Living with Urban Everyday Technologies

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New and complex technologies are exceedingly present and in widespread use in contemporary cities globally. The urban lifeworld is saturated with various applications of information and computing technologies, but also more rudimentary forms of technology construct and create the urban everyday life as we know it. Many forms of urban technologies are perceived first through their everyday aesthetic qualities: how they look, feel, sound, or are otherwise encountered within the streetscape. Philosophical aesthetics, however, has tended to overlook everyday technologies as a topic, often due to unquestioned ideas of how a city should ideally look and feel. Thus, a more realistic approach to contemporary cities is needed, in which the deep-seated role of technologies is recognized and the experiences related to their entangled uses become acknowledged. This paper brings together recent developments in urban aesthetics with some of the core ideas of postphenomenological approaches to new urban technologies.
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1. Introduction

The urban everyday took an unexpected turn in the Spring 2020 with the Covid-19 pandemic and the ensuing restrictions to social activity. An opportunity to think and rethink the ways in which cities are used has presented itself, at the same time as struggles for health and survival are taking place. The individual tragedies and collective traumas cannot be justified, but we should try to make something of meaning out of this period of time in the history of the human civilization. The pandemic is not, of course, without predecessors, but never before have humans lived in such concentrated forms as in the current urban environments globally. How these thoroughly human environments are planned, built and used, is of significant consequence to the quality of life, social justice as well as individual experience and well-being.

Aesthetics might not have been considered to be at the forefront of the discussion on urban planning and development. However, aesthetic thinking

has in one form or another always been at least implicitly present in urban design and planning (Lehtinen, 2020). The philosophical and applied urban aesthetics today combine various useful approaches and theories to study a range of phenomena from cityscapes to the urban experience and from urban mobility to city branding. As one of the latest turns in this development, I am proposing that the insights from philosophy of technology, with emphasis on ethics and postphenomenological approach in particular, would need to be brought to the centre of attention in philosophical urban aesthetics. In this article, I aim at showing why and in which ways we could start studying more systematically the profound effect of technological development to different already recognized facets of urban aesthetics.

The motivation for this technological update of philosophical urban aesthetics is linked to an attempt to acquire an overall more realistic view of what contemporary cities are like, to what extent they are similar and in which ways they differ from one another. This should be the aim also for developing the philosophical urban and everyday aesthetics of the future years. In practice, this will mean that the deep-seated role of technologies becomes better acknowledged as an important part of the urban perceptual and experiential realm, ranging from large-scale entities such as infrastructure to small-scale personal use of e.g. navigation apps. This will mean also that the representations, narratives, and experiences related to their entangled uses become studied as a central part of our understanding of what the city as a socio-political and processual entity is and what forms it gets through conscious human activity.

2. New Technologies and the Aesthetics of the Urban Everyday

New exceedingly converged and complex technologies have become increasingly present and in widespread use in contemporary cities globally. At the same time, the implementation of many types of emerging technologies is being prepared. The urban lifeworld is already saturated with various applications of contemporary information and computing technologies, but also more rudimentary forms of technology construct and create the urban everyday life as we know it. The different types of roles technology plays in everyday human experience has been studied in detail in the postphenomenological branch of contemporary philosophy of technology through the notion of technological mediation (e.g. Ihde, 1990; Verbeek, 2005; Verbeek, 2016; Lehtinen and Vihanninjoki, 2020). In philosophical everyday aesthetics, however, there has been a tendency to overlook technology as a topic (Naukkarinen, 2019; Lehtinen, 2020). This might be due to nostalgic and romanticized ideas of how a city should ideally look and feel but there might be also other paradigmatic reasons for why technology as a topic has been difficult to discuss.

As the relatively new field of everyday aesthetics has emerged only during the past 15 years, one would assume that different types of technologies and the mundane daily interactions with them would have been a central topic of study

from the beginning. However, there has been surprisingly little efforts towards this end. As one of the exceptions, Ossi Naukkarinen writes tentatively about "how computers and computational approaches are changing our everyday aesthetics" (Naukkarinen, 2019, p. 181). Although networked computing technologies and their effect on the daily life is without a doubt on the increase, I claim that we cannot understand this effect without taking a closer look on the chains of technologies and their uses that have already become naturalized in the profoundly technologized everyday life. By this, I am referring to a certain degree to earlier, more rudimentary technologies that have enabled human collective life as we have become accustomed of knowing it already for decades or even centuries.

