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# Tokyo behind Screens: Participant Observation in a City of Mobile Digital Communication

Florian Purkarthofer

## Abstract

This paper critically discusses the method of participant observation (as ethnographic method and everyday practice), which consists of participation, observation and mediation, and suggests adjustments, through the lens of perception, which seem necessary in smartphone-saturated cities. The author argues that digital and material forms of mediation lead to different possibilities and limitations of sensory perception. These therefore need to be consciously acknowledged in the social production and construction of space and place. Through a focus on human perception, the challenges that individualised on-site media consumption provides to the concepts of participation, perception and mediation are discussed. In this regard, the interface, most prominently the screen, functions as a nexus that retranslates information through mediation back into the field of human perception. Mobile digital communication can therefore enrich the sphere of perception (at site), but what is digitally mediated is at the same time constrained by the technical and translational possibilities of the medium and the interface. The case study of the Shimokitazawa Curry Festival in Tokyo is used to show how participation, multisensory perception and mediation are practiced in an urban setting. The same case also provides empirical data concerning multisensory participation as a method that is facing new challenges through increasing mobile digital communication.

**Keywords:** Tokyo, Curry Festival, participant observation, anthropology of the senses, digital communication, screen

## Welcome to a city of screens

To reground the anthropology of the senses, our first priority must be to restore the virtual worlds of sense to the practicalities of our sensing of the world. (Ingold 2011: 317)

Participant observation as an academic method and as a way to understand user-generated media content remains as useful as ever for the study of our presence in the world and also our perception of the world. But it requires adaptation to and reflection of the mobile interfaces and digital communication that augment our perception and use of space.

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In many literal and metaphorical ways, Tokyo is a city of screens: there are screens in front of windows that protect against the sun or mosquitos (*amido*), folding screens (*byōbu*) and sliding screen doors (*fusuma* and *shōji*), and there are emotional screens that people carry to shield themselves from the society around them, as people in all cities do (cf. Slaatta 2006). Additionally, there are large LED screens in front of stations, like the Alta screen in Shinjuku or the many screens at Shibuya crossing. There are also an increasing number of screens in trains and subways, in department stores and of course the uncountable number of small screens in the hands and pockets of the city's residents (cf. Sneep 2017, Hansen 2018, Baron / Af Segerstad 2010). Urban spaces are full of interfaces that either limit perception (like a partition), show perceptible information (like a video screen) or do both at the same time (like a smart phone screen). The smartphone enables users to perceive visual and auditory information, while simultaneously limiting the perception of one's surroundings and obstructing other people's view of the smartphone user.

In this paper, I critically discuss the method of (multisensory) participant observation (PO), which consists of participation, observation and mediation. I also suggest adjustments that are necessary in smartphone-saturated cities. Digital and material forms of mediation lead to different possibilities and limitations of sensory perception. They therefore need to be consciously acknowledged in the social construction of space and place.

While engaging in PO of the perception of public space in neighbourhoods in western Tokyo,<sup>1</sup> my fieldnotes became permeated with observations of smartphone usage in various situations: while walking, riding a bicycle, driving a car, sitting, standing, smoking, but also while shopping alone or in groups, talking, listening to others talk, queuing in front of restaurants, ordering, eating, drinking and many more. My method was sufficient for the purpose of my study, as "ethnographic methods [should] document empirical operations and communicative practices as they appear and disappear in real time" (Lee 2008: 458) on location. At the same time, my research led me to doubt the possibility of understanding human (inter-)actions where the causes and results of these actions were often communicated solely through digital interfaces, mostly smartphone screens.

These interfaces enable users to consume and contribute to individualised digitally mediated discourses about location while on location. The everyday use of digital interfaces as modes of mediation necessitates rethinking our understanding of the social construction of space and place (cf. Low 2009, Horst / Miller 2012a). "In Japan social media has become an integral part of everyday life" (Gerster 2018: 17), and therefore the existing theories need to be discussed and transformed accordingly (Horst / Miller 2012a: 107; Seligmann /

1 The empirical data, observations and examples are based on my PhD project "Exploring the Nexus between Individual Perception and Social Construction of Urban Spaces" (working title).

Estes 2019: 5–8). Existing anthropological research on Japan mainly covers ontological questions: Ito Mizuko et al. (2005), Corinna Peil (2011) and Matsuda Misa (2014) elaborate mobile phone use in various (social) dimensions, Deirdre Snee (2017) explores the influence of smart phone use on everyday street life, Michael Fisch's study on commuter trains (2018) includes cell phone usage and Paul Hansen's article (2018) regards touch as well. In addition, ethical questions are raised by Julia Gerster (2018) in her discussion about social media use in the disaster-struck Tōhoku region.

However, the use of mobile digital interfaces must also be addressed as an epistemological question. We need to ask how perception in a city of screens functions, and therefore how anthropological concepts of space and place need to be adjusted and reframed. Additionally, research methods need to be probed with regard to potential blind spots and their a priori paradigmatic foundations. In this paper, I suggest adjustments that seem necessary in smart-phone-saturated cities. This does not mean that society or the human condition have completely changed, but it implies that variables that seemed static in the past are actually changeable and need to be treated that way.

