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Urban Nature and Digital Media Technologies Entangled: Sensobiographies of Young People in Turku, Finland

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Abstract

European youth to a large extent live with mobile media technologies in their everyday environments. At the same time, young people's relationships with nature are central to imagining resilient futures, and these relations are often formed in cities. It is, thus, important to ask: How digital media technologies affect young people's sensory relationships with nature in their home cities? This chapter offers novel insights into the myriad ways the use of smartphones and of digital music listening devices mediate perceptions of the urban green. For young city dwellers, mobile media technologies have become entangled with their experiences of natural areas. Technology participates in both social communication and personal mood control. The sensobiographic data of this study, produced with young people in Turku, Finland, demonstrates the multifaceted importance not only of urban forests, but also of so-called "weedy landscapes": those green areas and rewilding margins that are less controlled by public ordering. In these sensobiographies, both seeking out green sites and the use of mobile technology are integral to the interviewees' attunement with affective atmospheres.

Keywords: Urban nature, weedy landscapes, digital media technologies

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Urban nature and digital media technologies entangled

Sensobiographies of young people in Turku, Finland

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Environmental relationships of young people in the 2020s

> According to the [Carbon Disclosure Project's] 2017 Carbon Majors Report, 71% of the world's global industrial greenhouse gas emissions come from just 100 polluters. It is clear by now that the interests of big business do not drive the prosperity of the human race. As a society, we need to change course. (. . .) Until the world's governments and businesses are held accountable to the people, we are refusing to participate in the system that fills their pockets.
>
> – Earth Strike, Turku, 27/9/2019

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<Figure 13.1: Turku Climate Strike year 2021, photo by Inkeri Aula>

In September 2019, SENSOTRA project researchers were conducting fieldwork in Turku by walking with people. At the same time, young people in the thousands decided to march the streets declaring a climate emergency. The youth climate movement flooded into the public discussion around the UN Climate Action Summit in New York and *Earth Strike* rallies were organised worldwide (Laville & Watts 2019). Unlike many other Finnish cities, Turku declared that with their guardians' permission, children could skip school to join the demonstration. The emergency declared by the movement was echoed in the city's official policy on carbon neutrality. However, political promises did not convince the demonstrators, who demanded "a general strike on earth". A sign held by one of the demonstrators echoed translocal social media discussions: "I wish we were wrong and this was a conspiracy".

This chapter begins with the recognition that young generations' relationships with their environment seem largely defined by global ecological crisis and, simultaneously, that digital media is a key mediator between global issues and local experience. Young people in the 2020s have a significant role in maintaining multifaceted relationships with the environment in a world of increasing nature loss. To complement the other approaches in this volume addressing the transformations of sensory mediation, this chapter focuses on how young people's sensed relationships with the environment are affected by digital media technologies.

As most young Europeans live in urban areas, their relationships with nature are also formed and maintained in urban biodiverse areas: green spaces in the city such as parks and woodlands. This chapter looks at more-than-human diversity in urban contexts as sites where people form multisensory relationships with nature. These sensorial relations are mediated materially and technologically (Tiainen et al. 2019; Uimonen 2021). The very presence of mobile technologies in the everyday has changed our way of being in space, in contact with each other, and in our lives. The question remains: How is digital media technology influencing perceptions of the environment?

The purpose of this chapter is to address this question by considering the possible impacts of digital mobile technologies on young people's sensed relationships with their urban natural environment. In this study, recent changes in young people's experiences of the sensory environment are analysed through transgenerational sensobiographic walks, as described in the introduction to this collection. This chapter is based on sensobiographic walks and subsequent interviews produced in 2018–2020 in Turku, Southwest Finland, a medium-sized city surrounded

by thousands of small islands. The atmosphere of the city is influenced by the proximity of the archipelago and by maritime connections to the Baltic Sea through a busy international port. Waterfronts and forest areas provide connection with other forms of life on a continual basis, and form an indispensable part of the "nature of Turku", the specific feel of place in Finland's oldest urban centre.

Sensory mediations: a relational approach

The data analysis in this chapter and the conceptual framework applied are intimately interconnected by the relational methodology of sensobiography. First, the data analysed is shortly described. Then a theoretical trajectory is traced via theoretical approaches to sensing, technological mediation and the environment, that dissolve the binary dichotomy between subject and the environment, or human subjectivity and nature, resulting in a relational research approach to experiences of urban green spaces in the digital era.

Sensobiographic walks are open to serendipity, indeterminate and situational. The walks and subsequent interviews analysed in this chapter are not identically structured, but rather, each flows on a polyrhythmic pace of its own, following topics brought up either by the walkers, the dialogic questions of the researcher, or the routes and places themselves. The interviewing researcher takes care that all the research themes are discussed. The walks have been documented in video and audio formats and supplemented with photographs and GPS information. The participants' names are pseudonymised and their birth years approximated to protect their identities.

Analysis is based on close reading of the interview transcripts and on video recordings. The atmospheric qualities of the walks, such as light and weather conditions, seasonal characteristics, and traffic, can be felt from the videos, as well as the movement of the walkers and their surroundings. The Turku material is complemented with a data fragment from Brighton, extracted from sensobiographic walk transcripts that have been coded in qualitative data analysis with "technology" (see Murray in this volume). For the whole data corpus, technology was defined "in the broadest sense, [as] digital and non-digital, including clothes,

pencils, cars etc.”. Coding has been used here foremost for finding significant cases from Turku, that are then analysed in the interview context.

