (more on interaction further below).
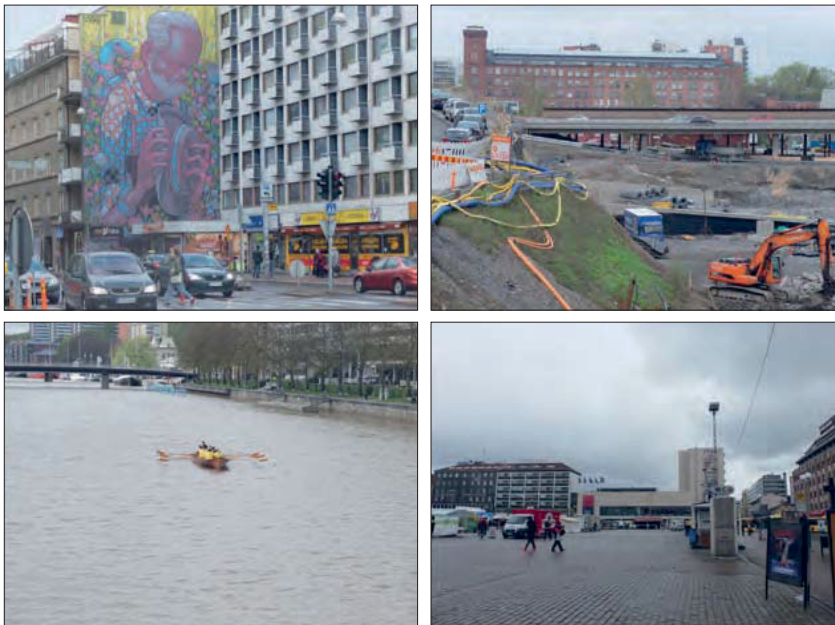
Figure 3 Examples of various landscapes on the route. (Upper left) The informant takes a photo of a large piece of street art that makes the environment look more interesting and notes the often socially lively storefronts below; (upper right) a vast construction site of a new highway tunnel that as a process interrupts both with the sensory landscape (as vistas and sounds) and with the used pathways of the informant's daily route, prompting affective responses; (lower left) an uncommon, although seasonal, sight of a rowing boat in the river running through the city that connects to the lively social event that took place on the popular riverside (outside of the picture) that captured our attention when crossing a pedestrian bridge over the river; (lower right) the city's main market square is often buzzing with people and activities during specific hours of the day, and some of the buildings on the outskirts of the square are ones which "everyone knows" by name and which work as effective appointed meeting places for friends. (Photographs by informants.)

Different construction sites, which were frequently present in the inform-ants' accounts, shape the material environment directly and often reach out to the streets – to the everyday routes – in the form of changing vistas, signs, sounds, and even varying physical obstacles and barriers. As Edward Relph writes: "For most of the time landscape is of little or no interest to us – it is merely there as a background and context for more immediate concerns … Occasionally this uninterest is interrupted by casual attention to the land-scape."[44] Many of the notions on landscape were often made of the various changes and transformations, or notions of what/how something *usually* was/happened in specific locations, but which during our walks were now absent.

The various material transformations of the environment range in different scales and are encountered differently: (dis)appearance of street art and graf-fiti and the joy of seeking new ones out, interest in the building of a floating restaurant boat by the riverside, the multi-year construction site of a new underground highway system and its effects on both the landscape and the open/closed pathways around it; and the recent addition of a new tall ho-tel building to the city silhouette. All are different examples of the dynamic material environment. These observations of change and transformation can also take more symbolic forms: one informant (F73), for example, takes note of the vacant office buildings and their possible relation to changes in local and global economics.

The landscape acts as a way to attune to the polyrhythmic city and to connect to a larger network of events outside of everyday travel.[45] These time spans of changing landscapes extend for various lengths: urban development pro-cesses, for example, follow multi-year cycles as specific planning, zoning, and building practices. The various changes and transformations can thus be part of the route and the everyday landscape for very short time (overnight disap-pearance of graffiti) or for long time periods (a multi-year construction site). They may even prolong their presence through memories of changes made or prospects of developments to come, absorbed through different forms of representation and media.

Relations to landscapes can also have more affective forms. The routes we walked, and the locations we passed by, have been a part of the informants' lives, in some cases, for decades. With one informant (F59), on her day-to-day commute to work, we passed by earlier homes, the place of first experi-

ences on a night out as a teenager, and previous workplaces. With another informant (informant, male, 70), the route between home and the city's main marketplace had been more or less the same for fifty years, which brought up multiple notions of past experiences and observations of changes in both the material and the social environments over the years.

These memories and recollections were often related to individual experiences – as described above – but also some notes on the collective and shared histories of the city and its certain areas were made: how the city had developed over years, how the industry had changed, and when certain buildings were constructed and how those changes shaped the areas more broadly. With the informants in their late fifties to early seventies, these notions were more frequently present in the narratives, and reaching back more years than with the younger participants. While these observations in general might not be daily and active – at the forefront of everyday experience – they nonetheless demonstrate how the urban environment that is travelled on a day-to-day basis has developed, transformed, and been layered as subjective places over time.[46] These places are remembered and imagined as well as experienced in the present, at least when they are talked about and introduced to others.

The interview as an unordinary event may underline these sensory connections to landscapes, for the interview provides a possibility to *show* the route and its different qualities, which may be left unsaid otherwise.[47] Still, these observations of various landscapes on the route give an idea of how different environments are perceived and what kind of meanings are embedded in them, layered as memories and earlier experiences through perceived changes and transformations.

RHYTHMS UP CLOSE: MATERIAL AND SOCIAL ENCOUNTERS AND INTERACTIONS
Inscribing Rhythm: The Body on the Move
The *everyday*, as already noted, is made up of routines and habits and, as such, is often associated with drudgery and uninterest.[48] In the case of everyday mobilities: people often move because they have to. Middleton notes that walking practices often take almost automated forms of movement.[49] Walking often is just walking – moving between points – without greater ideas or experiences behind it, as the informants often came to note during the interviews, usually when asked generally about their route. In these cases, the environment and its perceivable qualities might not be in focus – or on peo-

ple's minds – but are not escapable either, as the above sections have shown. The following examines some of these aspects of walking as *just walking*.

Walking is a thoroughly embodied practice, with all the limitations and constraints brought upon by physical movement. Feelings of fatigue or thirst, stress, or strong emotions can override much of the observed and experienced elements of movement since they may encompass the body thoroughly,[50] as the informants also came to note. Some of the informants likewise noted that the physical strain of the walk (ranging from roughly one to almost five kilometres in length) on the body works as a practical exercise, which is mostly done by controlling their walking speed; for others, the strain is something to be consciously avoided, resulting in a slower walking pace (although daily timetables might lead to taking a few running steps here and there). Also, the ground cover affects the walking practicalities, especially during the icy winter time. The routes' pathways as such consist mostly of asphalt or gravel surfaces and have few stairs and only mild elevation differences, which all contribute to the rather steady and even walking pace throughout the routes.

On the walking route, the body is subject to environmental conditions like weather and temperature, and the sensory experiences relating to them come to the fore. The interviews were conducted during late spring: the outdoor temperatures ended up shaping the walk and the outdoor activities thoroughly. Many informants noted how on warm days – especially during the summer time – the perceived atmospheres of places are often more relaxed, with people spending more time outdoors in general, and that their own route can occasionally meander more than during the colder times of year. Several informants noted that the rainy weather or the strong gusts of wind – which happened to accompany us in a few cases (and made the photography side of the interview a bit more challenging) – could *normally* be something that would make them choose some other method of transport than walking, or postpone the walk altogether.

The materialities of the space and the body connect in a number of temporal ways. The walking practice can even lead to playful behaviour. Quentin Stevens frames play in the urban setting partly as something which is lacking instrumentality and wastes energy rather than aims to conserve it.[51] One informant (M70), for example, showcased how he is in the habit of hopping onto a balancing board for a few steps just for the fun of it in an open exercise area – or a "playground for seniors", as he referred to it – passed by on the

errand route in a popular sports park. Another (F27) talked of a particular square with decorative tile paving, which leads her and others – on foot and on bikes – to follow the various lines of the tiles rather than moving in straight lines, sometimes resulting in the crossing of trajectories in otherwise sparsely used space. Urban environments contain various "props": material objects – such as benches and other street furniture – whose intended uses are either enforced or contested through different micro-practices, often in the form of play.[52]

Some of the informants brought up how the everyday route also provides time for oneself: to not think about anything or to go through work-related issues or the coming events of the day in their minds, and where one does not have to be socially active. One informant (F30) described how the daily commute route is the only part of the day she can be by herself and with her own thoughts, as work and young children at home take the rest of her time and attention. Walking can also be accompanied by various activities – such as listening to music and checking messages with the phone, or taking and sharing photos in social media. On a few such routes there is also often someone else walking the route (partially or fully) to interact with, which might take the mind off of the present activity of walking and the material and social surroundings.

Often this uninterest towards the surroundings is broken by certain locations on the route, as illustrated by the above-mentioned notes on landscapes. At these sites, various social interactions also come into play.

Interpreting Rhythms: Interactions and Encounters
As the routes are made of frequent, if not daily, repetition, the temporal and social characteristics of the different locations the routes pass by are well known. In the interviews, the informants brought up on numerous occasions how certain social practices, interactions, or events were (un)common to different locales – streets, squares, and parks – at different times of the day (or year).

Active and conscious route choices had been made with interaction in mind: to avoid busy traffic during certain rush hours of the day, to escape the noise of traffic to quieter streets, or even "to have something to look at" (F59) for personal enjoyment. This is not to say that people reorganize their route on a daily basis – alter the everyday habitual project – but that people have a

sense of the environment, and the activities taking place there, and can navigate through it based on past experiences and knowledge produced through repeated interactions with space.[53] Activities in places thus do not seem as random and always reset from day to day, but rather as having spatial and temporal structure that is expected and renewed on a daily basis through routine and repetition: we come to know that something *usually* happens in a certain location at a certain time.

The informants often photographed and discussed in detail narrow passageways, intersections, crosswalks, and other material details and spaces which require attention and active perception of the different trajectories and surroundings, and which bring the body momentarily to the present (Figure 4). Similar locations were, for example, the popular riverside in Turku and the central squares of the two cities where different social events and activities take place from time to time, gathering crowds of people, which are then to be navigated through on the route, as the project-like character of the route seldom makes stopping by and taking part in the activities possible. Indeed, the moments of interaction and encounter here really are *moments*: often brief and barely noticeable, and habitually and routinely performed.

As we were conducting the interviews on the move, these brief encounters were numerous. The informants (and I) saw familiar faces and quick *hellos* were exchanged; narrow passageways re-structured the walking pace and order; different street maintenance worksites brought unexpected obstacles along our way and unavoidable soundscapes of heavy machinery; crowds of people produced slight nudges between passing bodies; ringing bike bells behind our backs signalled different velocities; crosswalks often initiated brief negotiations about movement with car drivers; interested gazes were often set towards our interview event by other people on foot, sitting on the streetside benches or waiting in traffic lights inside cars; and once a face-to-face campaigner abruptly joined one of the interviews with messages of environmental concern.

The coming together of various rhythms can take either "arrhythmic" or "eurhythmic" forms[54] – producing either flow or friction in the crossing points of different trajectories as the temporality of the individual practices meets with the *place-temporality* – the conglomeration of material objects, people, rules, and routines.[55] Similarly, as Middleton notes, these interactions can also take more *imagined* forms as *potential* events – what could happen –

Figure 4 Examples of direct interaction with the environment. (Upper left) The narrow pedestrian/cyclist passageway through an old factory building occasionally prompts encounters with intersecting trajectories of people on foot and on bikes, producing arrhythmic movement; (upper right) movement is regulated by varying signs and symbols that produce stops and breaks in the movement, which are seen as both positive and negative aspects of movement, providing both security and obstacles for the walk; (lower left) the combination of a busy sidewalk – with pedestrians and cyclists – and a bus stop produces a mesh of intersecting trajectories; (lower right) crosswalks produce negotiations between different velocities and trajectories of motorized and non-motorized traffic. (Photographs by informants.)

based on the knowledge formed through routine and repetitious engagement with particular spaces.[56] So even if the spaces are not stages of active interaction, or actively reflected upon, people have an idea of the configurations of the various moving pieces in various sites, and how they potentially could interact with each other, often in arrhythmic ways.

The mundane encounters and interactions, no matter how brief, ordinary, or uneventful they might seem, are what come to make spaces as lived and experienced environments and are part of the writing of the "text" of the city.[57] The polyrhythm of the street creates frames and boundaries for different rhythms to play out, to interact, and to become visible (or to remain hidden), as Lehtovuori and Koskela note.[58] The various threads are spun together and are here – in the context of the route – negotiated on the move.

The everyday route does not come across as a place to seek active interaction and encounter, but these interactions cannot be avoided or escaped in public: they are part of the everyday mobile place and are engaged in on the move.

Although the route is partly fixed in terms of space, time, and performance, it is part of a dynamic world and all events are always in some way surprising and new since they happen in the *now*,[59] as already mentioned earlier. Lefebvre similarly noted that a repetition of rhythms always entails some kind of change and difference as no rhythm can repeat in exactly the same way.[60] Walking as a practice is thus not a predefined set of events or a sequence of rational choices, but rather part of the dynamic environment, produced by the body and subject to surprising and temporary changes in the material and social environments amidst habit and routine.

THE MEDIATE AND IMMEDIATE RHYTHMS OF MOBILE PLACE-MAKING

In the above sections, rhythms work on different scales, producing polyrhythm on the street level. In *setting*, the societal rhythms and clock time, together with the personal organization of daily life, work together to produce a frame for the route to play out – a frame for the relations between the body and the city. In *perceiving*, the various (both small- and large-scale) changes and transformations connect with subjective memories and past relations with the environment. In *inscribing*, the rhythms relate to the biological body and the embodied and multisensory practice of walking. In *interpreting*, spatial social rhythms are engaged in a more or less direct manner, as encounters and coming-togethers of different negotiated trajectories. However, it is important to point out that none of these rhythms work in isolation from each other; none are only either set, perceived, inscribed, or interpreted. Rather, the different rhythms work as a whole, and the interplay between the various rhythms take both eurhythmic and arrhythmic forms, as described earlier.

As noted above, the different scales of rhythm can be ultimately narrowed down to two: the mediate and the immediate. The former refers to how moving in the city is a way to produce knowledge about the environment, not necessarily in an active and perceptive manner, but by inhabiting and performing these spaces as part of the everyday routines and performing the route accordingly. The same beats of the rhythms are hit, making the route predictable and known, though always retaining something that is left open for possibilities, changes, and surprises. The route also provides moments

for relating to past experiences and memories that certain locations or landscapes bring to the foreground of the experience. The latter, on the other hand, refers to how the movement and the body are affected by immediate interactions. The notions of social encounters, occasional playful interactions with the material environment, and the walking itself as an embodied practice are all examples of how rhythms are inscribed through walking and inhabiting spaces, and how they come to resonate with the rhythms of others.

Here, walking comes to be depicted as a set of experiences and practices that are temporary, multiple, and simultaneous. Walking as an embodied practice acts here as part of the process of place-making that produces both the route as a project and builds upon on the place-specific rhythms of other moving bodies and other forms of social and natural rhythms. The rhythms here, too, work on different scales. The macro-level societal rhythms frame the temporal character of the spatial and immediate events: the temporality of the embodied practice of walking meets with the everyday urban temporalities, such as shared timetables. The micro-level rhythms of particular locations passed by on foot, on the other hand, provide tactile and concrete boundaries: the practice of walking is paced by both eurhythmic and arrhythmic interactions with the material and social environment as the walking route connects with other similar trajectories as well as completely different contexts of uses and dwellings in space.

The notion of mediate and immediate rhythms is also important from a methodical point of view. The mediate notions seem to be more easily communicated in an interview setting – and especially the use of a camera as a tool helps to bring these notions up – than the more immediate notions, which, on the other hand, were often prompted by the *in situ* interaction with the environment during the walk, or closer reading of the scene through the photographs that initially were taken to represent the more fixed and more mediate aspects. The non-representational aspects of rhythms come to the fore: What can be represented and how? This highlights the importance of applying various methods – including mobile methods – in the study of the complex and multifaceted urban experience and rhythmicity, for many such aspects might be difficult to attain through non-mobile or non-participatory means. However, this is not to imply that the methods used here would reveal the experience in full (that as a whole might very well be non-communicable) but provides a certain kind of a look into the matter through a certain set of tools.

CONCLUSION

The detailed informants' accounts of their daily travel sheds light on the habitual and routine practices and interactions on the move. This article presents ways in which people build their relation with the urban environment through temporal connections, interactions, and notions of emerging patterns that show the everyday walking route as familiar, known, and expected, but also simultaneously as always changing and dynamic. The habitual practices of inscribing, reading, and interpreting rhythms, along with the project-like character of the route itself, as described above, reveal something of how ordinary street spaces are given meaning and performed habitually through the body in a mundane and repetitious mobile context. Different layers of rhythms all meet and overlap one another on these everyday routes. Urban space is presented as a site of constant interplay between different material, social, and individual rhythms – as inherently polyrhythmic.

The study highlights the notion that to understand the urban experience in its complexity, it is appropriate to examine it from within the concrete practices the spaces are engaged in. Urban spaces are designed, planned, and constructed with specific aims and objectives in mind, but how these spaces become a part of the everyday life of their dwellers, as part of their daily practices and routines, and what kind of meanings and relations come to be embedded in them through these uses, interactions, and chance encounters are not simple and straightforward questions to answer. The themes of urban rhythms presented above help to partially explain some of those processes by bringing up both immediate and mediate temporal relations between the body and the environment in the very concrete practices of walking. These notions can help to make more sense of the urban environment and provide possibilities for urban planning and design by understanding the temporal and rhythmic embodied experiences on the move. Analysis of urban rhythms also highlights space and time not as singular entities but as multiple and simultaneous, as noted earlier in the text. Further research is nonetheless required to refine these notions into practical planning tools or principles.

The interest in walking practices signifies interest in something that is often taken for granted. Walking is a micro-level and mundane practice in the complex urban milieu that many urban dwellers participate in habitually – in one form or another – on a daily basis. However, as such a mundane practice, walking requires detailed attention in order to uncover the multitude of experiences and meanings formed through and in these everyday mobile practices that come to shape our relations with our everyday lived environments in a profound way.

NOTES

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02

Driving in/between places:
rhythms, urban spaces and everyday driving routes

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Driving in/between Places: Rhythms, Urban Spaces and Everyday Driving Routes

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Abstract

The use of the private car is one of the key factors that have shaped the contemporary urban milieu and daily life in the city. The paper examines what kind of temporal relations are produced between the driver and the environment in the context of habitual everyday driving routes. The data – utilizing go-along interviews, participant-produced visual material and recorded videos of drives – is examined by focusing on the temporal character of the routes by utilizing a 'rhythmanalytical' framework. The analysis examines ways in which spatial rhythms are produced and interacted with in and beyond the car-space. Focusing on the rhythmicities of everyday driving routes – as sites of everyday life and contexts for the urban experience – uncovers relations, experiences and meanings embedded in these mobile spaces and practices.

Keywords: rhythm, mobility, driving, place-making, everyday life, rhythmanalysis

Introduction: everyday mobilities

This paper builds on the simple premise that mobility is a way to produce meaning and interact with the material and social environment. Nowadays discourses of *life on the move* (Elliott & Urry 2010) are common-place and the contemporary city is seen as consisting of "fragmented and disconnected spatial and temporal connections" (Green 2002, 282). To produce these connections, people move from one site to another – and while doing so, meanings, experiences and relations are produced.

Mobility is, though, often understood as the process of uprooting and displacement (see e.g. Relph 1976), that might break, or at least change, the meaningful relations people have with their environments, with different meaningful *places* (Adey 2010, 53–55; see also Cresswell 2011). However, urban mobility should be considered as "an important everyday life practice that produces meaning and culture", as Jensen (2013, 140) writes, instead of thinking movement only as means of transit (or as "dead time" as noted by Sheller & Urry 2006; see also similarly Miciukiewicz & Vigar 2013). The paper challenges the common notion of mobility as *transport* in favour of a more complex approach, situating itself along the lines of mobility research where emphasis on the study of mobile phenomena is geared towards the experiences and meanings of being on the move, recently framed as the "new mobilities paradigm" (Sheller & Urry 2006; see also Cresswell 2011). The paper examines what kind of meanings and experiences are produced in the urban environment through everyday mobilities – which is the mode in which many contemporary urban spaces are "dwelled" in (Urry 2006; 2007).