An anthropological perspective on mediation [...] is largely concerned with understanding why some media are perceived as mediating and others are not. Rather than seeing pre-digital worlds as less mediated, we need to study how the rise of digital technologies has created the illusion that they were. (Horst / Miller 2012a: 105)

The same holds true for participation, which has long been interpreted as a spatial function in a geographical sense, e.g., staying in a certain place for a certain time. Due to digital anthropology this perspective has broadened. It now encompasses various forms of participation in (virtual) social activities (cf. Varis 2015: 62–63). Ito accordingly advocates a “reconfigured methodological toolkit” and calls for “designing new observational methods [...] that span physically demarcated localities” (2005: 11). To summarise, various scholars favour a new discussion of concepts and methods against the backdrop of mobile digital interfaces. The following thoughts illuminate these discussions in a review of the anthropological method of PO in an urban setting through the lens of perception.

## **Participant observation as a multisensory tool for urban research**

“Proper ethnography” involves, according to Clifford Geertz, “going out to places, coming back with information about how people live there, and making that information available” (Geertz 1988: 1). In short, it involves participation (taking part), observation (perception) and mediation (transcription and

publication). This also describes the basic logic behind participant observation (PO): the researcher is in the same (foreign) location – socially, spatially and temporally – as the social group she studies, so she can observe what the informants are doing, enacting and communicating (Howell 2018: 2). Although “[p]articipant-observation is not a clearly defined practice”, it is a central and constituting method of anthropology (Howell 2018: 3). PO as an ethnographic method that embeds the researcher in the field as a whole sensory being has always been multi-sensory. It emphasises and focuses on the sensory density of human interaction and everyday life. It also faces the problem of how to record, describe and deal with olfactory (cf. Henshaw 2014), taste and touch sensations. However, the epistemological question of where the limitations of these senses are and how they are constituted and configured is of fundamental importance if the general context is changed (for example through the intensified use of mobile digital communication). I would therefore like to underline the necessity of rethinking the multisensory elements of PO<sup>2</sup> by not only focusing on possibilities but also on the limitations and problems (cf. Seligmann / Estes 2019: 16).

I propose a sensory-aware version of PO as a method involving a “reflexive discussion of sensory ethnography practice in ways that make the processes and techniques through which they have produced knowledge open and accessible” (Pink 2013: 263–64). While classical PO is a viable method to gather information about a shared public sphere or a private group (cf. Pink 2009, 2013, 2010; Low 2015), it is now being challenged by the common practice of mobile, individualised and diversified media consumption (cf. DeNicola 2012). The mobile use of digital equipment has changed what is possibly perceivable as well as possibly participable.

Regarding location, I follow the conception of space and place by Setha Low (2009) who provides an anthropological reading of Henri Lefebvre (1991), Michel de Certeau (1998) and Michel Foucault (1991). In her “multidimensional model of space and place” social relations are the basis that necessitates materiality through embodiment and language to function as a medium of discussion (Low 2009: 34). *This Space as Mode of Mediation* can be approached hermeneutically as a text, whose meaning can be read (Aucoin 2017: 405) on the condition that the text is perceived and decipherable.

It is therefore necessary to ask how to apply ethnographic methods and approaches in urban studies and sensory anthropology, without ignoring the broad variety of practices of digital communications. *The Second International Handbook of Internet Research* (Hunsinger et al. 2019) or the *The Routledge Handbook of Language and Digital Communication* (Georgakopoulou / Spilioti 2015) are more general publications, but empirical studies (Kita /

2 Thereby following Ingold 2002, 2011; Pink / Howes 2010; Hansen 2018.

Yamada 2017, Quercia et al. 2015) exist as well, approaching perceptions of urban space through digital communication or data. However, these studies deal with translations and “transcriptions” of perceptions, thoughts and feelings (cf. O’Dell / Willim 2013: 316). In this regard, it is important to recall that the act of transcribing is an editorial one and “includes a selection process” (O’Dell / Willim 2013: 317). This also holds true for technical forms of transcription such as photography (visual) or audio recordings (auditory), and even more so for information transcribed by autonomous technical sensors, such as surveillance cameras or weather stations. The selection process in these (technical) cases is inscribed in the programme. The technical construction determines the possibilities of perception and transcription (cf. Flusser 2000: 33–40).

The academic output regarding sense-sensitive ethnographic methods – called “sensory anthropology” by Sarah Pink and “anthropology of the senses” by David Howes (Pink / Howes 2010: 331) – is currently a lively topic of discussion (cf. Ingold 2011). Even though there are methodological discourses on this (cf. Low 2015), (digital) mediation is only marginally approached. The same could be said about the rich urban studies research output (cf. Nasar 1989) focusing on Tokyo (cf. Imai 2017, 2008), that provides detailed empirical studies and frameworks but refrains from tackling the methodological problems of mobile digital devices. Only recently do we find research that is strongly committed to technology as urban praxis (cf. Sneep 2017) or as a substitution for human perception in a smart city setting (cf. Verma et al. 2019).

## Sensory systems and their limitations

Participant observation is based on conscious perception. In particular, communication practices are in the focus of attention and these can be limited to only one sensory category. For example, music, radio or voice-calls are limited to hearing, or text and pictures shown on a screen are only accessible through visual perception. These practices can also be combined to involve multiple sensory categories, like the smell of incense sticks and the ringing of a temple bell. It is important to understand that each receptor needs an adequate stimulus, a stimulus with sufficient intensity to exceed the sensory threshold that allows it to be perceived (Smith 2008: 34–36). This tuning between receptor and stimulus is a nature and nurture combination process mediated over a longer time through the “physical features of the world we live in” (De Lange et al. 2018: 766). The expectations we create based on our (socially and culturally influenced) experiences shape our thoughts and anticipations, and they also sharpen or dampen perceived stimuli (ibid.: 764–771, Ingold 2002: 157–171).