When the research began, there was a background presumption that the older participants would share their memories of a route from their youth, while the young participants would describe more their present life. However, to a significant degree, the young participants also chose routes connected to their personal history, such as the surroundings of their childhood homes. The most striking feature of the routes and sites chosen by the younger participants was a tendency to lead the walk to sites of natural splendour, such as parks, urban forests, riverbanks and the seaside. The same occurs to some degree also in SENSOTRA’s field data produced in Brighton and in Ljubljana. Urban forests were praised in the Turku study by both older and younger research participants. Some expressed that they felt privileged to live next to the forest that grows nearest to the city centre. Different walkers attributed this quality of the “nearest forest” to different wooded areas, indicating that Turku dwellers enjoy a richness of nearby green spaces, and feel that these areas are their own.

What can the sensobiographic walks convey about how digital technology affects people’s sensing of their natural environment? Our perceptions of the world are mediated by cultural conventions, personal routines, prevailing sensory orders and technological affordances – of which all are subject to change. The SENSOTRA project has taken as its starting point the following assumption: changes in ways of inhabiting city spaces happen, to a significant degree, in a mutually constitutive relationship with the available media technologies. These changes also pertain crucially to the nature or operation of the senses.

The anthropology of the senses has demonstrated that perceptions are mediated through senses in ways that are culturally constituted (e.g. Howes 2005, 2011, 2019; Howes and Classen 2014; Classen 1993). How digital and mobile media affect perceptions of the environment is a sensory question. For instance, McLuhan’s famous phrase, “medium is the message”, implies that media technologies produce – or even determine – our perceptions and experiences of the world. The anthropology of the senses as coined by Howes (2005, 2011), instead, does not necessarily imply this kind of technological determinism. Both McLuhan and Howes, however, are concerned with cultural categories of sensory experience – vision, sound, smell, taste and touch. Pink (2015, 7) has referred to their approaches as representational takes on senses.

While recognising the merits of both representational and nonrepresentational approaches, Pink opts for the practical-phenomenological approach of Tim Ingold's work. Ingold offers a simplified description of the Howesian approach as one essentially founded on representation: senses act as separate and reified "filters or keyboards" that mediate symbolic representations into our minds (referenced in Pink 2015, 8). However, instead of focusing on representation, the anthropology of the senses should be approached as a matter of *mediation*, as demonstrated by Howes (2019). Senses are not only passive recipients of information, but they can also be taken as interactive channels. Discussing ways of understanding senses as actions directed outwards, that argue for sensory perceptions as active media of communication, Howes has noted:

> The implication of this observation is that in some (perhaps many) cultures the senses act outwardly as well as inwardly: the act of perceiving goes on in the environment as much as in the brain. Put another way, the senses are interactive, they mingle with their objects, and are not merely reactive to external stimuli. The widespread belief in the power of the "evil eye" to adversely affect its object is one manifestation of this phenomenon, speech is another (as it involves both listening and talking), and so too is . . . that every act of touching involves being touched at the same time.
>
> (Howes 2011, 2)

Taking into account this insight that the act of perceiving takes place not only in the perceiver, but also in the environment, the anthropology of the senses is able to consider how sensing operates together with the surroundings.

This chapter acknowledges that particular ways of sensing, constituted by both personal life-histories and cultural conventions, mediate our perceptions. This sensing, however, happens both inwards and outwards in complex situations where multiple materialities, corporealities and affective atmospheres co-exist and emerge co-constitutionally. Drawing from Howes' insight on the anthropology of the senses as an escape from representation to mediation (Howes 2019) and on Milla Tiainen's formulation of mediation as immediacy (Tiainen in this volume; Tiainen et

al. 2019), this chapter proposes *a nonrepresentational approach to mediation* in scrutinising lived environmental relationships as they become manifest and emerge in sensobiographic walks.

Non-representational theory was originally developed in geography, but it now has wider disciplinary reach in foregrounding processes that precede conscious cognition, and in claiming that some knowledge cannot be represented. According to Nigel Thrift, the constant flux of life as material and embodied can be grasped by research that does not claim to reflect data simply collected from "reality" (Thrift 2008, 5–18). After the long struggles in ethnographic research with questions of representation and its relation to power (how culture is represented and by whom, e.g. Clifford and Marcus 1986), it is refreshing to think how to completely abandon representation as an epistemological starting point. Despite these welcome innovations, representations do still matter: social order is not fixed, and symbolic forms continue to involve meaning and power. These central insights of social constructionism remain important, but they alone are not enough, as their price is the divide between the world and its meanings (Harrison and Anderson 2010; cf. Pink 2015, 12).

On sensobiographic walks, lived experience and the remembering of meaningful memories are co-constituted situationally among the diverse participant elements of the walk: both research participants, researcher(s), seasonal and weather qualities, the changing landscape and it events. Environmental experience is formed among multiple material, human and more-than-human components, from bird sounds to noise-cancelling headphones.