The paper is interested in one particular mode of everyday mobilities: car driving. The use of the private car has been one of the most influential, transformative and polarizing aspects of modern societies. Cars have put people in motion from the beginning of the 20th century, and by doing so, the usage of cars has shaped and transformed spaces in both global and local scales through processes of urban and transportation planning, and by producing specific requirements for material uses and social activities, with varying results. (See Sheller & Urry 2000; Urry 2007; Sieverts 1997/2003; Amin & Thrift 2002; Jacobs 1961/2011.) "Much of what many people now think of as 'social life' could not be undertaken without the flexibilities of the car and its availability 24 hours a day", as Urry (2006, 19) writes. The car is "interwoven into the tissue of contemporary society" (Beckmann 2001, 593).

Everyday mobilities are here examined from a phenomenological perspective. What it means to be on the move and what kind of experiences and relations are formed and (re)produced between the body and the material and social environment in everyday mobility? The research leans towards "postphenomenological" orientations (Ihde 2012) by putting emphasis on the relations between the material world and embodied practices, along with (inter)subjective meanings and social relations. Examining driving as a mode of temporally dwelling in public urban space provides deeper understanding of the urban space as a complex site of various intentions, possibilities, meanings and experiences that often might retain contradictory or even conflicting characteristics. Especially it brings to the front the various *rhythms* of everyday urban spaces.

In this paper, the outlook on driving is limited to car use in urban central areas. I am not here interested in examining car travel as a whole, or the various road spaces traversed with cars, but to examine driving and the use of the private car as a way to inhabit and dwell in urban areas, as a mode of living urban space in motion. The streets are sites of multiple uses, meanings and relations (Crouch 1998) and driving is one of the most common modes of using space in contemporary cities. Driving, as an event, also involves various passengers (for the practices and experiences of *passengering* see Laurier 2011; Adey, Bissell, McCormack & Merriman 2012) but here the outlook is fixed on the driver: the focus is on the driver's practicing body, habitual and routine-like interaction with the material and social environment in and beyond the car-space, experiences, the processes of shared and subjective place-making, and the interplay between various spatial rhythms. The paper thus aims to inspect everyday driving routes as sites where meanings and relations between the body and the city are produced, rather than as only modes of transitioning from one place to another. The paper comes to examine if driving could be understood as happening *in* rather than *between* places, as the title of the paper inquires.

In the following sections, I will first briefly introduce the theoretical framework, discussing driving as an embodied practice and the character of urban rhythms; second, introduce the empirical research: the methods, the data sets and the research sites; and third, concentrate on the analysis of urban rhythms on the everyday driving routes. The paper is then concluded with a brief discussion on the results.

City in motion: habitual driving practices and rhythm

The use of the private car encompasses everyday life, daily routines and material and social structures of contemporary cities thoroughly (Thrift 2004, 46). Automobility takes many shapes: urban spaces are designed for driving, enforcing the modernistic ideals of speed, rationality and efficiency (Hubbard & Lilley 2004), and including/excluding other uses of space (Beckmann 2001); daily timetables and possibilities of movement are considered within the framework of

driving, which provides both the possibility and the necessity for movement between various locations (Sheller & Urry 2000; Sieverts 1997/2003); cars as material objects produce distinctive sceneries, events, sounds and even smells (Merriman 2011; Dant 2004); car as a material object produces various material cultures (Miller 2001), symbolic meanings and economic industries (Edensor 2004), and various affective relations (Sheller 2003; Steg 2004). The private car is both the topic of critique and admiration, politicized thoroughly.

In this paper, I will not discuss further the different (dis-)advantages that automobility has on lived urban spaces, the natural environment, sustainable resource use, social interaction, its role in the unevenly distributed possibilities of mobility, or its various possible future paths (such as self-driving vehicles) (for these and other discussions see e.g. Böhm, Jones, Land & Paterson 2006; Sheller & Urry 2000; Urry 2006; Beckmann 2001; Thrift 2004). Rather, I will examine automobility as it is *now,* and how driving as an embodied practice, and the car-space as a material context, produces experiences in urban public space. The fact is that many contemporary (semi)public urban spaces are experienced from within the private car. It is this everyday embodied and habitual practice that is in closer examination here, and the various rhythms that are both produced and interacted with in the public urban arena.

Driving: the body, the machine and the "assemblage"

Driving is an embodied practice that is performed in cultural contexts, and is, as any form of embodied movement, also a mode of communication (Edensor 2004; Kalanti 1998, 8–13). Driving is not altogether an active or conscious practice but resides somewhere between being actively present in the moment (and engaging in activities such as observing and assessing traffic) and habitual and embodied routine, as Thrift (2004) suggests.

Driving occurs in various places that are designed for automobility (for renown approaches, see e.g. Appleyard, Lynch & Myer 1964; Venturi, Scott Brown & Izenour 1977). All places are inscribed with various scripts and practices, habitual and routine-like ways of being and acting in space that produce relations between the environment and the body. These habits are created *in* places, not in isolation in the body/subject: "Milieu is not a passive backdrop, but a vital performative agent in the ongoing constitution of the human, suing experience and cultivating habits in myriad ways." (Dewsbury & Bissell 2015, 26). Habit is a process through which knowledge and understanding is produced, and places performed. (Ibid.; see also Hynes & Sharpe 2015.)

Dant (2004) writes that the relation between the car and the body should be considered as an "assemblage": "The driver-car is neither a thing nor a person; it is an assembled social being that takes on properties of both and cannot exist without both." (74). For Dant, the driver-car assemblage is a specific form of embodied relations with the environment, producing possibilities and networks: "The assemblage of the driver-car produces the possibility of action that, once it becomes routine, habitual and ubiquitous, becomes an ordinary form of embodied social action." (ibid.). The paper examines how this distinctive driver-car assemblage as a mode of dwelling produces meanings in the environment.

On assemblages, Dovey (2010, 16) similarly notes that "All places are assemblages": a street is not a thing or a collection of things, but it is the connections between the things and how they come to interact with each other that matters. Everyday mobilities (and spaces as assemblages) are made often invisible by their mundane character (Spinney 2010, 113), but still those activities are there and constitute the urban space as (momentarily) lived and experienced place. Jensen (2009, 140) writes: "People not only observe the city whilst moving through it, rather they constitute the city by practicing mobility." Everyday travel does not necessarily have to entail boredom and frustration, nor does it need to

In order to better understand everyday mobilities in urban spaces, it is important to examine the repetitions and routines that make these everyday mobilities precisely everyday. The temporal and spatial patterns that these habits, routines and repetitions produce – rhythms – come to be of interest.

be celebrated as something more meaningful than it might be. The everyday often *just is* in our experiences (but not as designed and produced materialities and synchronized routines, see Jensen 2013), and it is this *just is*-ness that produces our relations with the environment we inhabit and dwell in on a day-to-day basis, and what makes these relations interesting and worth of inquiry. In other words, the everyday is taken here as granted in how people inhabit the world but not as a focus of research. In order to better understand everyday mobilities in urban spaces, it is important to examine the repetitions and routines that make these everyday mobilities precisely *everyday*. The temporal and spatial patterns that these habits, routines and repetitions produce – *rhythms* – come to be of interest.

Rhythm: spatial and temporal practices and relations
It is quite difficult to think about urban space without the idea of rhythm, if examining the lived social and material space. Common imagery of urban space is one made of *repetitions* and *sequences*, such as the continuous flows of people moving around and following rigidly the natural day-cycle and various shared/individual timetables. Time-lapse videos are a popular medium to present the living characteristics of public spaces and social events, and the interplay between the static and the moving parts of the urban milieu.

Adey writes, that "Mobilities usually synchronize in rhythmic patterns" (2010, 28-29). These rhythms might not always be unique or provoke great interest by being mundane, far from extraordinary and making up the daily *grind*. *Rhythmanalysis* – the study of urban rhythms – as introduced by Henri Lefebvre, gives focus to the different natural and social rhythms – the interaction between space, time and energy/action. These interactions and connections make the everyday and present the city as a rhythmic ensemble of intersecting and overlapping rhythms that produce the cacophony of urban life: the various material and social movements, encounters and interactions. This urban *polyrhythm* plays out like a musical symphony, resulting in complex urban life that never ceases to pulse. (Lefebvre, 1992/2013.)

Rhythms can be perceived in a two-fold manner: cyclical and linear. Cyclical rhythms refer to natural recurrences – such as the awake/sleep, day/night, growth/decay cycles – and linear rhythms to social activities that are produced (which often take cyclical forms as routines and habits) – such as the daily working hours. However, Lefebvre stresses that even though rhythm refers to repetition, there is always the possibility of change and transformation, as these rhythms occur not only as repeats but also as part of the progressive time. (Lefebvre 1992/2013). Adam (1994, 87) similarly notes on natural rhythms that "it is in the very nature of those rhythmic processes to differ in their recurrence."

Spatial rhythms can be perceived, produced and interacted with but for Lefebvre, urban rhythms are always relational to the body, which comes to define them as fast/slow, frequent/infrequent, intense/loose or the like. People produce rhythm, but spatial rhythms are found both in the spaces that bodies traverse in and in the spaces of the body. The body is itself made of rhythms that together constitute the body as a living entity. (Lefebvre 1992/2013.) Meyer clarifies on Lefebvre that "The body is, so to speak, his metronome" that measures rhythm (2008, 149).

The brief overlook on rhythm above gives some insight to the concept but *rhythm* as such, though, is difficult to narrow down empirically and analytically as it appears in many forms, referring generally to the recurrence and change of (any) things. Lefebvre provides a framework for the analysis of urban rhythms but as Koch and Sand (2010, 68) note, there remains a need for "the development of methods to map, document, represent and present rhythm", in order to fully develop Lefebvre's rhythmanalysis as a proper mode of research (see also Amin & Thrift 2002, 16–21). Meyer writes that Lefebvre's "rhythmanalyst is more

receptive to time than to space … He tries to hear the music that the city plays and to understand its composition" (Meyer 2008, 156). How to do this remains to be developed, and this paper aims to contribute partly to its investigation. Here, the focus on rhythms is set towards the materialized social practices and experiences and relations that come to the fore in understanding how space is always changing and moving – *becoming* (Massey 2005) – but still though somewhat fixed and structured as a site of everyday life; or examining rhythm as "an element of dynamic stability" (Mareggi 2013, 5).

The analysis of spatial rhythms here makes use of Jensen's (2013) argument that mobilities are "staged" from the *below* and from the *above*: people stage their everyday mobilities through their own embodied practices; simultaneously, subject's mobility is staged by environmental feedback and various social factors, such as urban planning and laws and regulations. Partly following de Certeau's (1984) famous formulation of everyday "strategies" and "tactics", Jensen argues that mobility is both regulated from the top and acted out from the below, formed *in situ* in the meeting point of social interactions, material spaces and embodied performances. This conceptualization provides insightful cues in building a framework for the analysis of urban rhythms in the context of everyday mobilities. It helps to understand how mobilities (and the various rhythms related to mobilities) are produced through embodied spatiotemporal practices in the local and immediate scale (that could here be regarded as staging), and the ways in which social rhythms are imposed on the body, often ranging between the micro-level "place-specific" rhythms (Wunderlich 2013) to more macro-level societal and cultural rhythms, such as shared timetables (see Edensor 2010) (that could here be regarded as staged). Incorporating micro-temporalities and rhythms of the urban scene and mobilities, these notions could perhaps be further formulated into notions of *pacing* and *paced* (referring to temporalities and rhythms, developing on Jensen's conceptualizations of staging/staged) practices, socialities and materialities. These notions will be further examined in the everyday driving route -context below.

On a drive: research methods and data

Empirical research was conducted to examine the rhythms at play on the everyday driving routes. *Mobile methods* refer to various methods of empirical research and analysis that aim to grasp the fleeting and momentary character of mobility (Spinney 2015; Jirón 2011; Murray 2009). Following Kusenbach's (2003) formulation of "go-along interviews" as part of the study of street phenomenology, the study here utilizes similar interview approach (applied to a driving setting), supported by various visual data, to examine the experiences of being on the move in the city.

Different email lists of local organizations and social media were utilized to find informants who in their everyday life drive repeatedly a route that is set partially/fully in the urban centres of Tampere or Turku. Ten (10) interviews were conducted in total, half in each of the two cities that are the largest by population (approx. 220 000 and 180 000 inhabitants respectively) in Finland after the capital Helsinki metropolitan area, and roughly similar size. Conducting interviews in two different cities was done to prevent city-specific details or traits from gaining the upper hand in the data as the outlook on routes is generalizing by focusing on routine and habitual practices and experiences.

The research material comprises of three parts. (1) Thematic interviews were conducted in the car, whilst driving on the everyday route of the informant. A small wide-lens *action camera* was pointed outwards to record video material of the vistas and events that were taking place in front of the car for the duration of the drive. (2) The video – "footage as record" (see Garrett 2010, 525–528) – was then watched together with the informant during a video elicitation interview

following the drive, to provide another look to the route, events and environments without the need for the active practice of driving, the video working as a trigger for discussion (the video here taking partially the form of a "participatory video" (ibid)). The informants also picked points of interest in the video, regarding to the environment, route and events taking place there, which were then saved as screen captures for further reference. (3) The informants were asked to draw a map of their route in advance of the interviews. These maps were examined as part of the elicitation interview *with the informant* to provide deeper insight to the route and the various meanings embedded in these spaces. These maps, although are *visual* by character, and produce an *image*, were discussed as multisensory objects, aiming to bring forward the various affective experiences. (For the use of maps in research, see Lynch 1960; Gould & White 1986.)

The driven routes were ordinary commutes (4), trips to run errands (3) or trips to the places of hobbies (3) (either their own or their children that were given a lift) that are all travelled roughly at least once a week, some on a daily basis. The drives are usually set during the morning, day or late afternoon. The informants were both male and female and aged from their mid-twenties to mid-sixties. The interviews were conducted between late 2015–early 2016. The interviews were conducted in Finnish: all transcript translations further below are done by the author.

The focus of the analysis is set towards car travel in urban centres, although many of these routes partially took place in areas that were further away from the quite compact centres (that are even walkable in distance) of the two cities. The routes, except one, either began/ended in the city centre areas, one route being more of a drive-through route (with possible occasional stops in the centre by combining the commute to running errands).

Content analysis – based on the rhythmanalytical framework described above – focused on the temporal material and social interactions, sequences and (inter)subjective meanings that relate to moving in the environment. Aspects of the interviews that deal with temporality, routine or habit came to be of interest. The overall research approach is not to be taken as fully encompassing experiences of being on the move but rather understand that the data can only provide snapshots of these aspects that are always "partial, incomplete, in process, becoming" and thus difficult, or even impossible, to attain fully (Jirón 2011, 36). Vannini (2014) calls for new methods that might take *non-representational* forms to approach the study of complex lifeworlds, such as urban life. Although the practical research data utilized in the study still consists of various forms of representations – interviews, videos and maps – the study leans towards non-representational approaches by utilizing rhythmanalysis as a mode of inquiry (see Lefebvre 1992/2013; Koch & Sand 2010, 63–65) and by noting the challenges and limits of grasping experiences and affective relations through representations and communication.

Rhythms on urban driving routes

Building on the notion of rhythmanalysis, and the driver-car assemblage as a mode of dwelling in urban space, the paper next examines the empirical data gathered on the driving routes. The analysis focuses on two larger themes: first, how rhythms – in a driving context – are staged both from the *below* and from the *above* (following Jensen 2013), and second, how temporal social interactions take place on the routes. The role of the private car-space in the public urban space, (temporal) route knowledges, driving practice and its regulation, physical spaces and boundaries, and choreographies between different mobile bodies, are discussed.

Figure 1. Route blueprints. The route maps present the script, or the process of events, for the route. In most cases, only the streets and intersections relevant to the route were marked in the maps, highlighting the route as a specific mobile site. The maps also included notions such as "*cut-off street*" and "*first* [traffic] *lights*" (left figure) that highlight the dynamics and the linear form of the route. Excerpts from the informants' route maps.

Embedding and perceiving rhythms on the move

Rhythms as staging: knowledge, embodiment and habit

The informants noted that a key reason for them to use the car is either the ease and freedom it provides, or the requirements of various everyday needs that necessitates its use. The private car provides possibilities to organize one's life, whether through *necessity* or *choice*, and car use is reasoned through these notions (for similar observations, see Maxwell 2001). Most informants also used other modes of transport to move around in the city (such as walking, cycling and public transport) but for these specific routes the car was often the preferred choice. The seasons also have an effect: the weather of the cold and wet winter months (when the interviews were conducted) was preferably met with the car rather than, for example, on a bicycle that was often preferred during the spring and summer seasons.

The routes that the informants introduced are quite fixed between the point A and the point B, both in the form of used pathways and timeframes, and any detours or other stops (such as going to the supermarket on the way to home from work, or to run other errands) are often part of the *route plan* – or the 'episode' (Aura 1993) – the routes having a clear blueprint that is embedded into space. This is though not to say that the routes are meticulously planned but rather that these routes have become habitual and routine-like. The informants brought up how some of their driving routes are almost fully automatized. The informants often referred to the car as a living being here: it was the car that *knew* where they were going and drove them to the destination if one was not actively thinking about where to go (see similarly Laurier 2011, 70). Also, driving itself was automatized as an embodied practice. Some of the informants, though, brought up their earlier anxieties about driving, and recollected past occurrences in the traffic, but for most, driving, as a practice, was more or less automatized. One informant (Female, 26) noted jokingly that she probably would sooner forget how to walk than to drive.

Part of staging is the way how the environment is traversed (Jensen 2013): the skills and knowledge that are required to navigate through the space and to make it known (Figure 1). This knowledge often relates to the understanding of how different mobile trajectories meet and interact with one another in specific points of the route, and how these trajectories change and transform in cycles through the day, as well as other temporalities. Traffic congestions, rush-hours, intervals of traffic light changes, slippery parts of the road (during winter season) and potential encounters on the crosswalks are all examples of the knowledge regarding the *choreographies* (Merriman 2011) of the various trajectories of the street that were often brought up in the interviews. This knowledge transcends also into traffic regulation: the speed limits, one-way streets and other regulations are known – and embodied – and not actively investigated on every drive, as are

sharp turns and small unevenness in the surface of smaller streets and other drivers' movements anticipated (more on these in the next section).

The knowledge of the route's spatial and temporal structure often condensed in specific locations or parts of the route: one informant (F55) notes the multitude of the different pathways she could take to reach her destination, but how she usually comes to use the same route; another (Male, 42) talks of the smaller streets he drives around the central railway station as something like a secret route that not all drivers know about. All the informants brought up different notes on temporalities: how the roads usually jam up during certain times of the day and how they set often their own travelling accordingly (if possible) by delaying their departure for a few minutes or running errands on the weekends rather than during the week. Also, the various pathways used for other routes in other mobile contexts, were brought up. These are all examples of the small skills of navigating and moving in the urban space, of knowing the routes and the locations from a movement perspective. These staging "tactics" (Certeau 1984; Jensen 2013) are here habitually utilized in the *rhythmic* and *temporal* urban space.

As the route is known, so is the car-space itself. Driving is often accompanied with managed soundscapes: many informants noted that they usually listen to music (often through music streaming services) or to the radio while driving. Bull (2004) notes how sound becomes part of the driving practice: selecting what to listen is a way to exercise power and to privatize the inner car-space in the otherwise public arena, to "produce a seamless web of experiences from door to door" (247), or mobile "surrogate homes" (251). Rhythm, in addition to physical movement and trajectories, is also produced in other ways, such as through utilizing technologies, such as the car stereo here, to augment the sensed auditory space, or to connect to other (virtual) spaces through various digital connections.

The car is also a space of social interaction when travelled in company. Aside from the interaction between the driver and the passengers (see e.g. Adey et al. 2012), Barker (2009) notes that the car-space has become one of the most frequently inhabitant spaces for children in contemporary cities, and the car is turned into a space of everyday family interaction. This was also evident in those three interviews that took place on routes that were driven because of children: the informants brought up how the route is a moment to interact and discuss, even regarded as a *break* in the daily schedule. One informant (F36) talked how the twice-a-week trip to the hobby of her eldest child is a rare moment when they can have a chat just between the two, as younger children at home require more attention and care – although the use of a mobile phone or a set of headphones from the child's part might prevent these chats from taking place.