Choosing the *urban* environment as the central case helps obviously to narrow the range of observed technologies. It, however, also shows how the individual citizen is linked to a larger group of other societal actors through the intricate use of technologies, no matter how personal and private they might seem. Focusing on the urban lifeworld (Madsen and Plunz, 2002) makes it explicit that even though technology is certainly often a source of clear subjectively experienced aesthetic impulses, the realm of technology is first and foremost intended to facilitate the many interactions between people, between people and their environment, and, exceedingly, between people and complex processes comprised of non-human elements in the urban sphere.

It is possible to group contemporary urban technologies to three main groups according to their aesthetic qualities and effects. The first group is the most obvious one, and one that many urbanites would probably think of if asked about the technologies that they interact with in their everyday life. These types of urban technologies refer to those which are perceived first and foremost through their perceivable qualities: how they look, feel, sound or are otherwise experienced directly within the streetscape. This link to aesthetics can lead to treating them mainly through their *object*-quality instead of delving deeper into their quality as complex technological objects, as something which have an ulterior purpose beyond their mere appearance. In fact, they might even function largely outside the object-natured and material 'base' which is drawing conscious attention by its noticeable perceptual features. With everyday technologies, examples are found in most basic types of technological objects such as traffic lights, which nonetheless are part of a network and broader logic of traffic control. An individual dweller does not usually think about why the lights are changing at the precise moment when they are changing and neither is that knowledge needed to cross the street successfully. However, basic knowledge of the local synchronization of traffic lights is perceived by most adults crossing the street and many learn to take justified risks based on this knowledge. Even though perceptually attuned to pay attention to the signalling lights, one does not need to always comply with the rules set visible by the traffic lights if one can individually assess the risk of avoiding a collision with a vehicle of any type. The larger context of traffic flows is, however, not thought of nor understood as part of these daily rituals of deciphering the red and green light indicators.

The second group of technologies consists of those which are fully invisible or hidden from the surface level of the material basis for everyday activity. It seems fair to say that the urban everyday life relies increasingly on these types of 'hidden' technologies, which nonetheless govern the daily range of possibilities for the individual urban dweller. Their use is defined by *familiarity*, which overall is an important dimension of everyday aesthetic experiences (Saito, 2017). Water infrastructure is an example of a large-scale technological system which is in most contemporary cities hidden from the plain sight. Clean water provided by a very complex system of pipes, pumps and purification is nonetheless considered to be a basal level necessity for contemporary urban life. It seems fair to say, that technologies are more and more intentionally designed to become invisible. This development is explained for example as a safety measure, since changing conditions are a risk for the functioning of some of these types of technologies. Weather conditions and vandalism, for example in the case of electrical wiring, might lead to digging electricity lines underground or retrofitting them into the built structures instead or hanging wires outside the walls of building. It seems, however, very likely that safety and maintenance reasons for hiding technologies are also accompanied by assessing them as aesthetically unpleasing. The electrical wirings, for example, are one example of this although in some cities the aesthetic appreciation of these external wirings comes precisely from their extravagant appearance.

At first glance, the third group is the most difficult to define as it concerns mostly new technologies and also those, which are still being implemented into the urban sphere. However, it is reasonable to think that a distinct group of its own consists of networked technologies, which combine perceptual and non-perceptual forms. Most new and emerging technologies can be categorized through their perceptual presence in the cityscape as well as through the quality of their aesthetic effects. 5G network is a relatively recent example of a complex technology which is invisible to its end users but which, however, relies on highly visible technological parts which need to be implemented into the existing urban structure. This type of technological mediation of human-world relations which is hidden from perception has interesting implications to urban aesthetics. One obvious implication to social justice that these types of technologies have is the question of their accessibility. However, from the perspective of urban aesthetics, also the omnipresent reliance of urban technologies seems to be narrowing the scope of individual choice.

The infrastructure of a contemporary city does not consist anymore only of roads or a functioning sewer network. Even though many of the networks are invisible, the structures that enable them have often highly visible consequences in the cityscape. As an example, cell phone networks require antennae towers that have been disguised as palm trees and flagpoles, or converged with new types of lampposts that have replaced the older, simpler models. Another example of new, highly visible structures in the city are stations for charging electric vehicles and solar panels for localized needs for electricity. These take up space and affect by necessity also the most obvious aesthetic qualities and affordances of the places in which they are installed.