Young people in Europe use the internet daily with mobile devices (94% in 2019, Eurostat 2020) and carry them almost everywhere. The use of digital media technologies is part of the sensory environment. At the same time, environments form special kinds of affective atmospheres (Anderson 2009). Ambiences or atmospheres denote situations involving a particular feel that does not belong clearly either to the perceiving subject or to the surroundings, but is co-composed by the activities and elements involved (e.g. Anderson 2009; Riedel 2018; Thibaud 2011). In an analysis of the sensobiographic method as a way to tackle mediations of sonic atmospheres, Tiainen et al. (2019) explored the emergence and remembering of sensory experience with (new) media and sound-related atmospheres. Our analysis demonstrated how musical and urban sounds, temporalities and human agencies affect – act on and react to – each other experientially and epistemologically: bodies, minds, technical devices, sonorities and space-times co-occur in relation to one another (Tiainen et al. 2019, 250–251).

Technological mediation, as it appears in the use of smartphones and other digital gadgets, is understood here as a situated and culturally, socially and historically bound emergence where the media devices, their uses and the agency of the users mutually take form in relation to each other (see Tiainen in this volume). Mediation includes particular things that operate, relate to, and affect each other at the social, technical, historical, local and material levels (Tiainen et al. 2019, 238–240; Kember and Zylinska 2012). In this emergent process personal experience and the environment are mutually constituted in transforming ways that are different for young people today in comparison to those who lived their youth before the digital age, which will be demonstrated in the subsequent data analysis.

Sensobiographic walks as a form of research data become a conjunction of various small transformative encounters and interactions. This is a relational approach, where phenomena are understood as fundamentally co-constituted. It shares some similarities with the concept of media ecology, which comprises a theory of the complex interplay between humans, technology, media and the environment and their mutual effects (Milberry 2012). Media ecology has been explored, for instance, in studying how media contents affect life in cities (Coleman et al. 2016). In this chapter, local and situational ecologies are understood through personal and shared multisensory experience immersed in more-than-human nature. These experiences that break down the disruptive division between the human subject and natural environment can be called, following Anna L. Tsing's thinking, "weedy assemblages". Weeds point to uncontrollable vitality of diverse agencies and materialities entangled in constantly transforming coordinations of different forces that relate to each other (Tsing et al. 2017; Tsing 2017). The experience of the environment is formed in interaction with diverse materialities ranging from mobile phones used for photographing, music listening and communication, to street pavements; from weather conditions to perceptions of plant and animal life. The urban natural environment and landscape themselves have agency in triggering and mediating narration and sensory remembrance (Järviluoma and Vikman 2013; Kantonen and Kantonen 2017). On the walks, space is co-constituted among the different elements involved, as an embodied world-making, worlding, where selves, others, and the environment and its atmospheric qualities become experienced (see also Aula 2023).

Talking of "urban nature" also stresses this fundamental co-constitutive mixture. When space is understood as relationally produced (Massey 2005; Harrison and Anderson 2010), and

the senses relativised (Howes 2019), nature in urban contexts also needs to be rethought. The concept of *more-than-human* attunes scholarly attention to how other life forms are prerequisite for human life everywhere. In ethnographic research interactions, often unnoticed forms of diversity can be explored by elaborating on Tsing's thinking of rewilding and weed-growing spaces as *contaminated diversity* (Tsing 2015, 27–34, 2017). Contamination refers to the millennial human influence on the development of natural sites and the diversity of multispecies entanglements, from extinction to co-evolution, that has been formative of all our environments. Humans are not separate from other forms of nature, but a part of multispecies entanglements, breathing plant-produced oxygen, carrying microbes, and usurping ecological surroundings. "Nature" cannot be simply places somewhere in the wild, away from urban contexts. Contaminated wilderness is present in urban contexts as well, especially in "urban wildscapes" (Jorgensen and Keenan 2012, 1), where natural as opposed to human agency appears to be shaping the land or where the "city's normal forces of control have not shaped how we perceive, use, and occupy them" (Sheridan 2012, 201). Despite efforts of control, the uncontrolled elements of playfulness, plant succession and bursts of diversity lurk in urban spaces (see Uimonen in this volume; Aula 2021).

By formulating (following Tsing) the notion of "weedy landscapes", this chapter proposes that the idea of contaminated diversity should also be applied when analysing the mediation of environmental relationships in urban contexts. Here the metaphor of weedy landscapes is brought into analysing the literal green areas in young people's experiences in their hometown. Former studies indicate that young people do find nature experiences in urban contexts. Kelley et al. (2012) suggest that "nature" is broadly conceived by urban youth in ways that transcend common distinctions between natural and built environments: "loose" spaces can be as evocative of nature for urban youth as conventionally natural locations. The limits of this paper prevent digging deeper into the similarities and diversity of the loosely determined understandings of "nature" among young people and in social research (Lekies et al. 2015; Descola 2013). It suffices, though, to move forward with "urban nature" understood as mixed spaces, formed in a co-constitutive entanglement of human and nonhuman agencies, that can be conceptualised as weedy assemblages (Tsing 2017; Aula 2021). Despite the increased research interest in mobilities and urban space (see Murray and Doughty 2016), one can find figurative weedy landscapes of social science imagination in urban wildscapes: those weedy routes that

people walk outside – and on the margins of – formally planned public space (see also Salmenniemi 2018).