All these notions above present the driving route as a specific place in motion: as a set of mobile practices, ordered and synchronized to the rest of the private everyday life through timing, wayfinding, automatized driving practices and interaction inside the car-space. These notions bring up the (habitual) ways people set rhythm to space through their embodied (everyday) mobility. The above shows how people build knowledge around the various limitations and possibilities car travel entails, and produce knowledge of the spatial, and especially *temporal*, order of various mobile trajectories on the specific route. This knowledge is embodied into habits and routines as the city is navigated. These staging practices – both the habitual and the intended – show temporal relevance, as practices of *pacing* the urban space.

These practices though do not operate in separation from the environment. How the car-space, driving practices and the route itself relate and extend to the environment (and vice versa) are examined below.

Figure 2. Driven landscapes. The maps provide insight to the various distinctive landmarks and areas that characterize the route – such as specific buildings and park areas – with both shared and subjective meanings. Mostly the maps convey the visual aspects – which are prominent in the driving practice – but also other sensory observations are possible, such as the "*Stinks!*" remark next to a water treatment plant suggests (left). These observations, though, are easily damped by the enclosing character of the car. Excerpts from the informants' maps.
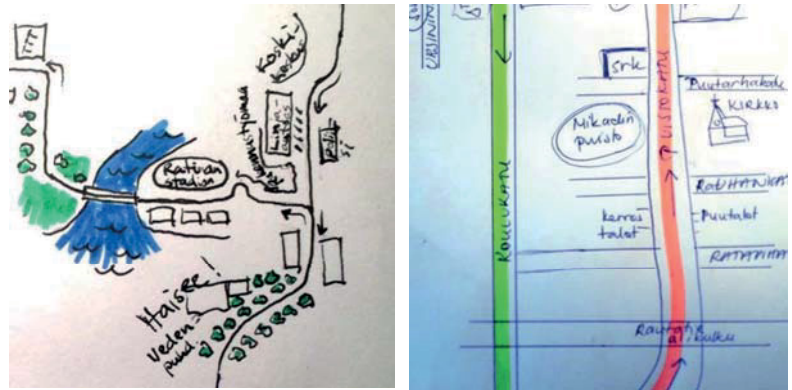
Rhythms as staged: landscape, observation and affect

Driving as a mode of mobility is heavily regulated, *staged* from the start (Jensen 2013). Many sites (such as parking lots and highway ramps) and signs in the build environment are there for the purposes of car-use (Thrift 2004). Streets and roads are *choreographed* for automobility from the get-go (Merriman 2011) and they are also tightly governed and managed as how these spaces are used by non-motorists (Urry 2007, 117). These various regulations of car traffic are part of the routine driving practices in the environment, and not necessarily actively observed. In the interviews, the various driving regulations were usually only noted when reaching a certain portion of the route, such as during a transition from a highway to an urban central area, where a new set of rules for the movement, such as lower speed limits, come into place.

The interviews show that staging of mobilities also takes other than regulatory forms, such as urban landscapes (Figure 2). Activities in cities are not only about movement: different events and happenings, of both *everyday* and *special* character, take place in urban public spaces, and these events and happenings are occasionally investigated briefly while driving by in the everyday route - context. Many informants emphasized, however, that the car is first and foremost a mode of transport for them, and that usually their drive is done in a state of mind that is not the most analytical towards the everyday (mundane and familiar) surroundings. The drives' functional form was emphasised: functionality of the movement was often intended but the driving situation also set certain limits to what was possible on the route. One informant (F37) noted, for example, that usually on her morning drive to work it is still dark outside so that "there is not much you can look other than the taillights of the car in front of you".

Driving, as a mode, comprises of movements and stops. It was these various *stops* that came up in the interviews as moments when the surroundings could be most attuned to. Stopping at the red lights, for example, provided possibilities for people-watching: the material interaction with regulatory sings produces possibilities and restrictions for other activities to take place inside the car. It was evident in the interview situation that the stops often provided also a clear break from the driving practices and helped the informants to refocus and make notions about the environment. Driving, as a practice that requires bodily coordination and concentration, was not seen as a limiting factor towards perceiving the environment as such but the informants noted that their environmental attention often steered towards issues relating to traffic when in motion (see next section).

The interview situation seemed to direct the informants to present the environment in a detailed way. Discussion rose around the perceived landscapes, which is not surprising as driving heavily emphasises the visual

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sense (see Appleyard, Lynch & Myer 1964; Venturi, Scott Brown & Izenour 1977; Kalanti 1998). Only few non-visual or non-movement types of sensory remarks were made. The informants often pointed out (un)enjoyed vistas, sites where something once was (such as demolished buildings), sites of personal relations and memories (such as previous homes and places of study) and sites of ongoing changes in the environment (such as construction sites and recently finished buildings, or road infrastructures that were not only perceived but which also had an effect on the travel by reconfiguring the route). In driving, the landscape is experienced in motion: as sets of openings, turnings and closings of perspectives (Appleyard, Lynch & Myer 1964). In the interviews, though, the notions on landscape were more-or-less *static* in nature. One informant (M64), for example, talked in detail of the various planned construction projects in the local area, which he followed closely; another (F48) talked in detail of her earlier memories of living in the area, and noted how "All these corners bring up some memories, every intersection". These affective aspects of the route came most evidently visible in the elicitation interview. The video (and the pausing and rewinding of it) provided possibilities for these recollections and memories to emerge (Figure 3).

These observations concerning landscapes are not necessarily part of the daily travel, examined analytically again and again during the drives. Still, they bring forward how the environment is connected to in and beyond the particular driving route, and how various contexts overlap and merge on the everyday drives. Many informants noted how they perceive spaces differently depending on whether they are travelled by car, on foot, by using the bus or by bike. In many cases, the discussion that revolved around the more detailed issues of the landscape, such as material details, specific buildings and their uses, or various temporary uses of specific spaces, were often *learned* about through other means than driving, such as by reading about it in the media or engaging with the space in an (mobile) activity other than driving. The spaces along the investigated routes that are only engaged through the car were thus often only briefly discussed in the interviews (sometimes noted that "there is nothing here" (F54)), were examined mostly through their visual characteristics (how something looked like) or through the amount of traffic. Urry (2006, 23) notes that the speeds of car travel make one lose the ability to perceive local detail, which even in the central urban areas, where speeds are often limited to 30–40kmph, plays a key role in the possible engagements with the environment. The driving route provides a specific context to engage with the space – framed by the regulated movement and the timing and organization of the everyday life – which often seem to result in fleeting engagements with the landscape that other contexts support and augment.

Figure 3. Affective scenes. Various landscapes dot the route that wake occasional interest on the way, and act also as potential triggers for discussion and interaction inside the car if driven in company. "*Cinematic*" apartment buildings and the various everyday social events taking place in the doorways (upper left); riverside restaurant boats that pulse life during the warmer seasons (upper right); a park next to the main library (left) with occasional social events and happenings (below left); an old freight station (left) and an open culture house (right) as current topics of urban renewal (below right). Excerpts from the videos by the informants.

What the above brings forward is how everyday mobilities are shaped and influenced by various spatial rhythms that are interpreted and engaged with on the move. Driving practices are *paced* by various spatial rhythms of which others

are more collectively shared (such as driving regulations) and others more personal and subjective (such as affective relations to landscapes). The traffic regulations and other social, cultural and material *place-specific* rhythms (Wunderlich 2013) of passed by places provide a frame for the various staged rhythms to play out in and beyond the car-space but these aspects did not come forward strongly in the communicated experiences in the interviews.

Above I have examined how mobilities and rhythms are staged by the collective embodied/spatial practices, materialities and socialities. One key question is then what happens when these different embodied staging practices meet and connect as collective and momentary relations, as assemblages.

On the beats: interaction, encounter and collective choreography
To move is to interact, both materially and socially. The street is a limited space and the interaction between drivers is unavoidable as cars move in a regulated and linear form (Urry 2007, 123). Interaction between the driver and the other users of the space came up in the interviews mostly in the context of traffic and movement. Streets are sites of multiple uses, as already noted above, but in the case of driving experiences, the street seems to be foremost a site of traffic. The traffic is not only noted but used as practical knowledges by anticipating the trajectories of others or increasing one's attention in specific locations on the route where multiple intersecting trajectories often means some kind of interaction. These interactions are the result of multiple individual staging practices meeting in the staged mobile spaces.

In regards to other motor vehicles, the flow of traffic was often discussed in the interviews and many remarks were made of the events relating to it: the slow/fast parts of the route, the perceived tightness/roominess of the driving space, the number of other users, the particular locations with identifiable characteristics that affect the way people move there, and the overall variations in the driving styles of other motorists. One informant (F55) noted of a particular intersection consisting of multiple lines, in the outskirts of the city centre, that the drivers who are used to driving there (the locals) and the ones who are not (the nonlocals, tourists) are clearly identifiable by how they managed their driving in it. Edensor notes that driving as a practice includes practical norms that are embodied, but which are also under constant observation from other drivers and their "disciplinary gaze" over the driving performance: "These collective performances engender mundane choreographies of the road and everyday motoring knowledge" (Edensor 2004, 112). Rhythms can be contested by different actors (Allen, 1999) which here, in the case of driving routes, often means the various material trajectories and how they blend together.

Figure 4. Flow of traffic as a mode of interaction. The interaction between the inside car-space and the environment is limited. Interactions with the different users of space comes through most evidently as micro-level events in traffic, where various trajectories meet and cross in various ways: lane changes and different velocities (upper left); crosswalks and pedestrians (upper right); cars joining or departing from the flow of movement (below left); traffic lights and street crossings (below right).   Excerpts from the videos by the author.


These micro-relations in traffic also include interactions with non-motorized movements. Often, the interactions were related to specific locations where

encounters between different modes of mobility could be anticipated, such as crosswalks, light guided intersections, certain long stretches of streets where crossings were made in multiple points (other than the appointed crosswalks) and the nearby areas of schools (and the unpredictable behaviour of children) during mornings and afternoons. The locations were *part of the route,* and the interaction, similarly to the interaction with the motor traffic, was routine-like.

Thrift notes that driving as a mode of interacting with the outside and other users of the space (beyond the (semi)private car-space) is quite limited. The car as an extension of the body renders much of body language impossible to read. The language of the car is distilled into velocity (and its changes, such as speeding up or braking), horns, lights and hand gestures. (Thrift 2004.) In the interviews, the notes on various interactions were based on the visual sense, and often relating to velocity. The mobility rhythms were thus often considered from a movement perspective, the act of moving being the most important method of communication between people (Figure 4). These signs are habitually read and interpreted in various mobile situations, such as ordinary street crossings. These material and social encounters take either "eurhythmic" or "arrhythmic" (Lefebvre 1992/2013) forms – either producing harmonious interactions or frictional encounters where the different rhythms meet disruptively.

Figure 5. Material and social encounters. Unexpectedly encountering a street maintenance site during an early evening drive. The routes are not fixed scripts that repeat unchanged but small reformations produce new micro-events of material and social interaction. A fifteen second sequence from a drive-along video, excerpts by the author.
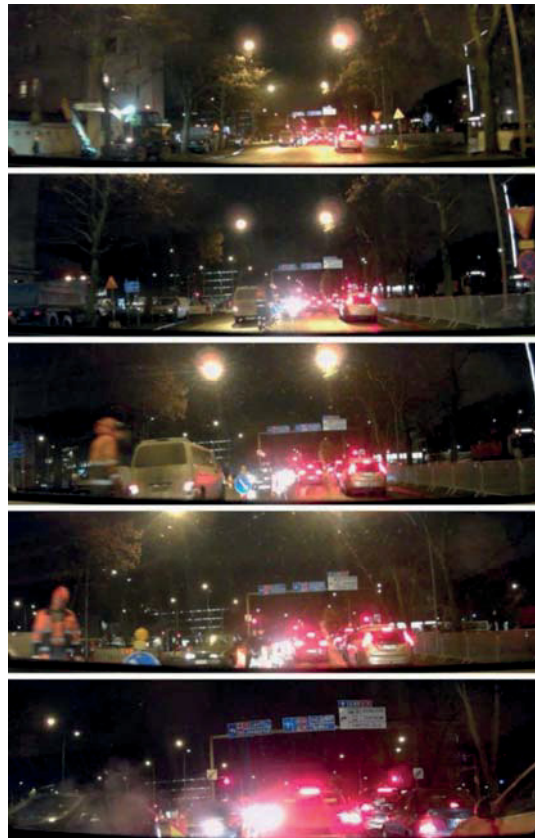
Adey writes that "It is often when rhythms break down that we become aware of the scale and scope of these mobilities" (Adey 2010, 28–29). Interrupting the predictability of the route produces moments that break the accustomed and routine practices. Various construction sites were noted as producing much of

the changes and surprises in the otherwise known pathways and (mostly) automatized driving practices. Encountering a construction site often also resulted into a reconfiguration of the aforementioned blueprint of the route as certain streets were closed and others opened (Figure 5). This, again, is not to suggest that people have a finished, ready-made script in their head, which they just act out, but that people have come to expect certain issues in certain physical sites through repetitious engagement with the space, and the route is seen as a more-or-less stable choice of pathways.

Various collective driving activities, such as rush hours and traffic jams – "when everyone else is going too" (M45) – are often attempted to avoid by managing own time and movement. As Edensor (2010) notes, many everyday rhythms, like the ones produced through everyday commutes, are partly made of actions that are organized collectively and shared between subjects. One informant (M64), talking about his route to a weekly morning sports event for male seniors, noted how "five hundred guys, all arriving with their own cars" not only has an effect on the availability of parking space at the sports arena (the route's destination) but also on the congestion of traffic in certain parts of the city. The individual pacing processes come to interact in a collective mode, producing individual-and-shared rhythms.

Together the staging practices produce habitual and routine-like interaction and relations between the body and the everyday urban environment. The routes are repeated as part of the daily life – and thus known from a movement perspective – but the changing landscapes and street networks constantly shape the experiences of everyday mobilities. Spaces are paced through staging practices of embodied mobility, which in turn are paced by the spaces traversed through, producing a complex assemblage of various trajectories and movements. The route provides momentary possibilities to connect to the surroundings even though the functional character of the drive comes to the fore in the communicated experiences.

Conclusion: embedding/perceiving/moving in rhythm

Driving produces specific rhythmic temporalities in urban spaces, in the form of materialities, interactions and embodied driving practices. Urban spaces are routinely experienced through this setting that comes to produce specific relations with the environment. Understanding everyday mobilities as meaningful sites of everyday life gives insight to how urban spaces are lived and experienced, and how the embodied context in which the environment is engaged in comes to shape these experiences. The relations between the individual and the environment are not necessarily always intimate, *actively* engaging or reflective – as the informants' narratives here bring forward – but are still crucial in the formation of our relations with the daily lived spaces, whether these spaces are traversed through or dwelled in for a longer period of time.

The paper, by developing another take on the rhythmanalysis framework, set out by Lefebvre and others, introduces a perspective to everyday mobilities and urban spaces on the move that focuses on rhythms as pacing/paced, and the interactions between. Rhythms are produced by the driver-car assemblage through movement, and the place-specific rhythms provide a local framework in which these rhythms play out. The barrier -like character of the car presents the temporal relations between the body and the city as tightly managed and scrutinized but, still, as the informants' stories bring forward, incorporates a set of micro-skills/knowledges/relations that are embedded in these mobilities. Even if on the everyday driving route the environment is sped by, it is a site where people set momentarily their own pace into the shared urban space through routine and habitual embodied practices, and are in turn paced by their surroundings, and interact with others embedding their own pace in it.

The relations between the individual and the environment are not necessarily always intimate, actively engaging or reflective – as the informants' narratives here bring forward – but are still crucial in the formation of our relations with the daily lived spaces, whether these spaces are traversed through or dwelled in for a longer period of time.

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The future developments in automated driving technologies, such as self-driving vehicles, might change the character of driving (as an embodied practice and context for body-environment relations) in the coming years, shifting the role of the driver towards the one of a passenger. This, though, does not change the fundamental character of the use of the personal car that separates it as a specific mode of mobility in the urban environment: the personal and personified inside space of the car in the public arena, and the possibilities and necessities of movement in the organisation of everyday life. Changing urban planning paradigms – that put emphasis on walking and the use of public transport – and urban densification might, though, be changing forces in how built environments are lived and engaged on the move in profound ways.

Still, car driving is something that happens in the contemporary city. On one hand, it impacts greatly on the overall character of urban milieu, and on the other, it is a common mode of inhabiting daily urban spaces, creating a distinctive set of relations between the subject and the city. Mapping the various rhythms that are produced and interacted with in everyday driving practices, reveal connections and structures between spaces, temporalities and activities. Examining these rhythms of everyday mobilities, that often might be regarded as mere trajectories in time-lapse videos (as noted in the beginning of this text), come to partially explain what kind of contexts they actually provide for the experience of the material, social and subjective spaces. The city is rhythmic, but the rhythms work in different ways depending on whether examined from within the practices and spaces they are engaged in or from afar, driving – as an embodied context – being one piece in the overall puzzle. Further study is thus required to connect these notes of rhythmic spaces from *within* driving practices to other notions of spatial rhythms. This will perhaps provide a more encompassing understanding of urban rhythms in general that will reveal everyday urban spaces not only as spatial but also as temporal sites, enabling us to draw concrete cues for planning and design processes and to deepen our understanding of our daily lived environments.

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03

**Examining the rhythms of 'urban elements'
on walking and driving routes in the city**

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Examining the rhythms of 'urban elements' on walking and driving routes in the city

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Examining the rhythms of 'urban elements' on walking and driving routes in the city

The paper follows Kevin Lynch's renowned formulation of 'urban elements' to examine the mobilities, experiences and materialities on ordinary routes in the city. Utilizing route narratives and participant-produced visual data, the paper focuses on various identifiable micro-temporalities and mobility rhythms on repeated walking and driving routes, building on Henri Lefebvre's notion of 'rhythmanalysis'. The paper examines how a framework built around rhythm and urban elements can add to the analysis of contemporary urban sites from the perspectives of situated mobile contexts, noting sequences and polyrhythmia as central temporal characteristics in the body-environment relations.

Keywords: rhythm, rhythmanalysis, urban elements, mobilities, everyday life, mobile methods

Introduction

Streets, and other public spaces in the contemporary city, are often experienced in passing. Street-spaces are planned and designed for movement, to function as the arteries of the contemporary city, and as such, they are the sites of various mobile contexts. Everything from functional commutes and errand-runs to leisure strolls and jogs take place in the day-to-day public urban arena. In such mobile events, the relations between the body and the environment are formed, and connections to the city are (re)made. Mobile practices have an active role in shaping and (re)creating spaces as sites of shared uses, social interactions, cultures and subjective experiences (Sheller and Urry 2006; Urry 2006; 2007; Cresswell and Merriman 2011; Jensen 2009; 2013; Edensor 2000).

Movement and the material form of urban space – the key characteristics of the city – have frequently been on urban studies' research agenda. They have been approached from various perspectives, such as the spatial form (Cullen 1961; Gehl [1971] 1987; Halprin 1972; Hillier 1999) and the social life (Jacobs [1961] 2011) of the street; movement as *choreographies* (Seamon 1980) or 'episodes' (Aura 1993); temporalities of space and movement (Hägerstrand 1970); and mobile bodies (Middleton 2009). Recently, different approaches utilizing GPS-tracking and big data have surfaced, to examine the spatial trajectories and uses in larger quantities. Through a research framework centred on *rhythm*, and 'rhythmanalysis' (Lefebvre [1992] 2013) in particular, and by examining mobile practices as contextual 'situational mobilities' (Jensen 2013, 3), this paper aims to further add to these, and other, discussions on mobilities and street-spaces.

The paper's specific interest is on embodied walking and driving practices on habitual everyday routes in urban areas, and the micro-temporalities related to the routine-like movement on the routes. The paper asks: how urban spaces, saturated with different mobility patterns, are experienced and engaged with whilst participating in these urban patterns? In what ways do the embodied practices of walking and driving relate to the (temporal) experience of space, the material environment, and the *urban* in general?

The paper utilizes ethnographic interviews, conducted on ordinary walking and driving routes in the city. The central analytical focus is on a visual data, produced by the interviewees about their everyday travel that fixes the research view on specific tangible focal-points in the urban environment. Here, the paper utilizes Kevin Lynch's (1960) renowned formulation of the 'urban elements' as an analytical reference point in order to draw connections between the walking and driving contexts through these visualised focal-points. The paper further examines what the rhythmanalytical framework, as a methodical approach, could add to the understanding of urban spaces and their materialities (as urban elements) through the situated embodied contexts of walking and driving.