The work of Itō, *How Are People Who Can't See Seeing the World* (*Me no mienai hito wa seikai o dō miteiru no ka*, 2015), for example, is very insightful in this regard. Itō worked on perception by people with disabilities, showing that their world (view) is not “lacking something” but is different due to the abilities of their senses, and that this is true for every individual. The convenient but misleading supposition that everyone perceives in the same way, as Uexküll (2001: 109) pointed out, creates a strong confrontation between “normal” and “disabled”, resulting in the view that the latter are somehow “handicapped”.

In addition to biological receptors, there are also a large number of technical receptors (like a magnetometer or a gyroscope in a smartphone) known as sensors, which are able to perceive, for example, gamma radiation (Geiger counter), electromagnetic waves outside the visible spectrum (infrared photo-sensor), and many more. There is the possibility of translation between the senses, so that information detectable only by one receptor can also be perceived by another. The mother who reads a street sign to her preschool child is a simple example for this, as is the constantly uttering radio in the back of a shop, which does the same work of translation for its owner, receiving electromagnetic waves and translating them into sound waves. These forms of translation from one sensory category to another transmit only part of the information. Some information is altered, and other information might not be translated at all. It is important to note that while the street sign might be unreadable to the child, it remains nevertheless perceivable. Electromagnetic radio waves, by contrast, will never be perceivable by any human. There is no problem of comprehension here, but rather one of perception. The need to have a technical receiver that can translate the (digital) information into a form that is perceivable for humans is the crucial point. It is also the reason why I have repeatedly emphasised that the screen is the most important contemporary representation of this interface. Screens (and headphones) are omnipresent because they are the best match between the possibilities of human perception and digital (binary and electronic) communication.

Let us next consider the limitations of the sensory systems with regard to biological as well as technical aspects. First, a distinction can be made between distance senses (such as visual and auditory senses) and contact senses (such as taste, touch and thermosensitivity). Olfaction is delicate, because it is based on chemoreceptors and therefore needs direct contact with molecules to be detected. However, in a lived world environment, these molecules can be carried over kilometres in the atmosphere. This also holds true for hearing. This leads to the second layer of distinction, dividing the human senses into energy-based senses and molecule-based senses. Mechanoreceptors, photoreceptors and thermoreceptors detect energy level changes in form of electromagnetic waves or oscillation, as well as forces that affect the human body.

These energy-based senses are somehow transmittable via digital communication through an adequate interface. A speaker, a display and a vibration device are the producers of such perceivable information in a cell phone. By contrast, the chemoreceptors are based on molecules that cannot be transmitted by electromagnetic waves or produced from an energy supply.

The third layer of distinction regards the level of measurement (or scale of measure), which corresponds to the second layer of distinction. Energy-based sensations refer to a ratio and interval scale, while molecule-based senses detect nominal (discrete) scale values. While energy-based sensations are transmittable through information and then made perceivable through energy conversion, molecule-based senses need transportation instead of transmission because they have very limited possibilities of matter conversion. A camera can detect the wavelength and intensity of electromagnetic waves reflected by a pinch of curry spice and then transmit this information to a screen, where wavelength and intensity are technically reproduced. The smell of a pinch of curry, by contrast, is a distinct variable. Even if describable as information by listing all the molecules and their percentage, it is not technically reproducible somewhere else through the use of energy.

The sensory differences and limitations of spatial media and space as modes of mediation should now be clear. We have also noticed the effective match between energy-based senses, digital communication and smart phones as interfaces. With the growing number of (digital) spatial media as an important factor that shapes the “experience of spatiality” (Leszczynski 2015: 745), a preponderance of visual (and auditory) sensations is obvious. As we will see below, attempts are made to translate and communicate smell and taste through pictures and text. On the other hand, a stronger urge to control information affects not only spatial media. For example, Paul Roquet (2016) showed in his book *Ambient Media* that by engineering and controlling sensory information in urban environments (e.g., in shopping malls or elevators), we see space as a mode of mediation drawn near the communicative processes of spatial media that is marked by a limitation of the perceivable.

## Participation: A shared space and place

Mobile media individualise perception and provide immediate augmentation. This results in diversified discourses that dissolve a shared environment. Participation means that the act of sharing can take place. This can be performed through sharing a geographical location, using space as a mode of mediation in order to enable proximity, contact and interaction. Sharing can also take place through other media, such as user-generated digital communication that



allows for contact, interaction and relational proximity. If (digital) communication refers to a location, it is called spatial media. This is where the discourse about space happens. Combining the two – participating in both space as a mode of mediation and spatial media – implies participation in a shared environment (local public sphere). However, individualisation and fragmentation can dissolve this local shared environment through multiple simultaneous but separated discourses (cf. Foucault 1991).