Urban biodiverse areas need to be studied as sensed, remembered and lived also on the affective, precognitive level, where non-representational mediations of experienced atmosphere occur. This can be approached as processual and ongoing *worlding*. Thus, sensobiographic walks become a way to understand the converging of the personal into, not only the larger social contexts (Järviluoma 2021), but also larger ecological and more-than-human worlds. In the following chapters, the young research participants in Turku demonstrate how this mediated worlding of the urban green is co-composed with digital media technology in their sensory experiences.

Mobile technology in more-than-human city environments

One of the walks took place on a sunny October day, 2018, just north of the centre of Turku. With a younger and an older research participant, we walked a circular route which at one point took us near to the Aura River, where we could just glimpse the water behind the trees from the street.

> This section of the riverbank, especially on this side of the river, might not be the most popular area to hang out, like not in the same way as down there, closer to the centre. But back then we came to hang around here a lot, with my friends and my girlfriend at the time, in the summertime. This was a place where you could just be at peace like that.
>
> (Mauno)

Mauno is a young adult (born 1990–1994) whose chosen route runs near to the first flat of his own, where he moved to by himself in his late teens from a satellite town of Turku. It is a nice area, with a park next to the Aura River just around the corner. This part of the river, upstream from the centre, is an area where recent development of the city centre has not yet reached. Large

areas of the riverbank are still overgrown with wild bushes inhabited by birds and animals, cut through by a simple path on the waterside.

> I was one of the first to move to a place of my own, so this became where we'd hang out at night. . . . I remember it was just so quiet. For example, in the summer, when there are leaves on the trees, and there'd be a gentle summer breeze, you could hear the leaves swishing in the wind, which is kind of rare in the city, that you can pay attention to something like that. And generally, it feels a bit funny to say this, because of course we had a lot of technology and gadgets at the time, but I didn't even have a smartphone.
>
> **IA:** And neither did your friends?
>
> **Mauno:** No, not really.

For young Mauno and his friends this little wilderness afforded a site of peace and calm, where they could hear the trees despite the proximity of the centre. The absence of digital gadgets is significant. Mauno seems almost embarrassed to recall that there were no smartphones, which somehow strikes him as an odd contrast to something so taken for granted today.

> So we didn't have, like, what always, as it seems nowadays, it's so cheap and so easy to take a Bluetooth speaker with you, and then you can listen to music. Well we never had any music with us. We were there with those sounds of the city.

This passage brings up an interesting insight about technological transformation. Mauno remembers his late teen years of living independently for the first time with fondness and nostalgia, even though what he recounts took place only just over five years ago. The change brought about by mobile gadgets is so present in the everyday, that thinking about time without them, even a few years back, seems to require some imagination. Foremost, the (social) soundscape has become different. The peaceful sound of leaves in the trees and being there "with

those sounds of the city" is narrated into the past. Now, there would always be music for socialising.

It can be readily observed In the Turku data, that more and more people move around listening to their headphones or earbuds (also Uimonen 2021). In Turku, most of the younger research participants, aged 15–30, admit to listening to music when on the move, while some also like to listen to audio books or podcasts. Some examples show in which ways movement in urban surroundings seems to encourage the use of headphones for avoiding noise and creating private soundscapes as a form of personal agency. One of the young participants, Katja, lives a biking distance from the hospital where she works, and claims to listen to music a lot when going to town or while jogging. Another young participant, Linnea, recounts that she has different lists on Spotify for different moods, and she likes to pick her music for the occasion and the mood. This varies, sometimes fast rock, sometimes classical music when working out at the gym, or on the bus, and she tends to jump from one list to another impatiently.

Although listening to music of one's own in a public space can be understood as creating a sort of personal "sound bubble" (Bull 2007), there seems not to be a clear cutting off from the environment. Even with headphones, the music listeners also pay attention to the traffic, location, atmosphere, and so on. Rather than a separate bubble, choosing music can exercise a different kind of sensory entanglement with the surroundings as a form of agency in (social) space. Active music listeners among the SENSOTRA participants often pointed out that they also enjoy silence. When Katja takes her dog out after work, she prefers not to listen to anything, but to enjoy the calming silence of the riverside park without adding personal sensory impulses. Similarly, Mauno recounts the sounds of trees in the past, acknowledging the sensorial presence of trees as significant, albeit in a nostalgic tone. But the trees are still there, and their sounds can be listened to in the wind.

[Insert 15032-5907-PIII-013-Figure-002 Here]

<Figure 13.2 Warning sign, photo by Inkeri Aula>

An interesting comparison is offered by a young person interviewed in Brighton. Several of the young Brighton interviewees touch upon the subject of walking with their phones. In the city centre, there are also many visible signs warning about the danger of paying attention to your phone instead of the traffic.

EP: This way. So do you carry a phone with you when you walk here?

Lucy: Yeah. Yeah–-

EP: Do you use it while walking?

Lucy: No, not usually. I mean unless I'm, like, changing my music or whatever, because the earbuds are broken.