The paper begins with a brief introduction to rhythm and urban elements. Next, the research case and empirical data sets are presented. The paper then turns to the analysis of the data, ending with a discussion on the findings and a conclusion.

Rhythm, movement and 'urban elements'

Rhythm, though a common term, has not been conceptualised in the urban context in much detail until quite recently (Wunderlich 2008; 2013; Edensor 2010; 2011; Smith and Hetherington 2013). The on-going academic discussions on urban rhythm can, in many cases, be traced to Henri Lefebvre's ([1992] 2013) notion of 'rhythmanalysis'. In its core, Lefebvre formulates rhythm as the interrelations between *space*, *time* and *action*, and urban space as a *polyrhythmic ensemble,* consisting of multiple overlapping rhythms of different scales of both *natural* and *social* origin (18–42).

Lefebvre's work on rhythmanalysis, in general, focuses on a critical analysis of social space, time and everyday life (see Edensor 2010; Mels 2004), but provides a few central outlines on rhythm that are utilized here in the empirical analysis of practical urban temporalities and mobilities. These outlines define rhythm generally 1) as the coming together of *space-time-action* (as noted above), 2) as *socially produced*, and 3) as *relational to other rhythms,* including the rhythms of the body (Lefebvre [1992] 2013). This basic formulation on rhythm enables us to draw connections between embodied movement, space and time, and to examine such embodied temporalities as *lived* times (see Crang 2001). In addition, it allows one to build on notions of space as a dynamic event: as *always animated* (Shields 1997), or as a *continuous process* (Massey 2005).

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Walking and driving, as studied here, are essentially different forms of mobilities. In urban design and research paradigms, they are juxtaposed as the key, yet often competing, notions of how people move, use and experience space (see e.g. Urry 2007; Patton 2007; Latham and McCormack 2004; Böhm, Jones, Land and Paterson 2006). Issues related to everyday life and life-styles, sustainability and resource-use, as well as city planning and urban sprawl, are indivisibly connected to walking and driving as mobile practices in urban contexts (see e.g. Urry 2006; 2007; Dant 2004; Middleton 2009; Jacobs [1961] 2011). Walking and driving thus connect to fundamental issues on how people live and organize their daily activities in the built environment.

In a more practical sense, combining the two modes in urban space often leads to conflicts and 'competing rationalities' in planning and design practices: 'Walking and driving each follow a distinct rationality, with different rhythms and concerns, that create fundamental conflicts over how streets should be designed' (Patton 2007, 923). Walking is ubiquitous and takes many forms in the city (Urry 2007, 63–65; Jensen 2013, 101–103; Lorimer 2011), whereas driving is characterised by a rather rigid and specialised mobility system (Urry 2006). Walking and driving also enable different approaches to the body-environment relations in urban contexts, such as through the speed of movement and the encapsulating nature of the car. The driver can be seen as being part of a specific human-technology unit, a 'driver-car' assemblage (Dant 2004): the driver relates to the environment *through* the materialities of the car – although it should be noted that walking is similarly enabled by specific technologies, such as shoes and pavements (see e.g. Jensen 2013, 102; Laurier, Brown and McGregor 2016). The use of the car also provides distinctive possibilities (as well as necessities) for the formation of complex connections of space and time in daily life, which in other modes would be more difficult, or even impossible, to compose (Urry 2006). These, and other differences and tensions between driving and walking, make the comparison of the two in urban context useful – not through opposition but through their interlinking *connections* in terms of environmental experiences, interactions, 'affordances' (Gibson 1979) and rhythms.

Here, rhythmanalysis is connected to the above notions of embodied mobilities of walking and driving through Kevin Lynch's (1960) formulation of the 'urban elements', in order to examine the temporalities of material urban space. Lynch famously studied how people orient themselves in the urban environment. Based on empirical research projects in three cities, Lynch identified five distinctive elements of which the imagined form of the urban milieu is comprised of: 1) *paths*, as channels of movement, such as street networks; 2) *edges*, as barriers, or 'linear breaks in continuity' (47); 3) *districts*, as recognisable areas, such as neighbourhoods*; 4) *nodes*, as junctions, or 'strategic spots' (ibid.); and 5) *landmarks*, as visible objects, such as buildings, or as smaller 'urban detail[s]' (48), such as signs. Lynch argues that these elements, as 'building blocks' (95), form the basis for how people read the material form of the city environment – a 'basic visual vocabulary' (Jensen 2013, 51) – and could act

as points of reference for urban planners and designers to produce *legible* (i.e. easily readable) urban environments.

Lynch's formulation of the elements is, almost sixty years later, still regarded as a key insight to the city form, and to how people *read* the urban environment. It has, however, been critically examined as well: one such critical approach is presented by Quentin Stevens (2006; 2007a; 2007b). Stevens examines the elements in relation to *play,* as non-instrumental embodied activity, from a phenomenological perspective. His sets focus on various embodied practices, based on empirical observations of social behaviour in urban street spaces. Stevens (2007b) reconfigures Lynch's elements as 1) *paths* (similar to Lynch); 2) *boundaries*, as barriers that 'differentiate space' (114); 3) *thresholds*, as convergences, such as gates and doorways; 4) *intersections*, as sites of crossing and overlapping trajectories; and 5) *props* as site's 'microgeography' (178), such as street furniture and other objects.

Similarly to the Stevens' notions above, the main interest of this paper is not on the *city image* or on how people read their environment – as presented by Lynch – but on how movement, as embodied and routinized contexts on the studied routes, shapes the urban experience in specific physical sites, affording different uses, experiences and meanings. Connecting Lynch's and Stevens' notions of the urban elements to Lefebvre's rhythmanalysis -framework, enables the examination of *lived* spaces and temporalities, and anchoring these notions to concrete physical spaces, that are engaged on the move.

The paper thus aims to provide new means of understanding movement in urban environment from a phenomenological (or *postphenomenological* [Ihde 2012; Ash and Simpson 2016]) perspective, setting focus on the materialities of space and the body. It examines the micro-temporalities and rhythms related to the urban elements through participant-produced narratives and visual data from everyday walking and driving routes. The paper partially follows in Lynch's footsteps as he already notes the temporal dimensions of movement in the city, bringing up notions such as 'time series' and 'motion awareness', and noting rhythms and melodies as analogues of the experience of being in motion (1960, 99, 107–108) (also Appleyard, Lynch and Myer 1964; see also Jensen 2013, 48–55; Wunderlich 2008; Aura 1993). Tonkiss (2013, 14–15) notes Lynch's (1984) aim towards formulating a 'sequence design' – an approach that could take movement, and the consecutive mode in which people perceive their environments, and connect the different elements *through* movement, as proper principles in the design of the urban milieu (see similarly Cullen's [1961] notes on 'serial vision'). In which ways could Lynch's conceptualisation of the urban elements, and their relation to embodied movement, as re-formulated by Stevens, benefit from Lefebvre's notion of rhythm (even though the deeper ontological questions here might be incompatible)?

Visualising the route: methods and data

As stated above, the interest of this paper is on repeated walking and driving routes as embodied contexts for the urban experience. The main focus is on the various materialities and (micro-)temporalities of the routes. Qualitative interview data, collected *on* and *about* such routes, has been utilized to examine these rhythmicities.

The interview data consists of two parts, both of which can be classified under the term *mobile methods* (see e.g. Sheller and Urry 2006; Haldrup 2011) as they aim to tackle methodical issues related to the temporal dynamism of movement, and acknowledge the difficulties of representing and conveying such mobile practices and experiences. In a more general sense, the research approach also aims to take into consideration the pitfalls and representational limitations related to the study of the *everyday* and *experience*: they might be difficult, or even impossible, to reach fully, as noted in the emerging literature on *non-representational* theories (see e.g. Anderson and Harrison 2010).

The interviews, ten *walking* and ten *driving interviews*, following Kusenbach's (2003) notion of 'go-along' interviews, were conducted during 2015–2016 in the city centre areas of Tampere and Turku. After the capital Helsinki metropolitan area, these are the two largest cities in Finland by population (220 000 and 180 000 inhabitants respectively). The two cities are roughly similar in size and have compact central areas that are walkable in distance. Informants, with a *functional* daily/weekly route, taking place fully or partially (driving context) in either of the city centres, were located through email-lists of local organisations, public notice boards and social media. The studied routes – embarked on together by the researcher and the informant *in situ* (ibid.) – are ordinary commutes, errand runs or other similar routes between home and one (or more) points in the city, travelled between the morning and late afternoon. Most of the routes are travelled alone, some with friends, children or the family pet. The travel mode varies (on foot, car, bicycle or bus) also on most of the routes, depending on factors like the season, mood and schedule. The informants are both females and males, aged from their mid-twenties to early-seventies (walkers: 25–73; drivers: 26–64; in the text below, the informants are referred to as F[female]/M[male]/age). They are from various occupational backgrounds: teachers, unemployed, students, engineers, analysts and pensioners, among others.

The walking and driving interviews were accompanied by subsequent *photo-elicitation* (see e.g. Harper 2002) and *video elicitation interviews* (see e.g. Murray 2009), respectively, that immediately followed the go-along interviews. During the walks, the informants were encouraged to take photographs of things of their interest. These photographs were then discussed individually as a part of the photo-elicitation interviews. Similarly, on the drives, a video camera was set to record the view opening in front of the car, to be used later in the video elicitation interview. While discussing the video, the informants were also asked to pause the video in points of their interest for further discussion: these were saved as screen-captures for further reference (akin to the photographs on the walks). Additionally,

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both the informants on the walking routes (referred to as *walkers* from here on) and driving routes (*drivers*) were asked to draw a (mental) map of their route in advance of the interview. These maps were also discussed during the elicitation interviews. The interview recordings (over 16 hours in total) were transcribed and qualitative content analysis was utilized. (The informants' quotes further below have all been translated into English by the author.)

The combined use of the two methodical approaches was intended both to tackle the aforementioned difficult-to-grasp nature of mobile practices and experiences, and generally to obtain richer data by providing different means for the informants to convey their experiences about everyday travel and habitual routes. The use of multiple modes of data gathering, though, also required awareness about the possible *burden* on the informant (see Evans and Jones 2011). The visual data was used to provide tangible (virtual) objects to help to fix the researcher's and the informant's attention to shared points (see Harper 2002; Murray 2009; Rose 2014) as part of the overall interview process (examined elsewhere as route *projects* [Tartia 2017; (forthcoming)]).

However, during the research process, it became apparent that the photographs/screen-captures could also tell another kind of story: a story that is fixed to physical space. The visual data – mainly the photographs/screen-captures, but to a certain extent the maps as well – is useful here as it can be used to identify specific focal points on the routes that the informants have noted as important to their travel, meaningful in their experience, or significant in some other way. Visual data, as part of qualitative research in general, is useful not only in anchoring memories (van Auken, Frisvoll and Stewart 2010, 375) but also, as it is argued here, in anchoring narratives to physical, tangible, sites (see also Harper 2002). As the photographs/screen-captures provide concrete examples – visual snapshots – directly from the field and are decoded together with the informants, they can help to *dissect* the route from a material perspective.

The visual data in total comprises 169 photographs (from all ten walks), 36 video screen-captures (from eight drives), and twenty route maps. The data, in general, represent streetscapes, vistas, buildings and environmental details in the route environment. The driving interviews produced significantly smaller amount of visual data (screen-captures med.=4; compared to the walkers' photographs med.=12). This might be due to the differences in embodied perception relating to speed and mediated engagement with the milieu (as noted above), but it could also be attributed to the method used and the fixed angle of the video.

Here, Lynch's and Stevens' frameworks on urban elements are utilized to group and compare the visual data. What kind of elements come to the fore in the context of the (habitual) route and embodied practices, and how they vary in relation to other elements and the embodied context, if we examine the urban experience on the habitual routes from a *material perspective*? The interest here is on how the

material aspects of the city and urban milieu come to the fore in the narratives of the everyday routes, as the meeting points of space/time/action, or rhythm.

On the route: the 'urban elements' and embodied experience

The analysis below focuses on two points. First, it examines the ways in which the urban elements – defined by Lynch and Stevens – relate to the route narratives and the visual data produced by the informants about their routes. Second, the analysis closer examines the temporality of such elements in the situated mobile contexts of walking and driving, noting *sequences* and *polyrhythmia* as central characteristics in the body-environment relations.

'Building blocks' of a route – types and variations

The key elements on the walking and driving routes, in relation to movement, were identified from the photographs/screen-captures (Figure 1). The main interest here is on how the informants' experiences relate to the material elements. Paths, nodes/intersections, and landmarks/props were identified as the most common characteristics in the route narratives. Especially nodes and landmarks were often depicted in the visual data (though one informant produced over half of the landmark-type photographs in the walking context), as they both provide clear physical and tangible anchors in the environment to focus on. It is worth noting that not all photographs/screen-captures were taken to present directly the material environment (such as pathways, buildings or environmental detail). Rather, they were used to

	Path	Edge	Boundary	District	Threshold	Node	Intersection	Landmark	Prop	Other
Walking photographs (n=169)	17%	2%	1%	6%	4%	33%	5%	20%	10%	2%
Driving screencaptures (n=36)	25%	6%	0%	11%	6%	17%	14%	17%	6%	0%
Total (n=205)	19%	2%	1%	7%	4%	30%	7%	20%	9%	1%
Combined elements	19%		3%		11%		37%		29%	1%

Figure 1. The informants' photographs (walkers) and screen-captures (drivers) as urban elements, outlined by Lynch and Stevens.

convey more intangible issues, such as specific points in the route project, general atmosphere of passed by areas, memories, or events and points of social interaction. It is also important to note that single photographs/screen-captures incorporated multiple elements simultaneously. The figure below presents the main element of each photograph/screen-capture, identified through the route narrative.

Paths

 '- - there's no traffic lights here and there's less traffic [than on an adjacent road] - - there's more pedestrians though, you have to be alert, especially when it's dark [outside], there's a lot of them, but otherwise there's considerably less traffic here.' (F37/driver on a commute.)

 '- - I like it [a pedestrian bridge over a river] a lot, sometimes I go that way, but it's like, it's somehow a more inconvenient route, first I actually went through that bridge quite often - - but it's not a big difference, which way you go, I don't know, I do go this side [of the river] more often though.' (F30/walker on a commute.)

Path refers to the various channels that people use to move in the environment (Lynch 1960, 47). Paths were frequently represented in the photographs/screen-captures, and also played a central role in the route maps as a basic layout of the route. The informants' remarks on various route knowledges, brought up repeatedly in the interviews, such as shortcuts, detours, fast/slow pathways, preferred car-free areas (walkers) and roads with low traffic (drivers), as well as their temporal changes through-out the day (Figure 2), highlight the functional role of the paths in the context of the route.

On the walking routes, the paths comprised of sidewalks, pedestrian-only-pathways, shared pedestrian/bicycle-lanes, squares and gravel trails in parks and other green areas. Notions on the paths concentrated mostly on various functional remarks on pathway choices, and how the route had become adopted by the interviewee. The paths were also described through their general social liveliness and visual interest (or the lack of either), as well as through the brief interactions and encounters with people, noted to occur on specific paths. On a few occasions, such interactions also took place during the interviews: for example, greeting familiar faces or negotiating movement with people passing by.

The screen-captures from the driving videos incorporated the path element frequently, which can be the result of both the research method (fixed angle of the video) and the driving practice itself, where the attention is mostly directed forwards (see Appleyard, Lynch and Myer 1964), along the utilized path. On the driving routes, the paths comprised of small and large streets in the urban centre and suburban areas, and highways on the outskirts, and similarly to walking routes, were mostly defined through their

functional use. The interaction with other people on the paths was mostly limited to movement and driving as part of the traffic, and how this collective movement was affected by the material environment, regulation or the habits of other motorized or non-motorized movers.

Figure 2. 'As you can see, there are not many people on the move, no cars, and no people, we're able to go quite freely. - - it's, during rush-hour, even though it's a three-lane road, it's really tight, and now that it's not the rush-hour, there's a plenty of room.' (Screen-capture from video: M64/driver on a route to hobbies.)

Edges / boundaries

Edge refers to the various linear elements that limit motion or visibility (Lynch 1960, 47, 62–66). The routes, in general, are defined through the possible or used paths (above), which was apparent in the data as limited notions on edges. In both walking and driving contexts, such noted edge-like qualities of the environment were related mostly to different temporal *boundaries* (Stevens 2007b, 114) and barriers, that (temporally) prohibit and change the possibilities of movement on the familiar route. Different detours and alternative pathways, created by construction sites and street grid system changes, were remarked upon in both the walking and driving interviews on numerous occasions (Figure 3). As the studied city centres are rather compact in size, even small street maintenance works on heavily used pathways can add to their overall impact on the route. These physical (and temporary) constructs not only alter, divert and reconfigure the route, but also change the expected events on the familiar route. Here, however, such changes were noted more often through the path, node or landmark

-type characteristics, rather than the 'edge-effect' (ibid., 115). This issue is examined in more detail further below.

Figure 3. 'But now we are - - at the corner, where I would turn left and go home, but there is a restrictive sign - - the bridge is cut off - - It annoys me a lot, as the commute takes more time and [it creates] that pointless detour, since there is no reason why I would go there otherwise - - with car it doesn't have such an effect because the gas pedal is light, or heavy, but on foot it does have an impact, or with a bike - -'. (Photograph: F59/walker on a commute.)

Districts / thresholds

'Here's again that some kind of a point of transition, or a turning point, when you come to the intersection, which is clearly the largest one [on the route], but I don't think it as a dangerous place at all - - I feel that the people here are quite similar than I, and going to similar places, in the morning, to work or to study - - Again [going] to a bit different world.' (F37/walker on a commute.)

District refers to different areas of the city with perceived identity or atmosphere (Lynch 1960, 47). Stevens (2006, 809) notes that Lynch's formulation of a district is mostly a cognitive element: unlike other elements, it is not a topological form. Districts were marked in the maps with the place-names of the passed-by areas, such as proper city districts and park areas. These areas often were used as reference points when imagining the route in order to draw the route map. The drivers, especially, named and referred to different proper city districts when considering different paths that could be taken on the route through different areas of the city.

In the narratives, however, different *parts of the route* were more prominent than proper urban districts. These notions described both the route – mid-way points, first or final sections of the route – and the environment – lively and quiet areas, areas going through (physical) transformations – in relation to one's position on the route, as moving between different sections. This relates to Stevens' notion of *thresholds,* that act as transitions between different sites. Thresholds are 'natural gathering points, bottlenecks', with often unique sounds and vistas. (Stevens 2007b, 158.) Such thresholds were present in both driving and walking interviews – such as underpasses, buildings (as *landmarks*) and *intersections* (see below) – signalling transitions between districts and, more importantly, between different parts of the route-project. On the driving routes, for example, the changes between the outskirts and the central areas were often indicated by increasing interaction with other mobility modes: the frequency of crosswalks, increasing congestions of traffic, changes in speed limits and the like. Here, the transitions between different parts of the city are thus understood more through the route, rather than through the districts themselves.

Nodes / intersections

> '- - here you can see the [restaurant] riverboats and a bit of the riverside - - it's nice to drive by and check if the riverboats are full [of people] or not. The first days of spring, when it's sunny, there's usually quite a lot of people on the move.' (M32/driver on a commute.)

Nodes are the meeting points of crossing trajectories, as well as sites of different uses and meanings – 'events on the journeys' (Lynch 1960, 47–48). Such nodes on the studied routes are, for example, squares, lively streets, popular riversides, and intersections and other street crossings (Figure 4).

As sites of multiple uses, nodes were mostly noted through the visual or aural sense, especially in the walking context. At these sites, possibilities for different uses and social interactions are acknowledged and present – such as events, commercial services and the general presence of other people – which each produce distinctive visual and acoustic patterns and rhythms (see Wunderlich

2013). In both route contexts, however, these sites were mostly traversed *through* rather than actively engaged with. The informants often noted how their route schedule, imposed by various *constraints* (Hägerstrand 1970) of their personal lives (such as working hours, timetables or parental duties) affected how their route can deviate from the underlying functional role.

Figure 4. 'This is from behind the bus stop, this is like one of those knots, in the traffic, there is usually a lot of people here, there's none in this picture, because there's not much movement on that street but when you turn the view a bit then suddenly there's a group of twenty people.' (Photograph: F27/walker on an errand run.)