### Disintegrating field sites?

By studying perceived urban space in times of digital communication, the definition of the field site has become problematic. The concepts of geographical place and socially constructed space no longer overlap (cf. Low 2014, Lefebvre 1991), but Ingold's statement about fieldwork and the resulting idea of a field site is still very much to the point:

[Participation] is what makes anthropological fieldwork possible, for it allows the fieldworker and local people to inhabit a common ground of experience, even though each may bring to bear a radically different conceptual frame to the task of its interpretation. (Ingold 2002: 167)

The contemporary practice of immediate telecommunication, and through it augmented perception through screens, is marring the validity of this statement. The “common ground of experience” (Ingold 2002: 167) is starting to crumble under the siege of individualised mobile interfaces. Hence, taking (digital) communication relating to space into account, i.e., “spatial media” as defined by Leszczynski (2015: 729), the definition of the field becomes more complicated. As Piia Varis stated,

[the u]nderstandings of space and place – and indeed, understandings of what constitutes ethnographic “field” – have also been complicated by the fact that mobility is increasingly not confined to physical movement. (Varis 2015: 58)

Mobility and accessibility – not necessarily linked to physical location – fracture or disintegrate the classic idea of a somehow contained or at least distinguishable area of field research (cf. Castells 2013, Seligmann / Estes 2019).

In my own research in Tokyo, the processual approach was helpful at the beginning. It led to the selection of two starting points for my ethnographic fieldwork. The commuter train intersections Shimokitazawa<sup>3</sup> and Meidaimae were both experiencing and expecting major changes in the physical structure of public spaces and train lines at the time (cf. Sand 2013). Because biological perception is triggered by stimuli, such as changes in the environment of an organism (Smith 2008: 33), these places were ideal for observing spatial perception.

3 Existing scientific literature deals with the shopping streets in a global context (cf. Zukin et al. 2016), the protest movement and its community (cf. Miura 2016), and the microeconomic situation (cf. Hattori 2012).

While my first week of fieldwork – full of participant observation and casual interaction and conversation with informants in public spaces – could be described as somehow successful, the urban practice of everyday and ubiquitous smartphone use made it clear that the smartphone as interface (cf. Galloway 2012) was omnipresent. The information it contained, however, was not for the observing ethnographer. Deirdre Sneep, who dedicated her dissertation to the study of cell phone use in Tokyo, gets to the point by stating that “[t]he ‘smartphone walker’ has become a standard part of city life” and that it is a phenomenon worth studying (Sneep 2017: 78).

The problem is that only the device, i.e., the outside surface of the smartphone, is visible, while the programming and content behind the screen, and therefore the act of communication, remain invisible in public space. In such a situation, it is tempting to construct a dichotomy of real space vs virtual space, or physical space vs cyberspace, as many did, and were subsequently criticised for (cf. Leszczynski 2015: 743–746). Even though the metaphorical use of virtual spaces and cyberspaces needs to be acknowledged, in addition to different usage of these concepts in other disciplines and approaches, it is important to recall that the information is not perceived in cyberspace but through the screen (the interface) at a specific location (Hansen 2018: 6). A shattered smartphone screen, for example, ends the possibility of perceiving the digital information at that precise location.

We can therefore say that while PO in public spaces is useful for participating in space as a mode of mediation and while it results in a rich quantity of sensory impressions, this method is less rewarding when it comes to studying participation in digital spatial media. Through the possibility of privately communicating in public, digital media often strips away the contact and interactional aspect of participation in space as a mode of mediation, surrogating it in highly fragmented spatial media. Michael Fisch (2018: 51) described this pointedly by writing that “the silence of the packed train [...] as well [as] the various forms of media – from cell phones to screens to posters – [...] have become essential features of the commute in recent years”. This generates a fractured environment that includes spatial proximity as well as communicative distance at the same time. Of course, not all spatial media are digitally transmitted by screens. There still exist verbal, visual and other multisensory communications and contact. However, the social construction of space is biologically based on contact and interaction. Next, we will therefore turn to a discussion of the influence of individualised spatial media on a shared environment.

## Sensory-based socially constructed spaces

Many critical geographers<sup>4</sup> regard space as a “material and social reality, that is constantly brought into being through embodied socio-technical practices” (Leszczynski 2015: 735). The way human beings are connected to this socially constructed space is through perception, i.e., their senses.

At the beginning of the last century, the influential biologist Jakob von Uexküll developed theoretical notions of how organisms perceive their environment (*Umwelt*). He stated that only through our “sensory organs” can we “transform stimuli into properties”, and furthermore that we must learn in small steps “that familiar objects are not small but remote” (Uexküll 2001: 108). These findings are confirmed by modern biology,<sup>5</sup> and they are also compatible with social system theory (cf. Luhmann 1984). We are, in short, separated from all other beings by the limits of our senses, but we are also connected to the world around us.<sup>6</sup> Therefore, through our senses we are connected to other beings that share this world. Uexküll also took into consideration that

[...] the idea of an objective universe, that embraces all living things, is undeniably very useful for ordinary life. The conventional universe, where all our relationships to our fellow human beings are enacted, has brought all personal *Umwelt* spaces under a common denominator, and this has become indispensable for civilized human beings. Without it, we cannot draw the simplest map, because it is impossible to combine all subjective points of view in a single picture. (Uexküll 2001: 109)

This acknowledgment of the social construction of reality is the necessary link that bridges the gap between materialists’ and constructivists’ understandings of the world through communication.<sup>7</sup> Communication is understood here in a broad sense as “the sharing of meaning through the exchange of information” (Castells 2013: 54), and “[a bit of] information is a drawn distinction based on a perceivable difference” (Luhmann 1984).<sup>8</sup>

How does this insight help us to deal with digital communication and space from an ethnographer’s perspective? First, it proves that so long as we are unable to perceive in the same way, we need to construct a shared environment – in this case a shared idea of space – to enable any meaningful communication and civilization. A shared environment can be understood as an *argumentum ad populum* that is constructed from a multitude of individual differing

4 For example, Lefebvre 1991, Massey 2005, Weichhart 2018.

5 Cf. De Lange et al. 2018, Smith 2008.

6 Tim Ingold’s work (2002: 153–287, 2011) focuses on this point from an anthropological perspective in detail as does that of the above-mentioned Sarah Pink and David Howes, but also Michael Jackson and Paul Stoller.