(Lucy, born 2000–2005)

In this passage, it is noteworthy that listening to music does not even count as "using" the device. Music has become so ubiquitous that in many ways it is taken for granted (Kassabian 2013). For the young people on the sensobiographic walks, listening or not listening to music has become a form of management of the atmospheres one needs to enter or to share with others in the city space. The young research participants often hurried to say that they also appreciate silence and that they often walk in natural surroundings without listening to any audio devices. In many of the narratives, music listening is justified as a way of blocking unwanted noise. This way the sensory environment is co-created with technological mediation.

Digital media technology is present in everyday sensescapes. In Finland, schools often allow the use of smartphones during breaks. Young interviewee Sanni (born 2000–2004) tells about using smartphones in school:

Sanni: Hmm. For example on breaks, most people are on their phones, they don't talk, or share what's up, so then that's usually done in class (laughs).

SP: Okay that's interesting.

Sanni: And it would be nice to actually chat and be in the situation.

SP: So you're next to each other, but on your own phones then.

Sanni: Yep.

SP: But maybe, perhaps they don't need to be mutually exclusive, so you could now and then . . .?

Sanni: Now and then, yeah, of course. But like sometimes it does exclude talking, sometimes it doesn't. Like you can be on Instagram and talk at the same time.

Portable digital technology follows these young people in their everyday activities. The smartphone is so seductive that it can beat talking directly to the people next to you. Another young interviewee, Anna, described her relationship to her smartphone as being "like a baby": it is always kept near you, and every time it makes a sound, you immediately pick it up. Anna also remarked that she was not listening to music all the time at the moment only because her headphones were broken. This was a common reason for walking without music for some other youngsters interviewed in Turku and in Brighton. If the technology works, it tends to be used.

Different material objects have affective abilities and agency in triggering actions (Gell 1998). Henare et al. proposed a radical new materialist epistemology by asking, can the thing speak? (Henare et al. 2007; Holbraad 2011). Smartphones do literally speak to us – often in the pleasant female voice of Google services. The smartphone creates cultural environments (Zhang 2015) and, as it combines many functions, the manner and content by which it addresses us is not only words. Routines of touching the screen and attending to the phone's presence include holding and hearing the device itself and relating to the communication channels it enables.

The smartphone also affords a way to represent yourself in the social world. Sanni's smartphone is with her on the walk to a natural park just two kilometres from Turku centre. Sanni enjoys long walks and does not like to hang out with her school friends, she has more online friends from different countries. When asked, she points out an old pine as her favourite tree.

SP: So what tree is this?

Sanni: Oh I don't know I just think it's nice to sit on it. You get nice pictures there. . . .)

IA: What kind of things do you like to photograph?

Sanni: Well a lot of like nature things, I like to take pictures of just like trees and of myself somewhere in between.

Sanni's excerpt demonstrates how digital media technology influences not only soundscapes, but also other ways of being present in both social and natural environments. Sanni's visual perception of the forest area is mediated by patterns of photographing: she is looking for environments where she can take a nice picture. She should be able to recognise the conifer as a pine, but somehow the naming skips her as unimportant. Her being in the forest is affected by the available technology, in this case the smartphone. Here, the relationship with more-than-human nature is co-constituted with digital technology and its visual affordances.

Yet, technological affordances do not determine the experience. Use of a smartphone camera, and the experience of the place with the tree that you can climb, touch, smell, look at, hear and sit on, become part of the same world in action. Sensory routines, technologies and more-than-human materialities become entangled. This is sensorial worlding. With digital media, the context is more complex than the tangible materialities; media needs to be studied with acknowledgement of their content. Instagram styles and patterns for taking photographs can also influence perceptual patterns on a walk in the woods that affect and involve the young people in urban nature.

SP: How often do you, when you go out about walking like this, do you put some nature pictures on Instagram or the like?

Sanni: It's pretty rare for me to share nature photos, because it's not fashionable as they say, and because of peer pressure I don't have the nerve to share them, then. [laughs a little]

SP: So what would be fashionable?

Sanni. Selfies. Obviously.

SP: Yeah.

Sanni: Overall, pictures with friends. Nature photos are like pretty rare among young people.

Although Sanni says she does not share many of her photos, the idea of taking a selfie is very much present in her visual way of being in natural surroundings. The visual appearance of the self in "selfies" is a novelty pointed out by some of the older research participants. For example,

Liisa (born 1946–1950) remarked that she has never taken a single selfie in her life. Not long ago, posing in a picture was not part of common visual culture in Finland, where modesty has been an important value. Contemporary selfie practice (Rettberg 2014) demonstrated in Sanni's excerpt shows that including oneself in the picture as a visual representation has become a common manner of visually relating with the surroundings. This seems to be a change brought about by mobile media devices.

Several of the young interviewees in Turku told about their regular visits to watersides, parks and city forest areas seeking relaxation: some of them have a dog to walk with, some go jogging, and some go deliberately for walks either alone or with someone. Often they stressed the importance of not listening to music on headphones; in these accounts, nature sites become associated with the peace of walking. There may, of course, be many reasons and motives behind the choice to not use an audio device. For Katja, music is important:

> **Katja**: Sometimes if I haven't listened to music for a long time, then, because music is important to me in such a way, then I might just listen to something when I go for a walk, too. But usually I'm so tired after work if I go for a jog I'm too tired for that. I'd rather, be in kind of silence, as far as possible.