Stevens focuses on the nodes as proper *intersections*, as sites of overlapping movements. Intersections slow down or stop movement, and introduce moments of waiting, where the attention can shift from the instrumental notions related to a person's movement to other issues, such as the aesthetics of the streetscape or the activities of other people (Stevens 2007b, 200–201). In the driving interviews, for example, waiting in traffic lights provided time for observing others and gave a respite amidst the driving practice that otherwise required active attention in some case. In the walking interviews, similar notions were made: the moments of waiting shifted the interest towards specific buildings, material details, people or the like. The interaction between the walkers and the drivers also mostly centred on intersections. The trajectories of the two modes cross and interact, and sometimes prompt friction and breaks in the movement of the other or both.

Landmarks / props

> 'Then here comes another kind of a cluster, which they currently debate quite a lot about,
> they aim to demolish all those, which you can see there, those old buildings, sure,
> because it's now on the frame, you might pay attention to them, [feeling] a bit of pity
> together with optimism.' (F62/walker on a commute.)

The term *landmark* refers to the visual objects in the environment that are used as points of reference for orientation and pathfinding, such as buildings, natural formations and signs (Lynch1960, 48). The studied routes are routine-like, placing less emphasis on pathfinding in familiar surroundings. Sensory cues, though, do have an orientation-related role in routinized movement to some extent (see e.g. Hölscher, Tenbrink and Wiener 2011). This was also evident in some of the interviews: for example, certain buildings signalled the right intersection to turn on the driving routes.

Landmarks were, however, frequently present in the maps, and are clearly part of the *route* and its identifiable characteristics, or at least how the route is explained to others (as the map drawing task was presented as such). Lynch (1960, 48) notes that landmarks, in addition to being used for orientation, create also familiarity and identity. The aesthetic qualities of the landmarks were often noted – how a building looked like, for example – and they also brought up personal memories – some recent, some going back multiple decades – and affective relations. It is important to note here, however, that the interview event provided a possibility for the informant to *show* the route, which leaves the question of to what extent the landmarks are part of the *everyday* experience partially open. Nonetheless, they do provide understanding of the extent of different relations between the walker/driver and the ordinary and familiar environments.

Landmarks were also often noted through their physical transformation, which produced temporal changes to the surrounding sites – such as physical barriers (as *boundaries* and *edges*) – and changes to the motion flows through active construction sites (see further below). Stevens (2006) formulates that *props* are the objects in the environment that are interacted with in some way, such as street furniture (such as benches and sculptures) or temporary materialities of construction sites (such as walls and fences [see Kopomaa 1999]). In the interviews, remarks on direct interaction with specific objects were few, noted mostly through interaction through gaze instead. Street art and graffiti, and material details in buildings are some examples of such perceived urban detail. In a driving context the notions of such props were fewer than on the walks: the speed of movement has a direct effect on the ability to perceive environmental detail (Urry 2006, 23).

Temporalities of 'urban elements'

Connecting the spatially fixed urban elements -framework with the time-oriented rhythmanalysis framework highlights the two main issues in the context of the everyday routes and mobilities: *sequences* and *polyrhythmia*. The term sequence has been borrowed from Lynch (1960; 1984) and refers to the temporal linkages between consecutive rhythms of movement on the route. The second term, polyrhythmia, borrowed from Lefebvre ([1992] 2013), refers to the multitude of perceived and engaged simultaneous – but not necessarily directly interlinked – temporal uses and movements in space, especially in the different nodes and intersections on the routes.

   Here, sequences are understood as the subjective, embodied, movements in space: how different sites and elements on the route are connected as part of the successive route 'episode' (Aura 1993), and are affected by *in situ* materialities and socialities, as well as regulation and law. Polyrhythmia, on the other hand, is interpreted here as the coming together of different uses and users on specific sites *on* the route: sites where different uses (mobilities and other uses) are temporally connected to the individual route as they are passed by, regulated both from above and from below, as 'site-specific' (Wunderlich 2013) rhythms.

   Both terms are characterised by the interaction *between* different rhythms: the harmonious 'eurhythmia' or frictional 'arrhythmia' (Lefebvre's [1992] 2013, 25–26) of overlapping rhythms. The arrhythmic relations, here in the everyday route setting, refers to the friction *in* and *between* the sequences and polyrhythmia, that are experienced in such forms as negotiated and contested practices of movement, direct and desynchronised encounters between different users, and contested uses of space.

Sequences

A key notion in the route narratives is how the material space effects movement. What is here of interest is how the rhythms of the body and the environment shape and interact with one another. Central to the concept of rhythm is the oscillation between 'strong' and 'weak' times as the *accentuation* of temporalities (Lefebvre and Régulier [1985] 2013, 86–87), or the alternation between the highs and the lows. This accentuation is commonly identifiable in urban mobilities, for example, as the move-wait-move-like forms of movement of the travellers changing between different modes of transport (see Bissel and Fuller 2011), such as from walking to riding on the bus to walking back again. On the studied walking and driving routes, this fluctuation refers to the regulated practices of walking/driving, and how various micro-scale temporalities and interactions affect the movement, splicing both the route and the embodied mobile practices into sequences.

Here, the role of the paths, as urban elements, becomes important: as noted above, they enable the functional movement on the everyday routes. Traffic lights, and other such regulation, came prominently visible in both walking and driving narratives as temporal pauses, patterning both the embodied movement, and the route as an overall project with expected events on the way. Such repeating patterns, overall, provide routine and familiarity (see Edensor 2011, 196–197; Seamon 1980, 161–162), and are noted if changed:

> 'Here you have to stop quite rarely, there is now something, now there's been something
> [different] in these lights. Usually you would still [get to] drive straight through. I think,
> there was that bus that went [by] a moment ago, it might have shuffled the lights, because
> there's a bus priority in these largest [intersections with] lights.' (F55/driver on a
> commute.)

The edges and boundaries, that control and temporally inhibit movement in the habitual route context, are not necessarily fixed physical barriers or obstacles, but temporal, such as the regulatory signage, that become part of the route knowledge. For example, in many cases, both in walking and driving contexts, the informants brought up their knowledges related to the time intervals between light changes, temporal congestions in particular stretches of the street network, and other notions of how they practice mobility in a familiar context and environment. The habitual knowledge is utilised to put their own 'tactics' into use, against the overall regulated 'strategies' (de Certeau 1984).

> 'And then there's that one light guided intersection, which I don't usually use because
> those lights take so long to change, or they are rarely green.' (F26/walker on a route to a
> friend's place.)

The physical qualities of the paths also shape one's movement and the configurations for interaction with others. The drivers in the interviews often noted the transitions (as *thresholds*) from the wider roads to narrower streets – when approaching the more urban areas – as changes in the modes of one's driving practices, as interaction with other mobile users of space became relevant. The walkers also brought up specific points on the paths along the route, which are more crowded due to (temporary) material limitations (Figure 5). In these spaces the different rhythms connect in a linear fashion, as specific sequences of interlocking rhythms, that are either adapted into, or challenged through one's own movement.

In a driving situation, the sequences are tightly managed: organized and maintained from *above* as regulatory frames. These regulations impose directly the momentum, the speed and flow of movement, on the driver (Urry 2006; Edensor 2011, 195). Driving, as a practice, hence, leaves little

room for direct interaction with both other drivers and other movers, and improvisation amidst traffic regulation, as the informants also described. In intersections, different mobility modes come into direct interaction with one another, as the 'competing rationalities' of the design of mobility spaces meet (Patton 2007). In walking situations, the material form of the built environment – how blocks, street crossings and sidewalks are placed (ibid.) – imposes certain possibilities/restrictions on the movement. Direct (traffic) regulation, though, is here less explicit than in the driving context, although such factors as the social gaze – as social control – comes into play more prominently in the walking context, from which the drivers are often exempt due to the encasing character of the car (Urry 2006, 20–22).

Polyrhythmia

Lefebvre's ([1992] 2013) notion of polyrhythmia refers to the multitude of different, simultaneous rhythms, that overlap and interact with one another. Rhythm is not singular or isolated from others: rhythms work in unison like a *symphony* (41), producing something more than the sum of its individual parts.

The routes can be here seen as 'obliged time schedules' that not only structure everyday lives and mobilities thoroughly, but also form specific spatiotemporal 'urban structures' (Mareggi 2013, 8). Individual routes produce, amidst other (heterogeneous) collective uses and temporalities, part of the site's perceived social activities, producing distinctive time-space choreographies (Seamon 1980) and place-specific rhythms (Wunderlich 2013). In the interviews, especially the node and intersection -type sites on the route were often described through other than movement-related activities: as moving amidst other uses and functions of the space. The paths were similarly defined either as only movement-oriented sites, or as more heterogeneous sites with varying users, based on the perceived events and activities taking place there.

> '- - around, between four and five, when commuters come, this [front of the railway station] is interesting looking, when, like, masses of people come in pulses, and who then stop, at the [nearby] traffic lights, to wait, it's like a heart or some organ that pumps people to motion - -.' (F27/walker on an errand run.)

From a movement perspective, the intersections on the routes acts as sites where different embodied sequences (above) are connected momentarily. Intersections produce breaks, pauses and re-orientation to movement, as already noted above. These notions on the multiplicity of interweaving rhythms also relate to Hägerstrand's (1970) notion of 'bundles' (as part of the *time-geography* framework). In these sites multiple trajectories are gathered and intertwined momentarily in time-space,

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and then again dispersed into different directions (see Figure 4). But the intersections also provide moments in the habitual movement where the multitude of spatial uses are revealed through observed visual or acoustic patterns. Waiting at the traffic lights, for example, provides time for people-watching and observing environmental detail, in both walking and driving contexts, as noted earlier above. As Stevens (2007b, 99) writes: 'Phenomenologically, space opens out at an intersection.' The intersection connects the mover 'to a polyphonic multiplicity of urban rhythms' (Pasqui 2016, 56) beyond the functionality of the route.

In the case of the studied routes, though, it is not only the movement and other concrete activities and uses that are concentrated to these sites, but experiences and meanings as well. The nodes, as sites of polyrhythmia, present the multitude of different meanings individual people share with particular sites. These meanings, and even concrete uses of space of different subjective embodied contexts, overlap and fuse together: specific paths brought up remarks about the interviewee's other recurring routes and how the other routes would continue after specific intersections; different landmarks – such as theatres or shopping malls – prompted discussion on how these spaces are entered and habited in other contexts.

> 'And there are also huge construction projects there, I don't pay attention to them really, when you, in the morning, just drive half-asleep (laughter). - - this is such a familiar route that you don't, like, pay that much attention to what is here, that it can often be that when you go for a walk or something, you notice that oh, there's that, like this construction site here - -.' (F37/driver on a commute.)

Nodes and intersections on the routes, thus, are regarded as more than crossing points of material trajectories: they are sites of different embodied contexts and uses, transformations of the built environment and collections of signs and meanings – *polyrhythmic ensembles* (Lefebvre [1992] 2013).

Transformation of the physical space as functional and affective relations

A specific type of an event was prominent in the narratives: the effects of the physical transformation of the built environment (as noted above). The unfinished form of the urban milieu is one of its main characteristics (Lynch 1960, 157–158). Construction sites, street grid changes, street maintenance sites and other similar changes in the built environment were often noted by the informants. These changes were frequent topics of the photographs and screen-captures (one-fifth of all the visual data) and were often included in the route maps as visual landmarks or functional edges or boundaries, producing detours and blocked or new pathways, or affecting possible route choices in general. The

noted changes either produce friction and breaks in the movement and how the route operates in general or has an impact on the affective relations between the mover and the environment, as the familiar surrounding is transforming.

Lefebvre ([1992] 2013, 77) notes that rhythms often only come visible when there is a breakage or an interruption in the ordinary and the expected (see also Middleton 2009, 1956): he writes, 'In arrhythmia, rhythms break apart, alter and bypass synchronization'. Here, these interruptions are the concrete (temporal) obstruction of movement that reconfigures subjective time-space routines and collective 'place-ballets' (Seamon 1980; see also Haldrup 2011), or the change in the visual (or aural) landscape.

Such changes have also less definitive effects, which affect particular sites on the route rather than the route itself. Worksites often *reach* onto the street, changing the ways that the spaces are used and what affordances there are for different uses and social interactions, sometimes in arrhythmic ways (Figure 5). In a driving context, these effects are regarded mostly time- and traffic congestion-wise; in contrast, the walkers brought up the distances travelled (fatigue) and the frictional encounters with other mobile bodies (see also Figure 3). The effects of these changes do not always equally distribute between different modes of mobility and are not only about the obstruction of physical movement but also manifest through different landscapes and soundscapes that shape the ways the environment is used, engaged with and perceived.

> 'Well it [a major construction site] has made all travel more difficult, that you have to note it
> every time, that wait a minute, how was it again that you need to drive here.' (F36/driver
> on a route to child's hobbies.)

These changes can, through desynchronization, make temporally visible different rhythms, and their conformed or contested interaction, in the polyrhythmic ensemble that is the site. The sequences of individual mobile trajectories of walking/driving, as well as the overall polyrhythmia of a site, are partially re-aligned by the physical transformation of the milieu, creating new (temporary) points of interaction, materialities – as the formation of new fixed/temporary paths, edges, nodes, props and the like – and socialities, as well as shaping the subjective relations between the mover and the environment.

Changes of the built environment, in general, work as concrete and commonly identifiable examples of how the material form of the city reconfigures spatial patterns and the ways in which people use and experience space, even in the most routinized practices and contexts such as the routes examined here. They reveal – through breaking, altering and rerouting the existing choreographies – the underlying movement patterns and rhythms of a site.

Figure 5. "Well then here was this scary tunnel. (laughter) - - there used to be a building here, which was demolished - - but now a new building is being built there, and it's nice to follow the work, how the project progresses. But now it's a bit unpleasant because it's so narrow, that cyclists' and pedestrians' path. And then it's a bit scary when you come from the other direction, the cars come, of course they can't see that well because of that fence - - they come quite fast, and it scares a bit, that will they stop in time." (Photograph: F30/walker on a commute.)

Conclusion

The analysis above has examined the temporalities of everyday walking and driving routes in the shaping of the (temporal) experience of the city. The *urban elements*, sketched out by Lynch as mental images, and examined in the context of embodied play by Stevens, have been utilized as outlines for the analysis of the material and temporal character of the built environment in an everyday route context. The rhythmic qualities of these elements have been examined as sequences – as the interlinking mobility rhythms – and polyrhythmia – as the multitude of different inter-crossing rhythms of embodied practices. The role of arrhythmia – as frictions and breaks of/between rhythms – has also been considered in the formation of the mobile urban experience. Together the themes present the urban environment as a complex and rhythmic ensemble, and sequences and polyrhythmia as the key temporal elements in the movements taking place in these sites. These temporal elements, though, do not only take place *in* but

actively shape the (inter)subjective experience of the environment, *in* and *beyond* the context of the habitual route.

As mobile practices, driving and walking are divergent in many ways, such as embodiment and perception, human-technology relations, social interaction, and law and regulation. Nonetheless, they are equally common modes in which people *dwell-in-motion* (Sheller and Urry 2006) in contemporary cities, and thus warrant analytical attention. Future mobilities design probably needs to favour walking and public transport in its application, in order to be sustainable both ecologically and socially. It is, however, important to research all urban mobilities as modes in which spaces are produced on a day-to-day basis, and to examine them critically.

In addition to the research literature referenced to above, this paper suggests that understanding mobilities as active embodied practices that *produce* space – not simply *use* or *happen in* space – can add critical insight to how day-to-day urban environments are understood and perceived in both research and design. While individual routes are tied to individual people and their subjective experiences and unique routines and habits, their spatial and temporal *constraints* (Hägerstrand 1970), examining the connections between such routes, and the general plethora of issues relating to these routes, can nevertheless convey a deeper and a more heterogeneous view on the urban scene. The paper further argues that developing the framework of urban rhythms, in particular, can extend the view on mobility as a complex event, and foster approaches to everyday movement which go beyond the *utilitarian* and *deterministic* notions often found the in planning and design fields (see Miciukiewicz and Vigar 2013, 181). As Jensen (2013, 202) writes, 'The research agenda for the future of studying the materialities of mobilities thus connects to how a creative dialogue between the design fields and the "mobilities turn" may become established.' The paper suggests that both the rhythmanalysis and urban elements frameworks could be key insights, as both theoretical *and* practical approaches to everyday mobilities. The methodical formulation here opens possibilities for further study, to connect the experiences and the materiality of space together more intricately.

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PUBLICATION
04

**Rhythmanalysing the temporal street space:
spatiotemporal negotiations, appropriations and liminalities
in the daily urban mobile scene**

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Previously unpublished article manuscript

Rhythmanalysing the temporal street space: spatiotemporal negotiations, appropriations and liminalities in the daily urban mobile scene

The article focuses on urban spaces as everyday sites of (mobile) urban life, examining the temporal material and social interactions and relations that are in the core of the contemporary streetscape. By utilizing a rhythmanalytical framework, the article focuses on the rhythms and rhythm-making processes that emerge from the urban 'noise' that consist of mobile embodied spatiotemporal uses and practices, signs and symbols, and material designs. The analysis of audio-visual recordings, collected during ethnographic site observations on 'ordinary' urban mobility sites, focuses, in specific, on the circadian rhythms of the space and its effects on the mobile scene, mobile socio-material interactions, and embodied negotiations and appropriations of space. The article argues that an analytical focus on such liminal, or taken-for-granted, spaces and practices, is able to provide new methodical ground for emerging 'rhythmanalytical' approaches, and, in small steps, lift the veil on the urban polyrhythmia.

Introduction

During an ordinary day, a series of mobile events occur on a city street. People, with different routines and schedules, form and follow – or contest – larger collective and regulated mobile schematics through embodied movements both *in* and *between* spaces, creating complex spatial and temporal patterns and *rhythms*. These mobility flows and fluxes connect to larger societal rhythms and to the organization and practice of daily life in the city. Whereas some of the city's streets become important sites of urban social life, many of the streets we inhabit in the daily life are framed mainly by their mobile uses. Such spaces, as sites of functional and pass-through movement, are often considered as urban 'armatures' (versus 'enclaves', Jensen 2013, following the works of David Grahame Shane) that channel movement, and movement alone. They are sometimes labelled as 'non-places' (Augé 1992/2008), or 'placeless' (Relph 1976), without any (apparent) meanings or signs of social life beyond monofunctional movement.

However, such transitory spaces, or movement spaces, *are* central to the everyday urban life and or habitual relations with it, and thus also affect directly the cultural and social practices through which the daily life of the city is organised and choreographed, and how we interact with our immediate environments and each other (see Sheller and Urry 2006). Mobilities are more than movement lines or trajectories between two or more points (ibid.): they are (inter)subjectively experienced events (Edensor 2011), 'staged' through complex regulations, social norms, embodied practices and material configurations (Jensen 2013) and they actively produce spaces (and are, in turn, shaped by those spaces) (Cresswell and Merriman 2011). Focusing on transitory spaces *as* sites of urban life challenges us to (re)think urban life as something that happens in both the 'places' and the (mobile) 'non-places'. Vikas Mehta (2007) notes that public social activity is commonly used as a measure of the vitality of the city, but the empirical studies on it are often limited, as such studies on urban life mostly focus on plazas, residential streets or other sites with already established *special meaning* in the community (whether set form the 'above' or from the 'below'). The article here argues that decoding the material and social relations of the mobile *in-between* spaces – the spaces that often do not gain such an attention – can improve our understanding of how urban spaces are *assembled* through various material and social connections (see e.g. Dovey 2010). This, in turn, can help to bridge the long-existing gap between urban design and mobilities that have somewhat been approached as separate fields (see Jensen 2013; 2018).

The article examines such in-between spaces in the context of two Nordic cities. The analysis of the empirical research data (introduced further below), consisting of site observations of six ordinary urban

mobility spaces, focuses, in specific, on the various embodied spatial appropriations and playfulness that sprout up from the interaction between the 'staged' from the 'above' mobilities – material design, legislation, signs and symbols, schedules and social organization of time – and the practiced from the 'below' mobilities – embodied practices, habits and routines, spatiotemporal contestations and creativeness (see Jensen 2013). The analysis presents such common urban scenes as composed – or assembled – of different heterogeneous relations, temporalities, and momentary socio-material relations.

The article's specific interest is on the emerging conceptual and methodical framework of *rhythmanalysis*, which, as a research orientation, connects *space*, *time* and *energy* analytically together (as *rhythm*) in order to examine each as a co-constitutive element of the others (Lefebvre 1992/2013). In other words, it highlights the processual nature of urban environments, and how the bodies acting in such spaces also come to produce them (and *vice versa*) (see Edensor 2010). An increasing number of research work notes the potential of the (underdeveloped) rhythmanalytical framework in tackling, in specific, the emerging questions about urban complexities, processual nature of (time-)spaces and socio-material body-environment relations (see e.g. Ibid.; Edensor 2014; Smith and Hetherington 2013; Simonsen 2004). In other words, rhythmanalysis can provide new insight to body-environment relations, and their continuous temporal re-making.