7 Uexküll was not the first to do this, but others have pointed out similar mechanisms (cf. body and mind in Spinoza’s *Ethics*, Karl Jaspers’ discursive truth and Wittgenstein’s thoughts about things and facts).

8 And Luhmann 1992, following Talcott Parsons and Gregory Bateson: “a ‘bit’ of information is definable as a difference which makes a difference” (Gregory Bateson: *Steps to an Ecology of Mind*, Chicago University Press, 1972, p. 315).

perceptions through participation. We are therefore not constructivists by choice, but by necessity. Therefore, the *argumentum e contrario* is that if we are not communicating with each other (but only beside each other), we are creating parallel environments that are not collectively shared.

Secondly, it is important to understand that *Umwelt* is not the space around us but rather what our senses are capable of discerning of its stimuli. It “reveal[s] the ways in which physical spaces are always-already information spaces”, and thus the “experience of spatiality (as material socio-spatio-technical relations) [is] as always-already *mediated*” (Leszczynski 2015: 745, emphasis in original). This means that (digital) spatial media and space as a mode of mediation do not contrast each other – such as a “cyber space vs real space” distinction would imply. The two coexist and both are needed for the social construction of space. The difference between these two is based on the characteristics (limitations, potentials and degrees of freedom) of the media that structure the ways of communication (cf. Castells 2013: 54–136) and the possibilities of perceiving them. It is possible to avoid participation in (digital) spatial media by avoiding communication, or by only consuming spatial media and therefore being unperceivable by others. Regarding space as a mode of mediation, it is highly complicated to avoid communication in daily life, because by our bodily existence we leave perceptible traces in space. Furthermore, space as a mode of mediation allows for a broad variety of perceptions, while spatial media are highly limited.

## Perception: Screening the city

We have seen above that space is constructed through both spatial media and space as a mode of mediation, and that spatial media are consumed and partly constituted by screens (on mobile digital interfaces) on site. This diversifies what is individually perceivable, resulting in networked forms of communication. By contrast, space as a mode of mediation allows for multisensory communication in spatial proximity. Through increased attention to the human sensory system, I try to show in this section that the feeling of difference between spatial media and space as a mode of mediation is mainly caused by the sensory dearth of the former and the (unavoidable) sensory fullness (or even overflow) of the latter. Space as a mode of mediation is also difficult to control, which is why spatial media (especially through mobile screens) are used to draw the focus to specific sensations or information, creating an augmented space. The Shimokitazawa Curry Festival can serve as an example to demonstrate how taste and smell are rich in information. These are therefore regarded as important for PO, because they add layers of contradictory, confusing and

unconscious information to places and they contribute the “finer points” of a multisensory dataset. The ethnographer as author or composer faces the familiar problem of having to put in academic prose what is otherwise extremely difficult to verbalise and transcribe. The same is true for user-generated social media, in which sensory input needs to be transcribed.<sup>9</sup>

The following sentences are based on the field notes I wrote in the Kitazawa Branch of the Setagaya-ku government building, while waiting for a counter to open. I walked through the eastern part of Shimokitazawa (SK), where the newly built bridge of the Keio Inokashira-Line<sup>10</sup> spans the north-south running Chazawa-dōri, which is, with a proper lane in each direction, a major street for the surrounding area:

Monday, 15 October 2018, around 7:45 am. Crossing the street [Chazawa-dōri] to enter SK through the green metal gate into *Shimokitazawa minamiguchi shōtengai* [SK south exit shopping street]. There is no south exit at the moment, due to the construction work, but the name remains. People in business suits rush by in the direction of the train station (new south-west exit). Apart from this herd of exhausted-looking individuals, the streets are deserted, the shutters of the shops and restaurants closed. Only garbage bags clutter up the street. Passersby seem to hold their breath.

It smells bad. A mixture of spices (curry and chilli), oil and alcohol, some cigarette butts in between. A menagerie of abundant cans of *chūbai*<sup>11</sup> decorate a small brick wall, contributing artificial grapefruit (?) to the smell mix. The smell changes in composition and intensity by house and street. It is ubiquitously awful: the last stage of a wasted weekend. The stronger-than-usual curry note is probably a legacy of the Shimokitazawa Curry Festival, which ended the day before. The bags are awaiting the approaching garbage trucks, which collect the remains of consumption two times a week (Mondays and Fridays), starting around 8 o'clock in the morning.

The communication processes and sensory restrictions of academic articles do not allow me to include a smell sample (I am sure readers will be happy about this), but I hope the description allows one to imagine the olfactory sensations. Without any certainty that the smell of that Monday morning was altered due to the Shimokitazawa Curry Festival, I would like to take this as an example of how important the multiplicity of information that creates reality really is. This Curry Festival, for instance, is an example of the “inextricably linked” (Graham et al. 2013: 465) nature of space. While the “curry part” of the event is only perceivable at the location through gustation and olfaction, the “festival part” is not so much present in the streets (except to some extent at the main square in front of the train station) due to the decentralised nature of the festival, but it accumulates in spatial media. Numerous shared pictures, videos and comments of participants (under the Japanese hashtag *#shimoki-*

9 Cf. O'Dell / Willim 2013, Geertz 1988.

10 A commuter line connecting the Tokyo Sub-Centre of Shibuya with the popular suburb of Kichijōji.

11 *Chūbi* or *chūbai* is an alcoholic drink mixed of some kind of fruit soda and hard liquor, resulting in an easy-to-drink beverage with an alcohol content of 3–9%.