In the sensorially overwhelming environment of urban life, peace in nature is sought after. It is not pristine nature that human culture would not have touched, it is also what Tsing calls contaminated diversity, but the watersides and parks do offer an atmospheric escape from intense technological mediation of one's surroundings.

Incessant attendance to the smartphone is also recognised as something harmful by many of the participants, who expressed critical views about excessive use of digital media. Without the researchers asking about it, several interviewees in the younger age group (at least Arham, Anna-Sofia, Sanni, Piritta) even claimed that they want – or are trying – to reduce their daily usage of their phones or of social media such as Snapchat, Instagram, YouTube and WhatsApp (mainly these were mentioned in the interviews in 2017–2019). Some also tracked their daily usage of particular apps.

At the same time, phones and other portable media devices are linked to positive memories and experiences. They have many practical benefits not only for communication but as navigation tools, sources of local information, a torch in the dark, and so on. Smartphones and other gadgets also function as tools for deliberate management of experiencing the environment. They can be used to match moods, times of day, situations and environments; albeit definition of to what degree this is dictated by commercial interests remains out of the scope of this study. Affective atmospheres and their management came up in the larger field data most commonly in relation to music and soundscapes, but also in other contexts. In the following section, affective experiences related to mobile technology and urban nature are analysed as valuable, without ignoring conflicts and contradictions.

Sensory diversity in weedy landscapes

Mental health problems are common among young people today. It has been found that being in nature is beneficial to mental wellbeing, including a sense of connection and care (Birch et al. 2020). Moreover, a growing corpus of microbial and ecological health studies has effectively proved the importance of biodiversity to human health (Roslund et al. 2020; Bell et al. 2019). In the sensobiographies of young Turku dwellers, even small patches of more-than-human diversity, as well as routes and spaces with trees, natural waters and green views, rose up as significant sources of wellbeing.

On an early summer's day, young designer, Lotta (born 1990–1994), currently on sick leave due to burnout, leads a walk to the forest area of Luolavuori accompanied by two researchers and an older interviewee, Martti, who also works in visual design (sensobiographic walk led by Lotta). Apple and cherry trees are blooming and the sun warms the walkers, but thunder clouds gather on the horizon. Both interviewees have precise information on weather predictions on an hourly basis, albeit from different mobile services, and Lotta has equipped the whole group with umbrellas and a raincoat. They turn out to be not enough to protect us completely from the rainstorm that descends upon us as we set out. Lotta enjoys the thunder and the sound of rain in the urban wilderness, a diverse forest area inhabited by foxes and deer just three kilometres from the centre.

The interviewees, who did not know each other before the walks, turn out to be experienced trekkers and familiar with camping in the woods. Both are quick to point out different plants by name and their properties. They also share similar ideas about the relation between noticing small details and observing a bigger picture. Earlier, when Martti led a walk in the centre, Lotta paid attention to architectonic details in a way that Martti could identify with. After the sensobiographic walks, Lotta made true her dream of getting a dog to walk with in the same forest. In a later interview, she says the puppy has made her even more sensorially sensitive.

> **Lotta:** So I've paid even more attention to all the hubbub and that, how many people there are. On the other hand, it's nice, you can hang out in a café and just watch people passing by, but on the other hand, it's like, help!

When noise becomes a nuisance, Lotta has opted for using noise-cancelling headphones. This is another way of co-creating the environment both inward and outward with the help of mobile devices. She recounts using them on the bus, on her bike, when walking in the centre, and on the train. Otherwise, she hears too much of the surrounding noise: children screaming, dogs barking, parents yelling into their phones and other peoples' loudspeakers. Her headphones block the sounds so she can rest in her own music, from piano to folk metal. The city centre makes her feel restless, so she has found ways to navigate her affective atmospheres with digital technologies. This is a method of sensorial atmosphere management available for many young Europeans today.

> **Lotta**: That's why I'm fond of the smaller places. Like there's that [name removed] place, it's so lovely. Before I had a dog I'd always, always go, well, after therapy I'd go there, take my drawing equipment with me and I'd just go there and draw and drink coffee or something. I could, like, spend an hour and a half there, and then just pack up my drawing stuff and go home. It's so, like, lovably small, such a quiet place.

Use of earpods or even noise-cancelling headphones is common in today's urban contexts. Inferring from the sensobiographic walks, these enable some level of management of one's own soundscape and mood by listening to music – or to something else, such as books. Crowds and busy areas can be demanding for people who experience overt sensitivity to sensorial impacts. Noisy urban spaces are emplaced situations, occurrences *in situ*, that afford affective atmospheres. Atmospheres have been characterised in different theorisations as a particular feel co-composed by the activities and elements involved. Atmospheres comprise a togetherness of sensual and spatiotemporal qualities and actors (Anderson 2009; Riedel 2018). In these theories, atmospheres emanate from certain space-times and the "bodies" or other terms participating therein, whilst impacting on them and, in turn, becoming qualified in the experiences of those present (e.g. Böhme 1993, 2017; Anderson 2009; Riedel 2018; Thibaud 2011; Riedel and Torvinen 2020).