The article first discusses rhythmanalysis as a framework for decoding urban spaces and mobilities. It then, by drawing from ethnographic fieldwork, presents briefly a few central notions related to such rhythms that examines mobilities and mobile interactions as temporary urban forms that change – as *animated* rhythms – through-out the day, transforming both the material and the social form of the space. The article also briefly examines the role of *video* as a research mode, and as a tool of uncovering and understanding such urban patterns and rhythms.

Rhythm and the built environment

Rhythmanalysis

Rhythm is a stable part of both the urban studies and mobility studies vocabularies. Rhythm as a term is often used to refer to the lived character of built environments, highlighting the spatial and temporal patterns of different human activities: the regulated and informal cycles and flows in, and between, cities and spaces that are framed by varying cultural contexts and natural phenomena (see e.g. Smith and Hetherington 2013). Such complex cycles and flows are closely interlinked with daily, weekly and seasonal temporalities (Edensor 2010), exemplified by the variation of uses and population densities of different areas of the city through-out the twenty-four hours of the day (see e.g. Hägerstrand 1970; Novák and Sýkora 2007; Mareggi 2013; Osman and Mulíček 2017). The challenge with using rhythm as a more detailed conceptual or practical research tool, however, is that it is difficult to define in precision (Mels 2004). Rhythm can be thought of as the general repetition of something, marked by a certain temporal duration or frequency. Rhythm, thus, can be applied to a vast range of issues that, even if confined to an urban context and to a mobilities-oriented framework, still refer to a host of different heterogeneous phenomena.

This is one of the issues that Henri Lefebvre (1992/2013) acknowledges in his attempt to approach urban rhythms theoretically, and to formulate *rhythmanalysis* as a practical analytical approach. Drawing from music theory, Lefebvre defines rhythm broadly as the coming together of space, time and energy (or action), highlighting the interconnected relations between each of the three in constituting the others, and the central role of *repetition* – and the *differences* in these repetitions – in the formation of these relations. For Lefebvre, 'societies are shaped by various temporal rhythms, including clock time, seasons and bodily circulation – all alternately harmonising and clashing with one another.' (Kullman and Palludan 2011: 347). In the centre of such *ensembles* is the multisensory body that acts as the key reference point, or a *metronome,* for these rhythms, providing the rhythm its 'measure' (Lefebvre 1992/2013: 29; see also

Meyer 2008). The body here is 'not just the anatomical, physiological body, but the body as being-in-the-world, perceiving, acting, thinking, and feeling' (Prior 2011: 205).

Lefebvre's interest towards rhythms culminates in the interplay – and friction – between the *cyclical* rhythms of nature and the body, and the *linear* rhythms of capitalistic societies in the production of spaces, and how they intertwine inseparably (see Elden 2004: 192–198; Mels 2004). For Lefebvre, it was the mechanistic rhythms of capitalism that were enforced on the body, and rhythmanalysis, as a mode of attentively and critically *listening* to such rhythms, included the potential to transform and change such rhythms, and thus the everyday life in cities (see Meyer 2008; Edensor 2010; Hetherington 2013).

What is of interest here, in specific, in relation to the study of urban public spaces and their temporalities, is Lefebvre's (1992/2013: 37–45) description of an ordinary urban street scenery that opens from an apartment's balcony. The scene, which at first seems disordered and chaotic – as 'noise'[1] – starts to become more legible through (multisensory and embodied) *listening*, and *rhythm* begin to reveal themselves (see also Hall, Lashua and Coffey 2008; Wunderlich 2013). Kevin Hetherington writes on Lefebvre:

> - - mobile bodies and materialities help to establish rhythms but his real interest is in how pattern comes to be established out of the noise of a city which on first appearance might appear to be just a cacophony of singular acts without any relationship to each other.
>
> (Hetherington 2013: 23.)

Lefebvre's (incomplete) rhythmanalytical framework – as a Marxist urban analysis – does not translate directly into a practical research framework (see Edensor 2010; 2014; Smith and Hetherington 2013). It does, however, provide some key insights to how the *lived* aspects of the city and urban environments could be approached through the focus on bodies, interactions and socio-material relations. Kirsten Simonsen (2004) notes that rhythmanalysis can, in specific, contribute to a performative understanding of (time-)spaces: how spaces are produced through bodies and their interaction with both the human and the non-human elements. It, thus, highlights a multiplicity of different 'lived', or embodied, temporalities, over a singular view on time (see Ibid.; Crang 2001). This rhythmanalytical framework's dynamic view on timespaces connects to other contemporary discussions on spaces, including the *processual* (Massey 2005) or *emergent* (see e.g. Partanen and Joutsiniemi 2007 for a brief introduction) understandings of spaces, as well as to *urban assemblages* (following the works of Gilles Deleuze and Félix Guattari, and Manuel DeLanda: see e.g. McFarlane 2011; Müller 2015; Dovey 2010).

Taking rhythmanalysis into practice, rhythms have been differentiated on various scales in earlier research, such as part of the place-specific rhythms that affect the intersubjective experiences and aesthetics of particular sites (Wunderlich 2010; 2013); as 'chronotopes', or rhythmic profiles of spaces that notate changes in the daily uses of spaces (Mulíček, Osman and Seidenglanz 2014; Osman and Mulíček 2017); as elements that shape everyday commutes and other routes as experienced mobile places (Edensor 2011; Jirón and Iturra 2014; Kullman and Palludan 2011; see also Middleton 2009); as affective (mobile) landscapes (Cook and Edensor 2017); and as elements of street-performances (Simpson 2012). Together, they provide some initial practical methodical frameworks for the use of rhythmanalysis in an attempt to open up the temporality of the urban fabric.

This article builds on these and other approaches and experiments with video as a mode of site observation in connection with a rhythmanalytical framework, as introduced further below.

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[1] Rather than referring (only) to sounds or aural perceptions – as examined famously by Schafer (1977/1994) as part of the notion of 'soundscapes', or Augoyard and Torgue's (1995/2006) examination of urban sounds – noise here refers to the coming together of materialities, social interactions, signs, symbols, meanings and uses of the space.

Pacing the street

In a practical study of the urban mobility spaces, the work turns to the practices of site observation that are found in architecture and urban studies, and, in specific, what are sometimes termed as *public space studies* that focus predominantly on the identification and analysis of spatial patterns (see Gehl 1971/2011; Gehl and Svarre 2013; Halprin 1963/1972; Appleyard 1981; Whyte 2000; see also Schwanen et al. 2012; Goličnik and Thompson 2010). The article follows in similar footsteps in order to approach street rhythms and mobility sites, but shifts the focus from the analysis of a specific *site* towards *mobile practices*, temporalities, interactions and (embodied) negotiations – or, in short, the *mobile event*. It continues from the initial notions of *chronogeography* and *time-geography* that aim for the analysis of the temporal patterns of spaces, or the 'temporal structuring of space' (Parkes and Thrift 1978: 119; see also Schwanen et al. 2012; Lynch 1972), but focuses – as a rhythmanalytical orientation – on the multiplicity of different kinds of (embodied) temporalities, and on the 'intensities' of such (embodied) temporalities (see Shields 1997; Wunderlich 2013; Schwanen, van Aalst, Brands and Timan 2012; Pasqui 2016).

One of the key elements in the temporal ordering of the street – that have been identified in previous studies – are the different (trans-)localized 'pacemakers' that shape and define a site's over-riding temporalities. These pacemakers refer to different sources of rhythmic patterns that are collectively shared, and often institutionalized and stable, such as daily working and opening hours, public transport schedules, the synchronisation of collective social activities through-out the day/week/year, and the like. (Mulíček et al. 2014; see also Schwanen et al. 2012.) Ordering the temporality of the space, the pacemakers produce, in a way, legibility and predictability to the urban scene – that consists of complex and heterogeneous temporalities – through 'the domestication of time by the routines and structures of public space." (Amin 2008: 12)

In specific, the day/night temporal frame is one of the macro-level elements that change the character of spaces profoundly. The natural effects – predominantly the absence of natural light – alter and modify how the space is used, as lives are organized socially in relation to the day/night cycle. Lefebvre (1992/2013: 40) notes that for the duration of the night, rhythms of the city are *slowed down* and *modified* in relation to their day-time counterparts (but not *stopped*). Spaces come to possess different patterns, activities, uses and meanings depending on the time of the day, and effects on what activities and uses are deemed culturally/socially (temporally) 'acceptable', and by *whom*, both in the public and in the private spaces of the city (see Williams 2008; Melbin 1978; Shaw 2016; Schwanen et al. 2012; van Liempt, van Aalst and Schwanen 2014; Gwiazdzinski 2015; Cresswell 1998; Kärrholm 2007; Parkes and Thrift 1978; Gallan and Gibson 2011.)[2] In other words, the space comes to be assembled differently during the different times of the day. For example, the 'night people', who possess different kind of daily rhythmicity (such as working in the night shift) (Simonsen 2004; also Lefebvre 1992/2013) are often *othered* – for example, whilst they move in contemporary mobility systems – as differing from the 'normal' users (Gallan and Gibson 2011).

The liminal temporalities *in-between* – the dawn and the dusk – act as the points of change between such different major temporal modes of the city. These points could be considered as 'fringes' between the more definitive day/night modes of the city, similarly to the often-used (though back-and-white and dichotomous) notion of the 'urban-rural fringe' (Pryor 1968) that covers the sort of *no-man's-lands* between what is considered urban and what rural (as opposites to one another). Here, such liminal temporalities channel the transition between the day-time and the night-time city, facilitating different spatial uses, meanings and interactions. It is these fringes that are also studied here below, as they, as presented by the research data, highlight the changes and transformations between the different

[2] The interest in academic research and planning policy, however, is often fixed only on the day-time city, and the urban night – excluding the night-time economy (NTE) and the specific night-time events, such as the various 'Night of' -cultural happenings – has mostly been overlooked in the consideration of what makes the everyday city (Gallan and Gibson 2011). Recently, however, interest towards night-time policies and the development of the city during night-time has been on the rise, such through the appointment of *Night Mayors* (Gwiazdzinski 2015).

temporal modes of urban sites, and how people come to use and take control of the space in different ways.

The formation of such temporal order involves power relations and embodied territorial practices. Mattias Kärrholm (2017) (re)defines territories as *acts* (rather than pre-defined *spaces)* and territorialities as *spatio-temporal processes* (rather than set *spatial strategies*). In other words, people take possession of space through mundane practices and routines (Kärrholm 2007), including everyday mobile practices, such as walking or driving. In this regard, 'Territories are produced everywhere' (ibid.: 441) in the urban public, and the time of the day as well as the material design of the environment both play major parts in these ongoing territorialising processes (ibid.; see also Williams 2008), producing 'multiple, shifting, mobile and rhythmed territories' (Smith and Hall 2018: 372). The territorialities here are temporal, or as Kärrholm writes:

> Different forms of territorial production often operate at the same place, mobilizing different sets of artifacts, rules, and so forth. A bench could be associated as the territory of sandwich-eating students at lunchtime, whereas another group of youth could appropriate it at night.
>
> (Kärrholm 2007: 441.)

The *same* physical space is thus transformed through changing embodied and social uses – different territorial *appropriations* and *associations* – through-out the day (Ibid.; 2017). And it is not only the use of a particular space that changes, but it also affects the meanings, experiences and relations, that are connected to such particular spaces, or objects such as the aforementioned street-side bench, and what kind of possibilities for interacting and engaging those spaces are presented. In other words, the embodied 'time space routines' and site-specific 'place-ballets' (Seamon 1980; Seamon and Nordin 1980) are set in an on-going negotiation of spatial uses, bodies, and meanings, and the environmental 'affordances' (Gibson 1979). The urban spaces, as assemblages, are 'caught up in a dynamic of *deterritorialisation* and *reterritorialisation*' (Müller 2015: 29) in which the spatial uses and meanings are continuously (re)negotiated, such as exemplified, for example, by Robin James Smith and Tom Hall's (2013) account on their excursions to the literal twenty-four hour city through different 'street-level operatives' on various pedestrian patrols, presenting a pluralistic and heterogeneous view on urban spaces and their users, as well as different temporalities.

The argument here is that examining the daily mobilities patterns, as territorialising practices, can provide some critical insight to day-to-day mobile spaces, and how the space is used, appropriated and negotiated through routine and habitual mobile interactions. In other words, focusing on the different rhythms of the urban mobile scene can provide insight to the body-environment relations, and to the continuous and reciprocal relations in which they operate.

Data and methods

Recording rhythm? Video as a research tool

What follows below is *one* attempt at rhythmanalysis of ordinary urban mobility sites that utilises video as a method. In practical terms, the research (presented below) borrows from Hubert Knoblauch et al. who, in the study mundane of social interactions, utilize 'videography' as a form of 'focused ethnography' that uses audio-visual data (video) simultaneously as a recording tool, a framing device, and a mode of fieldnotes (Knoblauch, Schnettler and Raab 2012; Knoblauch, Tuma and Schnettler 2014). The approach here similarly utilizes video as a research *mode* (rather than as a [supplementary] research material), in the study of mobile events and their temporalities (although not following the 'videography' analysis formula [ibid.] in full).

Video has become ubiquitous in modern societies: nowadays, most people have a camera-phone in their pocket, and (automated) video surveillance is utilized in many public and private spaces (Koskela

2000). The growth of video in society in general has also led to its growing use in research: Paul Luff and Christian Heath (2012) note that video is increasingly applied as a research tool on different fields, including visual ethnography (see Pink 2007) and mobilities research (see Murray 2009). Time-lapse photographs and videos have a long tradition, in specific, in site observations of public spaces (see e.g. Whyte 2000). As Jan Gehl and Birgitte Svarre (2013: 31) write, video recordings help one 'to go into detail with otherwise complex city situations that are difficult to fully comprehend with the naked eye.'

There is, arguably, room also for rhythmanalytical approaches that utilize video recordings in empirical study, regardless of Lefebvre's some initial concerns that rhythms might evade any kind of *recording* (see Lefebvre 1992/2013: 45). For example, Paul Simpson (2012) has utilized time-lapse photography/video to capture temporalities and social interactions of street-performance situations. Filipa Matos Wunderlich (2010; 2013) has similarly utilized video recordings (as supplementary tools) to uncover place-rhythms, arguing in favour of the general *visualization* of rhythms. The obvious argument in favour of using video in rhythmanalysis is the possibility to manipulate time: to (re)play, rewind and pause the vents; to speed up/down the scene; to examine the 'same' space during 'different' times (through multiple recordings). Bradley L. Garrett (2010: 522) writes that video 'tracks the multisensual fluidity and rhythms of everyday life', which can even extend beyond the visual or aural senses (commonly associated with video). Arguably, the use of video can also add more layers to the decoding process of the polyrhythmic scene by incorporating both the 'first impressions' – that are part of any non-videoed observation (the perceptions and experiences *in situ*; as recorded in brief on-site fieldnotes here), *and* the 're-examination' of the events by (re)viewing the recorded videos (again and again), changing the (embodied) analytical context from the one of participating in the events (through corporeal presence) to the one of a more detached observer.

Observing mobility sites

The research data consists of video recordings in six public mobility sites in the central urban areas of two cities in Finland: Tampere (220 000 inhabitants) and Turku (180 000). The sites are ordinary street corners and intersections, located in the central areas of the two cities (Figure 1–3). The site can be described either as *paths* or *nodes* (following Lynch 1960): they are central points in the mobility and public space networks of their respective cities. The site selection was mainly based on an earlier examination of walking and driving routes in the two cities – studied as part of a larger research project that this article is also included in – where the sites were identified as *active* and to contain different types of mobilities (see Tartia 2019 [forthcoming]).[3] There is nothing remarkably special or unique about these sites: the selected sites for the study could, in fact, have been any street site, in any city (see similarly Osman and Mulíček 2017), as the focus here is set on the *mobile event* rather than the (particular) space itself – the focus is set on the practices and actions, rather than the specifics of any particular space. (Embodied) mobile events are always *situated* (physically) somewhere (Hägerstrand 1970), which means that they are always situated in 'real-life' spaces (Jensen 2013), and such spaces, of course, are each unique – with their own material, social, cultural, historical forms and narratives – but the interest in the analysis here is set on the commonalities *between* the mobile events in all six sites, rather than the specific setting or events of any particular site. The perspective on the selected sites was focused, in specific, on the intersections where different mobility modes interact, highlighting the coming together of different (embodied) rhythms.

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[3] Also, the author's previous knowledges and experiences were also utilized here to some extent, in specific with Tampere where the author has lived for many years.

	Location	Type *(Lynch 1960)*	Key characteristics	Notes
Site I	Intersection of *Itsenäisyydenkatu* and *Yliopistonkatu / Tammelan puistokatu*	Path / node	Major driving route through the city Commercial buildings, bars and terraces Close to market square, university and railway station Multiple bus stops	Shared pedestrian / bicycle path closed on the northern side of *Itsenäisyydenkatu* due to a building construction site
Site II	Intersection of *Hämeenkatu* and *Rautatienkatu*	Node	Next to the railway station and main (shopping) street (*Hämeenkatu*) with bars and terraces Underpass connections to *Itsenäisyydenkatu* (towards 'site I') Multiple bus stops, a parking lot, a taxi stand	Eastern part of *Hämeenkatu* as a *public transport only* –street during 07/2015-12/2016
Site III	Intersection of *Hämeenpuisto* and *Hämeenkatu / Pirkankatu*	Path / node	Park / boulevard Next to the main municipal library Major driving route through the city Multiple bus stops Commercial buildings, bars and terraces, ice cream kiosk during summer	
Site IV	*Itäinen Rantakatu* and pedestrian bridge *Teatterisilta*	Path / node	*Aurajoki* –river, popular recreational area Restaurant boats / bar terraces, ice cream kiosk during summer *City Theatre*, commercial buildings Differentiated motor / nonmotor traffic Bus stops No light guidance at the crosswalk	City theatre under renovation: part of the shared pedestrian / bicycle path closed on the southern side of *Itäinen Rantakatu*
Site V	Intersection of *Myllysilta / Koulukatu* and *Linnankatu*	Path	Multi-lane driving road / bridge Main pedestrian route of the site located by the river, going under the bridge Small green area with a snack bar; limited commercial buildings Bus stops	
Site VI	Intersection of *Eerikinkatu* and *Aurakatu*	Node	Next to the main market square Adjacent commercial buildings, shopping centres Main local transport hub for buses Restricted private car use in the area Diagonal crossing; pedestrian scramble	

Figure 1. The details the observed sites. Source: author.