*takarēfesu*) together with the social media presence of the organisers – the company Ai Rabu kk. and the Shimokitazawa Business Association – provide a substantial collection of mostly visually perceivable information<sup>12</sup> and a sense of the feeling of the festival. Long before the 10-day event starts, and long after it has ended, the mediated discourse cultivates the field by triggering the idea of curry in the expectation registry of consumers. All year around, the multiple restaurants that offer curry reference their products somewhat (in commercials and online media) to the event or have it referenced by others (through tabelog.com or social media posts). Graham, Zook and Boulton (2013) describe such a phenomenon of mediated space as “augmented realities”.

They define these [augmented realities] as the context-specific, emergent perceptions of place(s) that are (re)produced as our experiences of physical spaces are supplemented and structured by the voluminous flows of geocoded information about spaces and places that individuals generate and mobilize synchronously and proximately via networked devices, becoming part and parcel of how we (re)enact space whilst we are in space, experiencing that space. [...] These “augmented realities”, which are intimately predicated on the pervasiveness of location-aware mobile platforms, influence not only perceptions of particular places, but indeed also material behaviours, activities, and movements in and across space as “particular interpretations of events and locations are foregrounded or side-lined”. (Leszczynski 2015:735)

While this definition is quite appealing in framing the phenomenon in question, it is less helpful in addressing the problem of how ethnographic methods should deal with these augmented realities. Participant observation is possible during the event, but to eat at all 128 shops that offered curries is not. Even though informal onsite interviews of customers were possible, they did not provide real insight regarding taste and smell. Other than *oishii* and *umai* (both meaning “delicious” or “tasty”), the customers did not use more specific words, nor did they find it necessary to elaborate on their sensory experience on site. Asking one informant who was willingly chatting with me in front of the train station how he experienced the fragrance and taste, he answered that it would be hard to describe and much easier if I would go there and try it myself. This carelessly spilled answer supports the hypothesis that the difficult, time-consuming and skill-demanding work of transcription and verbalisation of senses into text is a hurdle that limits communication about perception. The general cultural and social training (in most modern countries) is focused on vision-to-text transcription, while other senses are ignored.<sup>13</sup>

In contrast to this inability or unwillingness to communicate sensations of taste and smell on site, digital communication about these sensations was nonetheless flourishing. Therefore, it must be acknowledged that a large share of communication takes place through digital spatial media. Even in the pam-

12 See Ai Rabu kk. 2018d, 2018c, 2018b, 2018a.

13 The Japanese language’s onomatopoeia might be interesting in this regard, but exceeds the scope of this paper, cf. Kita / Yamada 2017.

phlets provided on site, the prominent page three was completely dedicated to a smartphone application. A QR-code was printed on the cover as well as on the posters in the streets.

It is obvious that a study of digital communication might be the logical next step, to obtain more data (or to augment those communications that are not observable on site). While advertising and journalistic content can be researched with media studies methods, the individual perceptions that are shared online (e.g., on tabelog.com) are more like snippets of field notes (cf. Tabelog 2018). The users share the same burden as the researcher, trying to transcribe their perceptions and sensations and communicate them to others.

Figure 1: Shimokitazawa Curry Festival 2018 (cover and page 3 of a map to the festival)



Source: The pictures – cover page (on the left) and page 3 (on the right) – are taken from a twelve-page pamphlet in A3 format, published and distributed in print and online by the Shimokitazawa Curry Festival 2018 executive committee.

## Mediation: Communicating sensations human-machine-human

After discussing the spatial problem of participation and the sensory problem of perception, the final aspect of PO, the transcription and mediation, needs to be debated. In an academic setting, PO as a method is still very much text-centred (field notes, transcripts and articles), even though visual anthropology offers the medium of film as an (of course still largely visual) alternative.<sup>14</sup> PO as everyday praxis has gained a wide range of possibilities for the mediation of sensations through digital media. Visual media (photography and short videos) are often used, and digital platforms like Instagram, Twitter and Facebook encourage adding spatial signifiers to these posts, creating spatial media.

Using again the case of the Curry Festival, I first show how such digitally mediated images are used to share something that is referring to olfactory sensations and taste. Critique is woven into this discussion as I argue that more academic awareness is needed of human-machine interaction. The act of transcription, if done in collaboration between machine and human, not only obfuscates the editorial process (through the technical sensor and the handling of it) but also claims to mediate multisensory perception, even though the output is just a semiotic token, a representation not a sensation (cf. Hansen 2018: 3–6).

The number of sensors in cities (e.g. surveillance cameras, thermometers, microphones, etc.) is rising, especially under the influence of smart city aspirations. These sensors, in the same way as city users with their smartphones, could provide further data for research. At the same time, their deployment also raises objections to the use of data in violation of protection and privacy. The spatial media that are produced, distributed and consumed on site without much delay create a surplus of perceptible information, but this augmentation is ephemeral and individualised. This information is increasing the attention towards and expectations of perception.