For Lotta, who describes herself as sensorially sensitive, the atmosphere of the city centre requires affective management. She wakes up earlier than usual to go to the centre for her therapy sessions, and afterwards she often feels restless. In early daytime the centre is busy with people and noise, so she found that calming down in a quiet place before taking the bus home makes her feel better. Sitting in a cafe, drawing, without any hurry is relaxing – and simultaneously contributes to the atmosphere in the café. Urban space with its affective components also constitutes contaminated diversity, where diverse elements affect each other with transformative impacts. Vulnerability can be accepted and managed with different collaborations: finding niches of peace and calm, enjoying the company of a dog, and seeking forest paths.

Beneficial natural diversity in the city appears in the form of weedy landscapes, where nonhuman life forms flourish amid cultivated orderings. By following Anna Tsing's suggestion of noticing and observing weedy configurations and particular encounters, it is possible to perceive an alternate life in the city landscape that often goes unnoticed. Kuura (born 1990–1994) is a media student active in many spheres of DIY culture and art. Her school is located down river from the centre, and she can follow the river for most of her way to the school. Her chosen route passes upstream from the centre where the riverbank is lined, not with roads or boulevards, but with just a simple path with a few wooden steps in the greenery.

In the walking interview transcript the small, situated collective formed by Kuura, the older participant Liisa, and a researcher discuss the river at length. Seasonal changes and treat-searching waterbirds, the condition of the path in the spring and winter, and observations about walking or riding a bike on the path become mixed with stories, memories, and observations about personal life histories and the cultural history of the surrounding neighbourhoods. Yet, the sensorial atmosphere is difficult to grasp from the transcript. The author of this chapter did not participate in the walk, only in the reflective post-walk interview. When watching the 180-degree video recording, the atmosphere can be better related to.

Kuura walks with her bike, which gives a rhythmic sound to the background and the moving camera on her chest captures bird cherry trees in bloom and passers-by dressed lightly, indicating an exceptionally warm June evening. The light of a gentle summer night brings in clues of the scents and warm breezes. The blossoming bird cherries, which always emanate a strong, characteristic scent, the grassy shortcuts, the tall trees with full leaves, and passers-by in summer clothes, all evoke multiple sensations of a warm, early summer evening not visible in the transcripts. As at the time of writing, the COVID-19 virus is still fiercely spreading, it captures the writer's attention that only the fact that nobody is wearing a facemask distinguishes the route scenery from pandemic times: there are few people on the route, and they mostly walk or run alone.

The walk goes on a bit further from the riverbank and Kuura wants to try a shortcut. From the video, it can be seen how the path leads among large spruces to a dead end with no space to move forward. After returning to an open field with a view over the river valley, Kuura tells a personal memory of this spot:

> **Kuura:** I remember how last summer, I was supposed to go, there's Prisma [a supermarket] on the other side over there, I was going to pick up some things, and then. Well big shops like that are sometimes a bit difficult [for me], I was supposed to find something there, vanilla pods was it, I was supposed to bake something for my friend's birthday. So I tried to find them, I didn't, it took me an awfully long time. I got a terrible panic attack – and then I finally came here just to

> calm down for a bit. I came and sat there, I had an ice cream or something, a water bottle or something, and then I sat there [imitates heavy, distressed breathing]. You've got to pull yourself together now. Okay, I'm here in the lap of nature and now I'll just sit here for fifteen minutes, or half an hour, I can't remember any more.

The area is barely maintained, grass and bushes are allowed to grow, unlike in ordered parks. This bloom of wilderness functions as therapeutically relaxing site for Kuura after a stressful hypermarket ambience. A little further downstream, the river bends. From the meadow, you can hear the water rushing over stones. The path that follows the river upstream splits into various pathways through tall grasses, and there are hardly any people around, even at busiest time of day. The bushes conceal significant populations of pheasants and other birds along with red squirrels and hares as well as elusive foxes and even-harder-to-spot deer and badgers.

SP: Well this is a really good place to relax a bit after something like that-

Kuura: After a terrible shopping centre ordeal.

SP: Even that sound is really therapeutic somehow. [sound of flowing water]

Liisa: It is.

Kuura: Except the pheasants that sometimes. . . . There's always that noise, and I. . . It's woken me up so many times that it's like. . . a proper trauma.

SP: It's there in your subconscious. As this nasty sound.

Kuura: Bloody pheasant.

The colourful pheasants are not native birds. They were introduced to Finland at the beginning of the twentieth century for hunting and have continued to thrive due to wintertime feeding; they are part of the contaminated diversity of this weedy landscape. The contradictory affects they arouse bring up situated ways of coping and relating with the surrounding animal life. Kuura's

excerpt shows how even on the less walked riverside, one does not find only pure peace and harmony. Contradictions are part of the contaminated diversity.