The sites were observed during a period of 11 days in May-June 2016, amounting to 48 individual observation sessions that were ~20 minutes long each. The observation took place during four (loosely defined) parts of the day (on weekdays): *morning* (04:00–08:00) *day* (08:00–15:00), *evening* (15:00–20:00) and *night* (20:00–23:00).[4] All the sessions were recorded, adding up to ~12 hours of video (with sound). The videos were also accompanied by simple on-site fieldnotes by the researcher that were used to notate the difficult-to-record atmospheric and affective (see e.g. Anderson 2009) qualities of the site (which, though, are not examined here in length), together with events and happenings that evaded the used framing of the camera (on *diaries* as a method, see Gehl and Svarre 2013: 32–33; Wunderlich 2013). The fieldnotes covered happenings, events and atmospheric issues that the moment brought forward, such as this brief excerpt notates (from site II):

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[4] The effects of the season on the possibilities of outdoor activities should be noted here as the natural seasonal differences – such as the outdoor temperature, amount of sunlight and rain/snow level – are evident the northern latitudes of the globe.
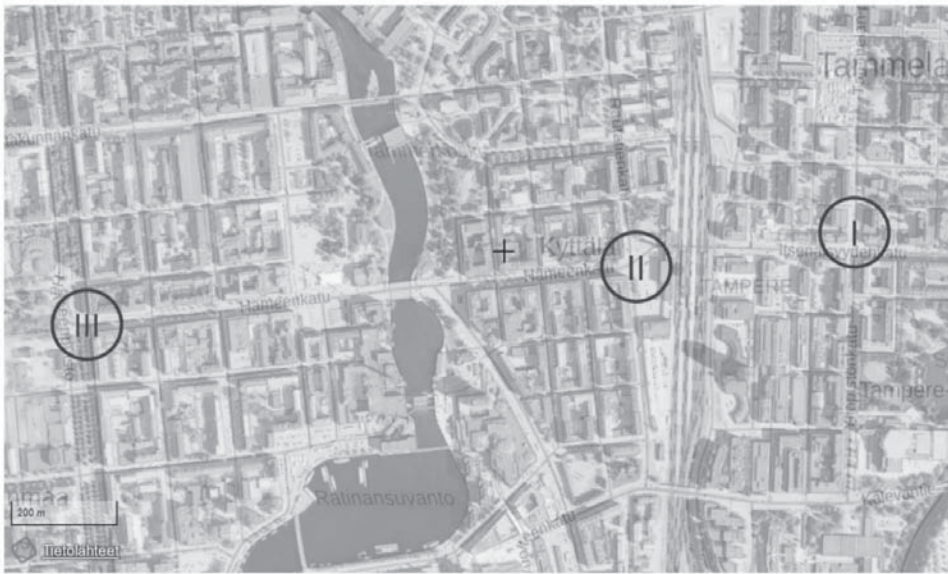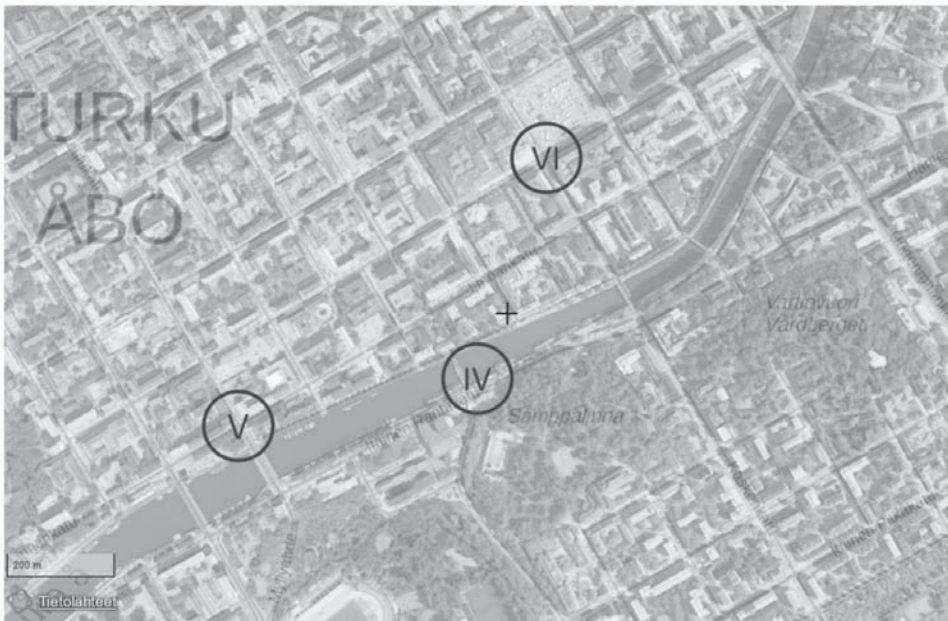
Figure 2. The locations of the observed sites in Tampere (above) and Turku (below) cities. (Map layouts: National Land Survey Finland [NLS].) Source: author.

[21:35]: the station is open for some hours still; music echoing from somewhere; multiple taxis [in a line at the taxi stand]

[21:38]: the sounds from [a nearby] pub terrace; the [sounds of the] running motors of the taxis [at the stand]

[21:39]: a few people has stopped in front of the city [tourism] map

[21:40]: mood: 'first warm nights of the summer'; many are clearly going for a night- out [in pairs and groups]; [audible] man's laughter

[21:41]: noticeably only few people on bicycles; pedestrians do not form temporary groups in the [traffic] lights [at the intersection] any longer [in contrast to the day-time]

[21:43]: a bouncer is standing in front of the adjacent bar; a police car drives by

The recordings were made with a small-form 'action-camera' with a wide-angle lens and a built-in microphone to make the recording-process easy and quick to set up. Street furniture were used as make-shift camera stands: the idea was to draw little attention to the recording process in order to affect the situation as little as possible. (The practice, though, revealed that I was often the only stationary user in the sites, which prompted some interested looks, as recorded both in the videos and the fieldnotes as notions of subjective feelings of being 'out-of-place'.)

Figure 3. Examples of the eye-level observational perspectives from each site (I-VI). Screen-captures from the recorded videos. Source: author.
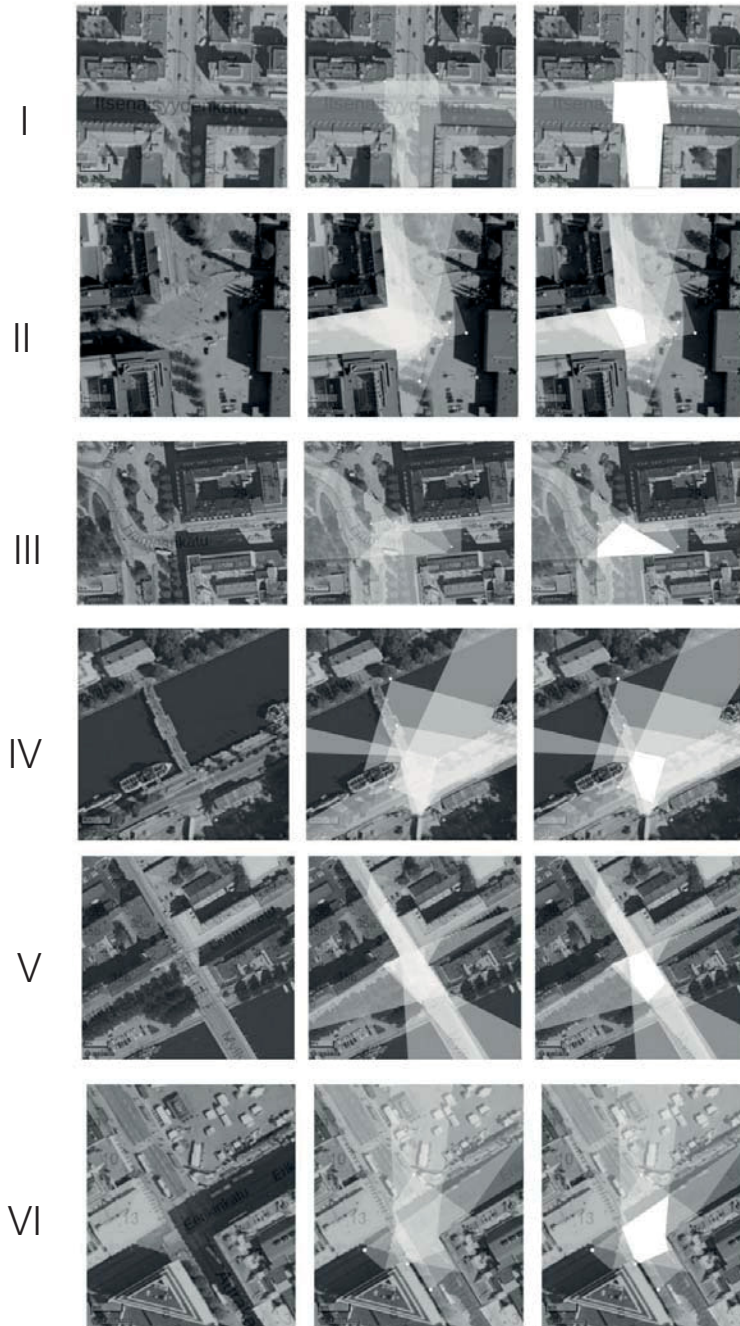
Figure 4. Overhead images of each site (I-VI) (left column), showing all the different framings of the recorded observation videos (middle column), and the area covered by each framing/video highlighted (right column). (Map layouts: NLS.) Source: author.

A fixed camera-angle/observation spot was used for each session (rather than moving in the scene). The perspective is that of an eye-level-view: the camera was set in different points at each site during different sessions to produce a *three-dimensional* view of the site – which also included a learning curve of the appropriate camera positions at each sites, mostly through trial-by-error (see similarly Luff and Heath 2012) – whilst retaining a perspective that is situated *inside* the events (see Figure 4). The eye-level view perspective, even though produces limitations for what can be recorded, is potentially less *detached* of the (mobile) situations than an elevated position (such as the balcony favoured by Lefebvre [1992/2013]; see similar critique in Hall et al. 2008; on the perspective to the mobile situation, see Jensen 2010).

Beyond noise: rhythmanalysing sites of everyday mobilities

Utilizing the rhythmanalytical framework and video as a research mode, the analysis of the research data examined patterns and repetitions of/in movement in the selected sites of the two Nordic cities. In the analysis process, an 'overview' (see Knoblauch et al. 2014: 86) was produced through repeated viewings (as content analysis), then moving in steps towards more precise detail. The video events were transcribed into text. The main trajectories and main areas of non-mobile uses were also identified on each site, and general traffic flows of walkers/bicycles/cars/buses were also mapped and calculated (as *people per minute*, see Gehl and Svarre 2013: 84–86) from the videos. The analytical focus was set, in specific, on how the mobile (embodied) practices unfolded at the sites: what kind of body-environment and body-body relations were identifiable; how people appropriated the sites, or singular objects (such as street furniture); how people contested the mobility-oriented uses of the site, or the designed and planned materialities and legislative symbols of the sites; what kind of non-mobile/(relatively) stationary uses and events took place; and how the practice of mobilities altered between different times of the day.

Below, I briefly highlight three main elements of the temporal patterns that can be pinpointed amidst the general *noise* (as suggested by Lefebvre, see above) of the mobile scene. These elements relate to (1) the overdriving temporalities of the day (dawn, daytime and dusk)*,* (2) mobile *interactions*, and (3) *negotiations* of timespace.

Overdriving circadian temporalities

The day-time street

Choreographies of the street are ordered, regulated and timed through a complex set of legislative signs, codes of conduct and social interactions (see e.g. Jensen and Lanng 2017), and affected profoundly by the daily cycle (Cresswell 1998). These choreographies, or 'time-space routines' and 'place-ballets' (Seamon 1980; see also Seamon and Nordin 1980), form the 'temporal architecture of a place' through temporary, both mobile and *fixed,* uses and users (Osman and Mulíček 2017: 48). Such site specific orderings form larger spatiotemporal 'urban structures' (Mareggi 2013) in and *between* such sites. The mobile choreographies of the street, in short, forms 'a routine that is carefully interwoven with the programmes of other individuals and with the timing of activities at particular sites' (Goodchild and Janelle 1984: 807–808).

The studied sites are no different. The mobile practices form more or less continuous lines, drawn by the body, which are most active during the day-time with a noticeable decrease in the volumes towards the mornings and evenings on each site, following the general daily activity rhythms of the city (see also Mareggi 2013). Walking and driving practices form the major portion of the observed street rhythms. The movements in the sites are mostly of functional character: walking practices are conducted predominantly in rapid and linear manners, and the lack of (formal) seating possibilities enforces such functional mobile uses of the sites (see Gehl 1971/2011). Driving practices are similarly here mostly about pass-through

movement, and (formal) parking facilities on the sites are limited. Biking practices, although much less frequent than walking and driving practices, also follow similar functional forms. The time people spend at the sites is thus, in most cases, as long as it takes for them to walk/drive (or ride)/bike through the scene, with only few exceptions of more stationary activities that relate mostly to waiting practices, work tasks (security guards, taxi drivers, face-to-face campaigners) or NTE (night-time economy) related activities.

The different user groups are most varied during the day-time in each site – with most observed variety in the *node*-like sites (including parents with baby-strollers and elderly people with walking-supports). During the late evening and early mornings mostly adults populate the sites. People move in different groupings, as singles, or as 'mobile withs' (Jensen 2013, following the work of Erving Goffman) – as pairs or larger groups. During the mornings, the *single*-groupings are the most prominent configurations, with more variation afterwards.

The general paces of the sites are determined mostly by the central intersection (located on each site) and its regulatory signage. The intersections act as *micropacemakers* (Mulíček et al. 2014) at each site, gathering and controlling formal mobile rhythms on the street level (see also Stevens 2007: 99–100). The traffic lights pattern movement in the intersections through-out the day, creating local (and temporary) hot-spots by grouping together people momentarily. In these events, the culture specific codes of conduct are applied, both in regard to legislative signage and personal distances (see Jensen and Lanng 2017; Scollon and Scollon 2003; on *dressage,* see Lefebvre 1992/2013). In the case sites such codes are followed and applied quite diligently by, for example, respecting red lights (in pedestrian context) even without near-by car traffic. The intersections simultaneously affect strongly on the acoustic environments of the sites that are dominated by the *droning* sounds of the motor engines, creating sequences of oscillating intensities of (de)acceleration (on the *drone effect,* see Augoyard and Torgue 1995/2006: 40–43). The droning sounds overpower much of the other sounds on the sites, namely the sounds of social interaction, such as general chatter of pairs and groups (although here the recording position and equipment play a major role).

All in all, the daytime scenes produce a quite ordered image, where the formal, or regulated, mobilities cover most of the spatial patterns. Next to the daytime observations, the study also incorporated early morning and late evening that highlight temporal shifts in the sites' mobility patterns as the borderlines of the changing rhythms of the city between the day-time and night-time cities.

Mobile informalities in the urban 'twilight zone'

The observation data on the six examined sites suggests that the twilight temporalities provide some level of *flexibility* in relation to the mobile practices, as the decreased level of (motorised) mobility, together with reduced users and, thus, social control – as the *social gaze (*Foucault 1975/1995; or the *ear*: Atkinson 2007) – provide room for alternative appropriations of space. The partial or full absence of specific programmes, such as car traffic, outside these timeframes relaxes the placement and choreographies of the mobility flows at the sites (Figures 5–7). In the data, this flexibility comes through, for example, in how the less frequent car traffic enables walkers and bikers to cut corners in their paths across intersections and over driving lanes; or how the total absence of pedestrian and bicycle traffic in the early morning enables one to park the car on the sidewalk for a quick ATM-withdrawal; similarly, a delivery van can be parked on the side of a city's main street for a minute or two to deliver parcels to a nearby building, without affecting the flow of the frequent bus-traffic during most of the day. The liminal temporalities, in other words, provide possibilities for *informal* mobile practices where the regulated mobile schematics of the site are challenged, adapted and personified. As Ilse van Liempt et al. (2014: 2, reading Melbin 1978) note: 'night-time has a more relaxed and permissive social atmosphere than the day as a result of an easing of the flows and pressures of the city.' This provides room for both mobile and sedentary (embodied) *territorial appropriations* (Kärrholm 2007; 2017).

Figure 5. A comparison between the morning (05:00; top) and the late evening (22:00; below) site highlights differences between pedestrian volumes and group settings. Note also the parked white delivery van in the morning on the otherwise 'bus-heavy' street. Source: author.

During these timeframes, the (aforementioned) droning sound of the motor traffic also oscillates more than during the day, acting as a less overdriving factor in the sites' qualities. The motorized sounds here alternate between occasional peaks of intensity and less intense patterns as the volume of traffic decreases overall. Movement similarly demarcates space: in the early-morning sessions (04:00–07:00), in particular, the oscillation between the presence and absence of human activities on the sites was highly noticeable as singular walkers, cyclists, cars or buses ruptured the perceived *immobility* of the sites momentarily. Here, the mobile practices transform from rather steady spatial *flows* to identifiable *events*. Flows – as dynamic and temporal materialities, made of more or less constant streams of pedestrians, bicycles, cars and buses, and patterned by interaction with other people and legislative signage – are frequently replaced by singular events that follow similar scripts of the flows (similar sites and modes of interaction) but in less volume.

site I	pedestrians	bicycles	buses	cars
(early) morning 1 04:48-05:08	0	2	0	4
-- 2 08:55-09:12	17	6	4	48
(after)noon 1 11:04-11:24	52	2	7	58
-- 2 13:17-13:37	43	6	4	60
late afternoon / early evening 1 17:36-17:56	41	9	5	59
-- 2 19:24-19:44	18	6	6	49
evening/night 1 22:19-22:39	4	3	3	30
-- 2 20:40-21:00	10	7	3	29

site II	pedestrians	bicycles	buses	cars
(early) morning 1 05:12-05:32	8	0	1	1
-- 2 08:35-08:51	46	6	5	37
(after)noon 1 11:29-11:49	85	5	2	53
-- 2 12:53-13:13	132	8	5	64
late afternoon / early evening 1 17:59-18:19	261	10	5	55
-- 2 19:01-19:21	99	7	4	58
evening/night 1 21:29-21:49	43	6	2	16
-- 2 21:03-21:20	53	7	2	31

site III	pedestrians	bicycles	buses	cars
(early) morning 1 05:39-05:59	0	2	1	3
-- 2 08:07-08:24	2	2	2	56
(after)noon 1 11:40-12:03	21	2	4	45
-- 2 12:01-12:21	30	0	2	48
late afternoon / early evening 1 16:23-16:43	13	15	5	74
-- 2 18:34-18:54	38	3	3	46
evening/night 1 21:54-22:14	6	6	1	24
-- 2 21:29-21:49	5	10	1	30

site IV	pedestrians	bicycles	buses	cars
(early) morning 1 06:56-07:06; 07:27-07:40	16	6	1	47
-- 2 09:19-09:39	7	12	0	45
(after)noon 1 11:45-12:05	24	31	1	51
-- 2 12:29-12:45	36	9	1	70
late afternoon / early evening 1 14:58-15:18	34	32	1	59
-- 2 18:48-19:08	50	11	0	29
evening/night 1 20:52-21:09	19	2	0	13
-- 2 20:46-21:06	78	10	2	75

site V	pedestrians	bicycles	buses	cars
(early) morning 1 07:09-07:20	2	2	1	89
-- 2 08:49-09:09	2	2	4	97
(after)noon 1 12:11-12:31	3	7	2	127
-- 2 12:08-12:25	6	3	1	95
late afternoon / early evening 1 15:22-15:42	1	5	2	136
-- 2 18:25-18:42	7	8	2	94
evening/night 1 21:11-21:27	3	8	1	60
-- 2 20:22-20:42	1	4	1	18

site VI	pedestrians	bicycles	buses	cars
(early) morning 1 06:34-06:51	20	0	3	1
-- 2 09:46-10:06	72	2	2	2
(after)noon 1 12:41-13:01	22	0	1	3
-- 2 12:48-13:05	79	1	4	7
late afternoon / early evening 1 14:32-14:54	107	2	2	4
-- 2 19:13-19:30	20	2	0	1
evening/night 1 20:32-20:48	34	0	4	1
-- 2 21:10-21:37	31	2	2	2

Figure 6. Counted pedestrian/bicycle/bus/car uses of the sites. The volumes are counted from 5-minute excerpts of the video, utilising a designated section of each area. The numbers thus are not definitive but reveal the key insight that each site – as expected – was most active during the day-time observations, and les so during the morning/evening times. Source: author.
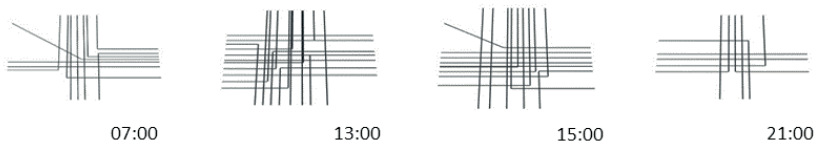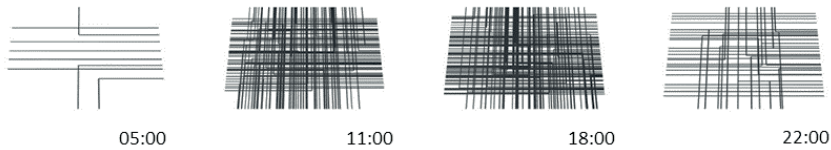
Figure 7. The effects of (motor) traffic on space as temporary forms. The lines each depict a trajectory of a motor vehicle at the site. (The amount of traffic is calculated from five-minute excerpts from the recorded videos, the lines representing the number and the general direction of the trajectories.) The above example is from a site in the central area of Tampere (site I), where the motor traffic consists of personal car use, logistics and buses making rounds on multiple service lines. The volume of traffic changes notably through-out the day, as most of the personal car use stops for the night and the bus service is more limited (on weekdays), affecting the pedestrian mobilities and uses of the site. Below, another central site (VI) from Turku with mostly bus and logistics traffic as personal car use in the area is restricted. The low-frequency motor traffic connects to a 'pedestrian scramble' intersection. There is, though, notably some service-drives to the market through the sidewalks that boarder the square. The oscillating volumes of motor traffic on each site have direct effects on the material, aural and visual patterns of the sites, affecting the general 'livability' (as studied by Appleyard 1981) of the sites, but also the other spatial uses and affordances (as mapped in this study). Source: author.