### Digital curry and the power of pictures

Searching for the hashtag *#shimokitakarēfesu* 2018 (in Japanese) and surfing the social networks in order to engage in digital participant observation, I was overwhelmed by the flood of contributions generated by festival visitors. Most of them consisted of one or more photographs of a curry dish and a very short text, often followed by a hashtag indexing the curry festival and another one giving the restaurant's name. The taste, as well as the aroma – perhaps the most prominent features of curry dishes – were given less attention. At least in

14 I am fully aware that there is excellent research regarding sound (cf. Roquet 2016, Bonnet 2016) and a lively community doing anthropology of sound, but in terms of mediation, audio files or live performances are still not accepted as scientific publications.



some tweets, the users employed adjectives to describe the meal, but the variety was limited mostly to *supaisu* (“spicy”) and *oishii* (“tasty”). The photographs, however, were quite appealing, in spite of the fact that they did not provide information about the taste or smell but focused simply on the visuality of the dish. When departing from the receptive possibilities of the apparatus – the camera – a translation of the chemoreceptors’ information is not convertible into a photograph. To quote Vilém Flusser:

In the act of photography the camera does the will of the photographer but the photographer has to will what the camera can do. (Flusser 2000: 35)

This does not mean that the camera determines the photographer, but it emphasises that the “possibilities of producing information” this way follow the rules of the “photographic program” (Flusser 2000: 26). Flusser understands this program as the technical and cultural knowledge that is necessary to build an apparatus, and the specific form and function built into it. The user of this apparatus is in most cases neither able to build the apparatus nor to understand in detail what occurs inside it (technically, mechanically or through coding). Therefore, users view photographers as the functionaries of the apparatuses, who “do not play with their plaything but against it”, thereby creating some kind of unity (Flusser 2000: 27). This idea of “playing against the apparatus/program” is something that structures not only photography but the whole structure of digital (spatial) media. The single users are not in control of the program but are willing to play along in order to get what they want. In many cases, the program seems to follow the will of the user, because the user has learned to want what the program can do.

Starting from another point and perspective, namely the study of Tokyo’s commuter train network, ethnographer Michael Fisch also develops his “machine theory for thinking with technology”, the goal of which “is to think with the processes of immersive technological mediation and conditions of human-machine interaction” (Fisch 2018: 6). He also raises the idea of a “rigged game” and the human willingness to participate in a human-machine interaction, even though the output might not be satisfying (Fisch 2018: 121–165).

By viewing the digital spatial media in line with the ideas of Flusser and Fisch on human-machine interaction, and by applying these concepts to the case of the Curry Festival, we can indeed see mediation occurring at the “margin of indeterminacy” (Fisch 2018: 14). The program gives a certain leeway to alter or interact in a way and therefore communicate. We find, here again, a possibility to perceive, that is to say, to structure the possibilities of communication.

The machine and its sensors and the human and its sensory systems are in this together, divided by their possibilities of perception. The program also restricts the perspective (the perception) and what is outside of the range that

must be translated into “program readable” data (Flusser 2000: 36). But in contrast, to affect human beings, it must be also translated into information that we are able to perceive. A server with tweets of the curry festival would not be accessible without a peripheral device translating it back into visual images (cf. Galloway 2012).

I mentioned before the delicious-looking pictures of curry meals at the curry festival that were posted on social media platforms. This phenomenon of technically produced pictures as proof or evidence of something that is actually not transmitted – here smells and tastes – is a widely spread practice. It is anchored in a (false) belief in the objective nature of technically produced and sensed information. The limitations of the provided information are not stated clearly enough, even though this is obviously important. It is particularly relevant for other examples such as surveillance cameras. Flusser describes this problem on the basis of the photograph:

This lack of criticism of technical images is potentially dangerous at a time when technical images are in the process of displacing texts – dangerous for the reason that the “objectivity” of technical images is an illusion. (Flusser 2000: 15)

Objectivity is an illusion, because subjectivity is a matter of perspective, and there is no sensor without perspective. There is only a program that enables the technical process, a program with all its ideas and flaws built into the machine.

While “reality” and in this sense the experience of spatiality cannot be split into what is real and what is virtual, our perceptions depend on the capabilities of the medium we are using to perceive and then on the medium we are using to communicate about it. This holds true also for urban space as a mode of mediation. The mode of mediation, too, is limiting in a sense, but not so much for all those who have learned to see the city as a natural state of being. For a machine with the ability to sense location, through a GPS receiver, tall buildings and concrete walls are a clear restriction in the possibilities for communication. Nevertheless, we see a tendency in newly built architectural and city spaces to control the (human) perceptions by technical systems or rules. In this way, the limits of perception by patterns learned through digital communication are reduced.

## **Artificial sensors and human perception**

Cities are becoming increasingly sensory, at least in a technical way. Sensors are fundamentally present in the conception of smart cities, as are processors that store and analyse data (cf. Ramaprasad et al. 2017). Constructed environments are equipped with sensory systems (e.g. surveillance cameras, therm-

ometers, microphones, etc.). Even before there were any high-tech sensors in the city, or even before the neologism “smart city” was coined, the city could be seen as a machine for living (cf. Hillier 2007, 2012) with multiple programs enabling it and written in it.<sup>15</sup> These programs, mostly materialised in architecture and infrastructure, structure the possibilities of living – just as Flusser’s photographic program sets the rules for human-camera interaction.