In biodiverse environments these weedy configurations of different forms of life making their ways in the same space are noticeable, they entail the entanglement of different modes of being in the world (Tsing 2017\\home.org.aalto.fi\aulai1\data\Documents\sensory transformations book taitto\15032-5907-FullBook.docx - Ref_697_FILE150325907PIII013, 7, 17). Projects founded on modern faith in progress, such as centralised urban planning directed by economic growth and profit, have in many ways colonised other modes of living in the city. Discovering these other modes can aid in recovering the multiplicities of urban environmental experience.

Conclusion: mediated attunements with affective atmospheres

Our technological environment has become increasingly digitalised. The objective of this chapter has been to find out how digital media technologies affect young, city-dwelling people's everyday sensory relations with their more-than-human environments: the urban green. This study has shown that digital technologies are entangled in young people's experienced, sensed and lived environmental relationships in complex ways. The themes identified in the sensobiographic material from Turku produced with people born between 1990 and 2005 (aged 15–30) can be interpreted as means of sensory attunement with affective atmospheres.

A recurrent topic in the research material is the constant and generalised use of smartphones for listening to chosen audio content in mobile situations. Movement in urban surroundings, including public transportation, seems to encourage the use of headphones for avoiding noise and creating private soundscapes as a form of personal agency. Another recurrent theme is how the young research participants tell of their regular visits to watersides, parks and city forest areas seeking relaxation, also without listening to headphones.

As a consequence of this general affinity, the young research participants' common choice for their sensobiographic walk was in a natural site of some kind. Urban green areas enable biodiverse life in close proximity to city dwellers. Interpretation of the qualitative data from these young people's sensobiographic walks shows that urban forest areas and parks are

crucial in forming and maintaining relationships with the environment. This chapter has brought together the perception of technological mediation of experiencing one's surroundings, and the perception of importance of biodiverse urban green areas. The notion of weedy landscapes captures metaphorically the multisensorial entanglements in co-constituting the environmental reality and personal experience. At the same time the notion defines literally the contaminated diversity of urban green where these young people walk. (For further sensorial approach to weedy landscapes, see Aula 2021.)

Both the use of headphones and the route choices – for example on the riverside and through parks instead of busier streets – relate to mood control and wellbeing. Smartphones are constantly used in social situations. Young research participants also expressed criticism towards excess use of smartphones and other digital gadgets by themselves or by their peers. Many stressed that they enjoy the peace of walking or jogging in natural surroundings (often alone or with a dog) without using their devices. Essentially, both mobile technology and choice of urban nature routes are used in attuning to desired affective atmospheric qualities of the environments.

Digital media technology as a part of the everyday is often an indispensable participant in sensory environmental relationships. Smartphones are an element of being-in-space for the research participants, who utilise them in diverse ways in relating with their environment: as a music device, camera, recorder, social media channel or a torch. Beyond soundscapes, also visual attention and being-in-space are affected by digital media devices such as the smartphone. Often, the motivation to spend time in nature involves taking nature photographs and selfies in natural surroundings. However, technological affordances do not determine the experience. For example, the use of a smartphone camera and the experience of a place, such as encountering a favourite tree to pose with, are mutually constituted. Selfies present a clear transformation from previous generations, who would not see themselves, in such an everyday manner, as part of the landscape to be photographed.

The young interviewees also recounted different experiences of vulnerability from mental distress, loneliness or bullying, to sensitivity to sensorial affects. Vulnerability comes forth in the sensobiographic material together with agency in the management of sensorial surroundings or atmospheres. Excess noise that causes distress is overcome with noise-cancelling headphones; a terrible ordeal in a shopping crowd is balanced by sitting in a green meadow by the river. In the entanglement of different forms of life in urban nature there are several vulnerabilities, even

threats of extinction. Trees, plants, birds and mammals alike are constantly threatened by city planning and maintenance. Different vulnerabilities come together in the city's contaminated diversity, also in fruitful and beneficial encounters. Young people have limited power to manage the atmospheres of the city. Nevertheless, the use of technology and seeking out natural spaces both serve exactly that purpose, as ways of attuning with the environment. Young urban dwellers attune with different sensorial environments using the technologies available to them.

One finding of this study is that even small natural stretches in the city, such as parks, wooded areas and watersides with diverse, less maintained greenery, offer deeply beneficial experiences to the young people interviewed – both with and without their digital devices.

Data

Anna, Turku, 2018, younger person, sensobiographic walking interview, Pair 19

Interviews cited from the SENSOTRA archive. Pseudonym, city, year, younger/older interviewee, form of interview, number of the pair of research participants.

Katja, Turku, 2017, younger person, sensobiographic walking interview, Pair 1

Kuura, Turku, 2018, younger person, sensobiographic walking interview, Pair 14

Liisa, Turku, 2018, older person, sensobiographic walking interview, Pair 14

Linnea, Turku, 2018, younger person, sensobiographic walking interview, Pair 3

Lotta, Turku, 2018, younger person, sensobiographic walking interview, Pair 13

Lotta, Turku, 2019, younger person, deep dialogical interview, Pair 13

Lucy, Brighton, 2019, younger person, sensobiographic walking interview, Pair 1

Martti, Turku, 2018, older person, sensobiographic walking interview, Pair 13

Mauno, Turku, 2018, younger person, sensobiographic walking interview, Pair 28

Sanni, Turku, 2018, younger person, sensobiographic walking interview, Pair 2

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