The liminal temporalities also transform the spatial patterns by creating new (informal) points of non-mobile or stationary (social) activities, such as in the case of hanging out and sitting on various kinds of street furniture. Next to the Turku Market Square (site VI), the multiple shopping malls that boarder the square are either closed or closing down for the day, and the market that takes most of the square by day is packed away. Groups of young people are appropriating the space, sitting and socializing informally on the steps of storefronts, or wander around in larger groups. Similarly, the pub terraces (which are found in close proximity of five of the six observed sites) produce distinctive rhythms to the sites during the evenings as points of both direct and indirect (such as the *gaze)* interaction. The edges of the terraces produce clear barriers between (semi)private and public arena, and thus practices related to the arriving or exiting (audible greetings and handwaves) to or from the space, similarly to other building entrances during the other parts of the day.

The twilight hours, with more relaxed pressures social and material, highlight the various rhythms in the *polyrhythmic* (Lefebvre 1992/2013) assembles of the site, decreasing the pacemaking role of the intersection and the mobility flows, replacing them with more stationary uses and even event-like mobilities. Below, I examine in more detail the urban mobile scene both during the daytime and the twilight, focusing on the interactions and negotiations that the different times of the day facilitate.

Mobile socio-material interactions

The mobile social and human-material interactions in motion reveal, in specific, the various 'arrhythmic' (Lefebvre 1992/2013) relations that bring the up *friction* (see also Middleton 2009) in and between the spatial patterns (temporarily) visible.

Figure 8. Choreographies on a sidewalk (site II; 19:00): a pair in conversation creates flows meandering around it, like a stone in a river. Source: author.

Pedestrian interactions on the sites mostly consist of small-scale negotiations on the sidewalks with other pedestrians and bikes, and with cars during street-crossing situations. Various *mobile negotiation techniques* (Jensen 2010) are utilized in both to navigate through pedestrian streams in different mobile

groupings, while retaining the continuous movement (see Figure 8). Motor vehicles move as part of the linear traffic flow and interaction is mostly done through related signalling (including the occasional car horn) that regulate the movement of the self and the others. Social interaction inside the walking (and cycling) 'groups' take place mostly on the move. Chats between pairs and larger groups are conducted whilst walking (or cycling in a few occasions), and are patterned by the regulatory signage of the intersections that provide, or necessitate, brief stops where conversations continue often in seemingly more focused manner (for example, by the people talking turning towards each other, rather than moving side by side).

Figure 9. Waiting practices at an intersection (site VI; 10:00): note the distances between people. Source: author.

The intersection gathers users into different sized temporary pockets, which, as noted above exhibit cultural norms on personal distances in the case of pedestrians (Figure 9). The intersections are also the most central points of interaction between the motorists and non-motorists. The intersections (in all but one site) are light-controlled, which makes the interactions between different mobility modes mostly controlled and predictable. Exceptions are the common situations where movements between different modes take place simultaneously (cars turning while pedestrians and bicycles cross). Here, the choreographies are based on mutual signalling rather than on legislative symbols, and in some occasions, produce some friction between the pedestrians and cars on the right of passage. The intersection – as the central element of regulated mobilities on the sites – also brings up inequalities in the ways different people can move at the site (see also Jensen 2013). Site I, for example, is characterised by a crossroads with sidewalks on all sides, wide multi-lane streets, pedestrian islands in the middles and light guidance to each direction. The interaction between the turning vehicles and the crossing pedestrians produces multiple micro-interactions and negotiations of movement (see Figure 10) but also limit them directly: in one instance, for example, an elderly woman with a walking aid, took three different sets of lights to cross the roughly twenty meters over the street due to her slow walking pace. The obvious mismatch between the walker and the regulatory signage highlight the timed, 'staged' rigidly in top-down fashion (ibid.), temporalities at the intersection.

Figure 10. Mobile micro-interactions (site I; 13:00): close-quarters pedestrian/motor-traffic interactions. Source: author.

Material interaction – beyond habitual mobile practices – could also be noted in the data, such as through the use of various 'props' (Stevens 2007: 178) of the environment, such as street furniture. One such example is a small staircase with a nearby ramp that the parents with baby carriages, commuters with bikes, or a worker moving a gas tank, each use routinely (Figure 11). The material environment also prompts some re-routing practices, such as through (evolving) work sites that affect the usable pathways.

The intersection also acts a point of encounters and anticipations: in some cases, friends notice each other on the opposite ends, wave, and greet on the edges. In one case (site I, early afternoon), for example, a man waits on the edge of the sidewalk as a woman with a child in a baby carriage crosses over, greets them audibly, and they soon continue their way together (as a new mobile grouping). In another case, during the early morning (site II), a man waits another one to cross, they shake hands and introduce one another, and continue together towards the nearby parking lot. These brief encounters, such as meeting friends, staying for a chat, or parting ways, also take place on the sites edges, or *boundaries* (Stevens 2007: 114) between the public and (semi)private spaces, such as storefront and office entrances. These boundaries are also sites for more individualized uses: stepping out for a smoke, or taking a sidestep from the sidewalk towards the edge to focus on phone-use for a moment.

Figure 11. Habitual material interaction (site IV; 09:00): baby carriages and steps. Source: author.

Negotiating space

The above has mostly noted the interactions in relation to formal mobilities. But people also challenge such regulated, timed and planned ways of behaviour, as observed on the sites as various micro-practices, such as jay-walking or driving through the red lights that challenge how one should move and act in the space (Figure 12). The decreased pedestrian and vehicular flows during the mornings and the evenings, in relation to the daytime, provide, in specific, possibilities for these practices that contest the planned and regulated (mobile) schematics, as there is room for peoples' own (mobile and non-mobile) 'tactics' against the pre-planned systems from the 'above' (de Certeau 1984; see Jensen 2013). These acts are more adaptive than disruptive in form: small-form ways of making the space momentarily one's own when the environmental conditions enable it. In one recorded event (site II, 05:00), for example, two young men on bikes approach an intersection (that during the day-time is characterised by continuous lines of motor traffic) to cross: the one driving ahead starts to go according to the designated crossing areas (zebra crossings) and through the subsequent sidewalks in a zigzag-fashion, but the one behind decides to cross diagonally through the (traffic-less) intersection/car-lanes; the one ahead soon (and after some kind of communication, not audible in the recording) also turns towards the open interaction and crosses its straight through, following the other.
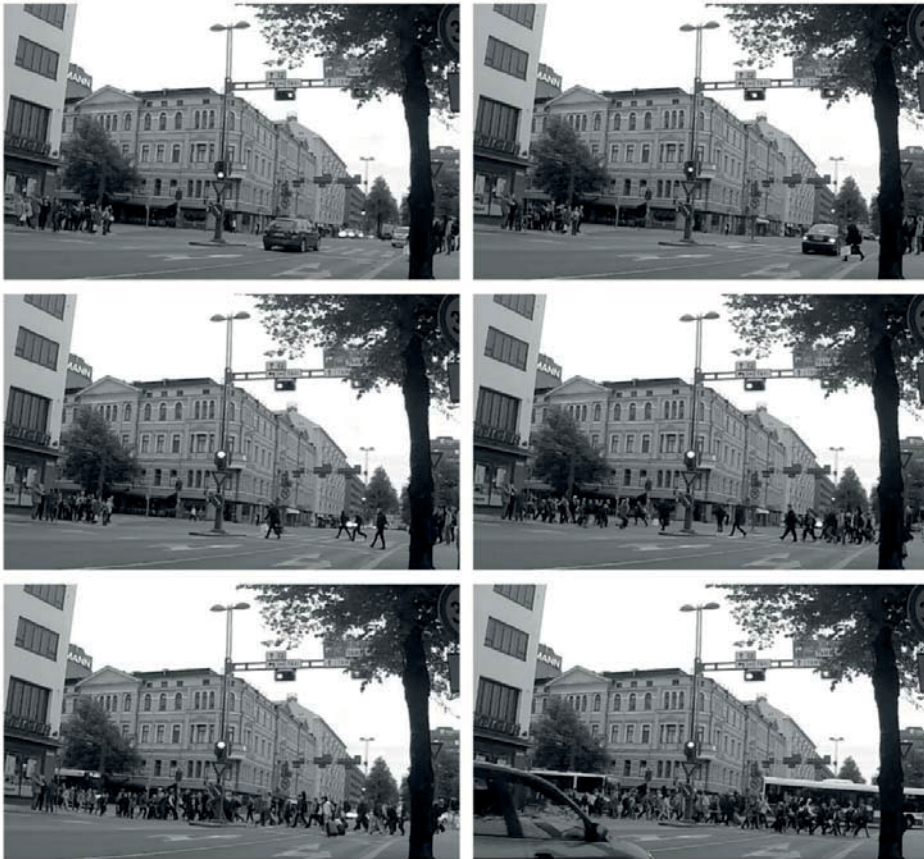

Figure 12. Pedestrian dynamics at an intersection (site II; 18:00): forerunners, followed by the larger group soon afterwards. *Source: author.*

In addition to mobility related re-negotiations, similar minute practices are used to that challenge the instrumentality of site and one's own movement – to play and to interact with it. Such playful actions can be noted in relation to environmental 'props' (Stevens 2007: 178), such as using a concrete roadblock as a steppingstone, leaning casually to a traffic post while waiting at the lights (Figure 13), children playing with a plastic trash caught in wind, or revving up loudly one's motorcycle while waiting at the lights. Similarly, in a personal perspective, the use of headphones (and mobile phones), the music oozing from the inside space of the car, or other such equipment that personifies the sensory-scapes, similarly reworks the mobile-centred uses of the site (see Bull 2012).

Figure 13. Temporary street props: the light-post as a temporary leaning stand through-out the day (site I). Source: author.

Figure 14. Work-related uses of the space (site III; 12:00): three city workers checking the electrics of a light-post. Source: author.

Extended stays on the sites relate to (aforementioned) waiting practices, sitting in both formal and informal configurations (including pub terraces), or work-related tasks (taxi drivers conversing next to their vehicles, people on a stand promoting religious beliefs, workers at a construction site, face-to-face campaigners) that each appropriate the space through their (habitual) bodily engagement with it(see Figure 14). Notably, during one recording session on a sunny day (site I, 13:00), a group of a few adults (informally) sat on the edge of a sidewalk with drinks, under a shade provided by an awning, for an extended period of time, claiming the space momentarily and challenging the utilitarian uses of the rather narrow sidewalk, prompting looks from the passer-byes. Such events, that clearly challenged the *norm*, though, were very rare in the overall research data.
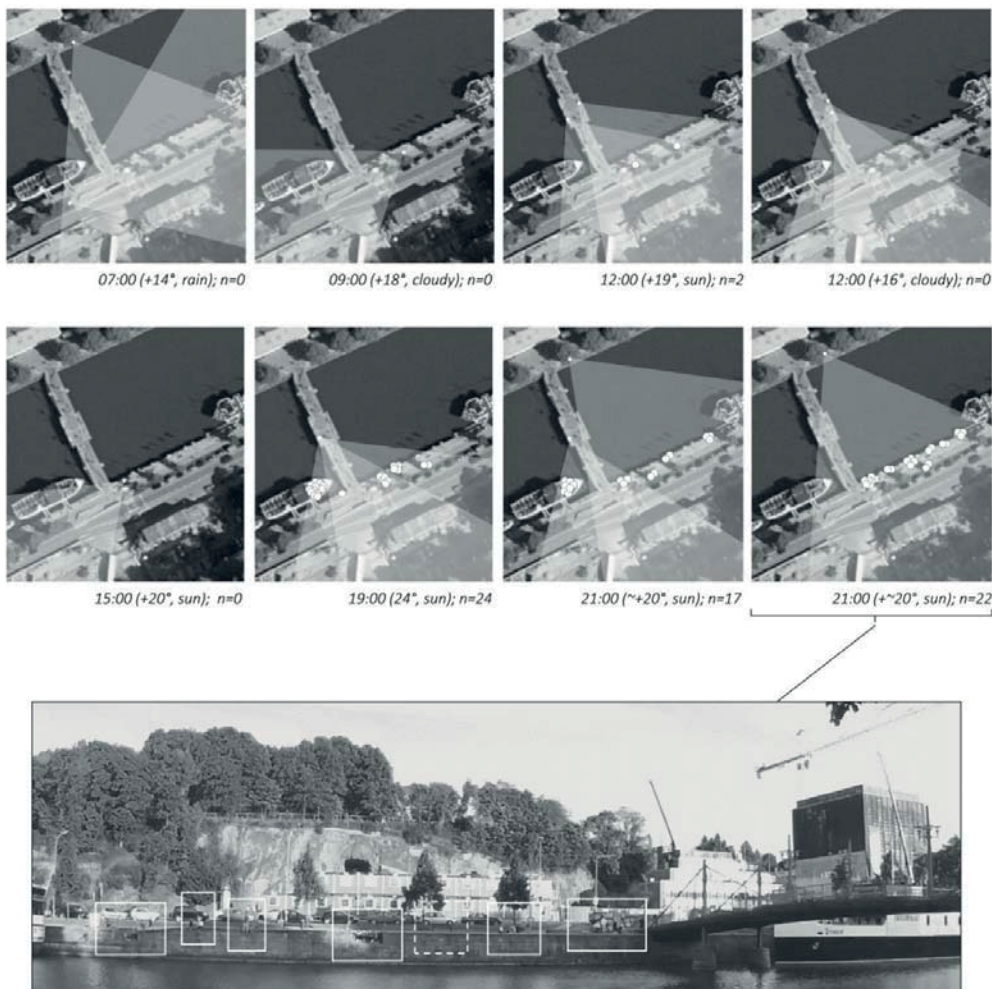

07:00 (+14°, rain); n=0   09:00 (+18°, cloudy); n=0   12:00 (+19°, sun); n=2   12:00 (+16°, cloudy); n=0

15:00 (+20°, sun); n=0   19:00 (24°, sun); n=24   21:00 (~+20°, sun); n=17   21:00 (+~20°, sun); n=22

Figure 15. Perceived sitting practices on a site (IV) during the different timeframes. Source: author. (Map layouts: NLS.)

As noted above, the liminal spaces provide room for non-mobile appropriations of space. Especially different modes of social interaction, which otherwise are mostly engaged *on the go*, take more sedentary forms during the evening temporalities. The river-side setting of one of the observed sites (IV), for example, gains a more complex set of collective uses during the evening times (Figure 15). The site, with restaurant boats, an ice cream kiosk and a picturesque landscape, gathers pairs and larger groups,

especially young adults, there, transforming the choreographies, materialities and social interaction of the site. People sit (semi)informally on the benches and the riverside stairs, socializing, often with drinks, next to the restaurant boats with terraces on the outdoor decks. Here, the benches and stairs that during the day-time observations were mostly empty or taken up by singles or pairs, are taken possession predominantly by larger groups of three or more people. Similarly, walking speeds are lowered and people engage in conversations while leisurely moving at the scene.

Formal and informal mobilities

The above brief notes from the analysis of the video recordings have highlighted different interaction and negotiations that colour the mobile event. It, in specific, has highlighted the interplay between the *formal* (regulated, planned, shared) and the *informal* (renegotiating, impromptu, subjective) patterns that emerge from a prolonged analysis of the scene.

On the sites, the top-down regulations, together with the built material form of the space (see Jensen 2013), *and* the down-top embodied and social practices, through which the spaces are engaged in, *both* favour the expected, predictable and routine-like form of the mobile event. The occasional (re)negotiations of the sites' uses – as presented above – act as noticeable markers in the otherwise repetitious mass: as something *different* that challenges the norm. These events are situated, in many cases, to the liminal temporalities (early mornings, late evenings) or liminal spaces (sites' edges) that enable more spatial *looseness* (Franck and Stevens 2007) for informal uses, both in and beyond movement. Here, the temporal and spatial patterns 'afford' (Gibson 1979) more varied kind of uses, albeit most of the recorded activity in the data relates to (functional) pass-through movement (Figure 16).

Figure 16. Observed practices at the sites as mobile/stationary modes of territorial appropriation. Source: author.

As noted above, the sites, where the focus is around the local intersection, are situated next to other private and public spaces (shops, services, squares, pedestrian-only streets) that facilitate (supposedly) more variation in uses (as designed and designated 'places'), and the demarcation between the two are often vague and difficult to pin-point. As Ondřej Mulíček et al. (2014) note, sites are not singular space-time boxes but interlinked on both the immediate local scale, as well as the city-level scales, forming together the sequential pulse, or the beat, of the city *and* the respective sites through embodied uses. Here, the focus has been on the in-depth examination of what happens in one portion of that sequence, in a mobility site.

Conclusion

The article has examined the day-to-day choreographies of 'ordinary' street spaces, focusing on the various embodied interactions and negotiations of space that take habitually place on such sites, most often in mobile contexts. The argument here has been that research approaches – that look at the urban mobile scene *beyond* the functional measures of movement, and examine mobilities as emerging assemblages and processes, and as embodied socio-material practices – can contribute to a more heterogeneous understanding of the urban mobile phenomena of the street, and, thus, contemporary urban life (on the move). The focus on rhythms, in specific, can, in a mobilities-centred research framework, contribute to a kind of a re-examination of the street, in order to further facilitate a mobilities design paradigm that incorporates both the planned and the regulated, *and* the lived and the experienced temporal elements of the street – both the *set-up-from-the-above* and the *enacted-from-the-below* mobilities (see Jensen 2013; 2018) – in the picture.

The experiences of this research, in general, support the use of video in such a study of the mobile street-scene and urban temporalities. The benefits of video – as a research mode – relate mainly to the ability to re-access the scene and the events, and to the fact that video – as a research data – provides some 'distance' between the recorded 'moment' and the moment of analysis. The use of video, though, holds also some reservations. Here, the questions related to video as a mode of representation, rather than as objective documentation, are relevant as video material is always *constructed* (Pink 2007; see also Murray 2009; Garrett 2010). The potential failure of the equipment (as experienced during the fieldwork in a few occasions), and the selected framing of the scene (in relation to the events and *what* is recorded), also produce practical limitations to what video can be used for. The video also produces a vast quantities of information that prompts practical problems, mainly for the process of transcription and for the setting of appropriate questions for the research data. The video also is not able to record rhythmicities that do not manifest in material (visual/acoustic) patterns, such as ones related to (inter)subjective experiences, affective relations or ambiances, which are all, of course, central elements of the *lived* qualities of space. The gathering and analysis of the research data could, thus, be further extended from the materialized (visual/acoustic) interactions and negotiations to such, more intangible, issues, like *affective atmospheres* (Anderson 2009), by making use of other research methods alongside video.

The analysis of the research data highlights the small-scale interactions, practices and events that play an integral part in the formation of the assemblage of the mobile event. The data highlights the micro-level embodied practices – the appropriations, negotiations and socio-material interactions – as well as the oscillating temporalities of the 24-hour daily cycle – connected to the changing mobile uses and users during different parts of the day – on the sites that, otherwise, as mobility-oriented *in-between spaces*, are dominated by the rhythms of functional (motorized) movement. Focusing on the minute embodied practices in and beyond movement, and their forms, transformations and frequencies, enable us to further consider the aforementioned *heterogeneity* (Mels 2004) of urban temporalities, which might often be somewhat hidden underneath the plain view. Study of ordinary mobility sites and mobile events, as examined here, can help to ground *rhythmanalysis* as a research 'mode' (Elden 2004: xii), and to examine the real-life urban fabric from practical research standpoints, as the assemblage of mobilities are continuously remade. It also enables us to approach the spatial and temporal configurations of these spaces *beyond* the intended and planned uses through the 'lived' – habitual, routine; contesting – uses that often avoid planning documents and regulation, but which are central in the making of the site's spatial and temporal form. As Edensor (2010: 15) writes: 'Besides this personal engagement with the rhythms of a place, putting one's own beat in space, the effort required to maintain rhythmic and temporal order should not be underestimated. Consistency is always emergent and contingent, reproduced again and again.' How such *putting one's own beat* happens, and how it affects the space and *vice versa*, are thus central to the nature of the contemporary urban space. Even though the article cannot provide definitive answers but rather (hopefully) new perspectives on urban temporalities and mobilities, such endeavours centred on rhythmanalysis are necessary ones as the rhythms of city life can only partially be described through the official and written-down activities, such as the design, regulation and policy-

making processes. Rhythmanalytical approaches keep the door open for transitions, micro-events and unplanned spatial uses that define the life of the city.

Acknowledgements

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