To give a concrete example, consider once more the visual and olfactory stimuli that are perceivable at the curry festival. Space as a mode of mediation is not unstructured or unconstrained. The window screens facing the street allow for visual communication that might bear the same information as the smartphone screen, by showing, for example, a replica of the dish. The wind, transporting aerosols through the streets from the curry kitchen to the human nose, is structured by ventilation systems, the height of buildings and so on. Due to the multisensory quality of the medium space, it is difficult to control these stimuli.

The structures of the city and their effect on PO reveal connections between architecture, design and city planning and the sphere of sensory ethnography. I therefore advocate extending reflections about human-machine interaction to the realm of the urban. The city – every built structure as a matter of fact – both constrains and enables communication processes, thereby enabling and disabling specific perceptions as it functions as a medium.

In this sense, mediation is a claim about the nature of our techno-socio-spatial realities – our being-with locational technologies, being-in space/place, and our being-with each other in a technological present characterized by the pervasiveness and entrenchment of spatial media in the spaces and practices of everyday life. (Leszczynski 2015: 747)

This emphasis on everyday life and the human scale regarding technology should not be forgotten or neglected, because even though it is central to ethnographers, it might be less acknowledged by scholars of other disciplines, or societal actors (e.g. the police). The human scale, as a scale of perception and communication, might be the only real determining force in this discussion about ethnographic methods and the multisensory perception of space. This is not to deny digital communication, algorithm-based media and a persuasive amount of technology-mediated information in our everyday lives. It is, however, adjusting the scale to understand that it is not the amount of information that is important. Nowadays there is always enough information through screens everywhere. Rather, the limits and the multifaceted, more than human notions of perception are shaping what and also how much we comprehend.

These limitations lead to constant processes of transcription and translation bound by systematic constraints, but the output and the material change.

15 Seen from a different perspective, and avoiding the word “machine”, we could also apply the theory of structuration by Anthony Giddens, which adds more perception awareness (and the development of research since the 1980s) (Giddens 1984: 45–51, 111).

That is to say, the minimum requirement for every perception is not limited to one's own possibilities. A (smart) city, sharing space with smart machines, is a city of sensors. This city is not only a place full of sensors but also a space constructed by and for a multitude of sensors – an interdependent fabric of perceptions. The interplay of information and material constellations is, however, always a material one. Information needs materialisation to be perceptible. Therefore, anthropological fieldwork is needed as an approach that considers human action and interaction (with other humans or machines) as embodied practices of communication and the enactment of information. Just as former anthropologists observed how scriptures led people to perform specific rituals or practices, we need to be open to accepting that scripts (codes and programs) are leading people to act and interact in a certain way.

While space as a mode of mediation is rich in the variety of senses, as shown through the above example of the waste left behind after the Curry Festival, it is not possible to perceive everything. One needs to select (consciously or unconsciously) the information that can be processed. This leads to two important mechanisms that also structure human perception: “expectation (‘what is likely?’) and attention (‘what is relevant?’)” (De Lange et al. 2018: 775). With the increasing amount of spatial media and despite the fact that what is perceivable can be very limited – allowing only visual perception, for example – the mechanisms of expectation and attention are significant. Expressed in more philosophical terms, François J. Bonnet states the following:

For we must not lose sight of the fact that the sensible, in so far as it allows access to the world of representations [...] presents in itself, or rather becomes for itself, a major stake. For whoever controls the sensible, or at least directs it, in doing so de facto manipulates the representation of the world and thus the world itself. Mediation and mediatization of the sensible therefore play an essential role in the construction of the real. (Bonnet 2017: 15)

## **Conclusion: A matter of perception**

Studying Tokyo, one needs to give full significance to what can be sensed (space as a mode of mediation) and to the augmented and assembled perceptions that mobile interfaces (spatial media) are creating. For a long time, the discussion unfolded along the question of how culture (the world of representations) shapes our perception – while the perceptible world was rendered as (relatively) fixed. Today, the question in a city of screens has shifted to issues of how we are sharing and sensing a world full of individualised screens. I use participant observation as a research method, but also as a tool to question the paradigms and inquire as to the limitations of ethnographic fieldwork (in contemporary Japan). Re-evaluating the three stages of PO (par-

ticipation, perception and mediation) through the lens of urban perception, I advocate that PO be used as a framework to understand social media activities that involve the transcription of sensory perceptions. In light of the discussion above, three conclusions can be drawn: 1) Participation is constituted through proximity, contact and interaction. While highlighting that personal perception is individual (*Umwelt*), a socially constructed idea of a shared perceived environment is needed to enable communication. 2) The perceived difference between spatial media and space as a mode of mediation is mainly caused by the sensory paucity of the former and the sensory richness of the latter. 3) Digital ethnography and anthropology of the senses can be complementary and mutually beneficial, but they are divided by the act of transcription. This transcription of perceptions into digitally storable information and back into perceivable information is bound by biological and technical constraints as well as by cultural and programmed environmental variables.

To sum up, perception shapes and limits the possibilities of human beings and societies. Not only humans and animals, but also machines/apparatuses are limited by their possibilities of perception. Consequently, the human-machine relationship – conceived through the bottleneck of perception and mediation – will be central to understanding social interaction in the 21st century. In connection with the topic of this special issue, the significance of perception for the topic of poetics and aesthetics of urban space in Asia is not questioned, but I have tried to show through the discussion above that perception is also a major factor regarding the political and social construction of urbanities in Asia. In this regard, participant observation as a way to think through and reflect on urban space is a key method not only in anthropology, but also for urban planning, social sciences and politics, to better understand how human beings actually dwell, live and interact with one another.

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