3. The Small Banalities of Technological Mediation

Whether the use and increase in the reliance of increasingly hidden technologies is compromising the autonomy and values of the urban dweller is an interesting question. In this paper, the topic is approached through paying attention to and analysing some cases of awkward and banal encounters with hidden urban everyday technologies. On many instances, these moments of awkwardness can create uncomfortable and even banal gaps in the scope of the urban everyday aesthetic experiences. These small moments of conflict are not, however, usually the ones which are taken into consideration when thinking about the use or the overall appearance of a city to its dwellers.

Since Martin Heidegger elaborated on the use and meaning of tools, their fundamental unreliability has been considered to be a somewhat defining part of human-technology relations (see e.g. Heidegger, 1978; Verbeek, 2005; Verbeek, 2016). As we all probably know from our own experience, temporal as well as functional inconsistencies such as lagging, freezing, and glitches are part and parcel of the use of different technologies. Whether rudimentary forms or more advanced technologies, their ideal and planned use is replaced in practice by a realization that one is always to some degree on the mercy of more or less unexpected malfunctions. These discrepancies in the use of technology are to some extent considered in their design phases, although the design activity tends to focus on idealized visions of smooth user experience. In any case, experientially one has to become somewhat habituated to ruptures with a range from the merely inconvenient to substantially banal and disrupting. These experiences have come to play an important part in the everyday going-about-minding-ones-business, since without some level of mental preparedness, meaningful activity would be seriously affected by these momentary breaks. The level of uncertainty, however, can sure be considered to cause extra stress to the experiencer-turned-user.

Everyday urban mobility is an interesting case from the perspective of everyday banal experiential ruptures. Aesthetically, it is not unimportant what type or selection of modes of transportation one chooses or is even able to choose in the first place place. (Mladenovic, Lehtinen and Martens, 2019) An underground public transportation mode such as the metro offers radically different affordances to exploring the city on foot or through the windshield of a private vehicle that one is driving. Thinking towards the future of urban environments, even the possibility of autonomous driving is again challenging the preconceived notions of what it means to move in the city and how smooth this experience can be. Whether you understand the experience of moving in a city through kinaesthetic (Lobo, 2020) or somaesthetic (Shusterman, 2019) framework, the perception of a city is strongly affected by the embodied nature of movement besides the cognitive factors such as knowledge, imagination, and even memories.

Another topic to consider from this perspective is linked to the questions of privacy, that has become increasingly central in contemporary cities globally. The many new, networked technologies which are implemented into the urban

environment provide a way to approach the everyday banal moments of experiential rupture. Especially after the terrorist attacks of the early 2000's, there has been a steep increase in the development and implementation of sophisticated surveillance technologies that detect and analyse not only the movement patterns but also the recognizable features of people who are present in the public space (see e.g. Lyon, 2003). These technologies include clear signs of surveillance, for example CCTV and biometric technologies such as facial feature and movement pattern detection and recognition. However, also many of those technologies, which have another purpose as their main reason is implementation, can be used for surveillance purposes if the data they produce is used in this way. In the scope of this article, it is not possible to delve deeper into the topic of the aesthetic consequences of surveillance technologies, but they most certainly have an effect on how the city is experienced and what is expected of the interactions taking place in the urban sphere. As contemporary cities globally are marked by an increasing reliance on intricate, interlinked technologies, the need to understand the aesthetic implications of surveillance technologies is also to be taken into consideration.

4. The Aesthetic Potential of New Urban Technologies

It is still common that technology is treated as a negative or even potentially dangerous force that alienates people from some type of a more authentic way of being (Verbeek, 2005). This type of thinking has been present persistently in the Western philosophical tradition as well as in common everyday life. According to the alienation views, especially after Heidegger, the way in which technologies situate themselves between the human and the world to mediate this relation, poses a risk of distancing from the worldly phenomena altogether. This can be described as a fear of losing connection in experience as well as on the level of knowledge. As the world – or the city in our particular case – becomes experienced through a filter of technology, we perceive it less directly. Neither are we able to know precisely what is happening in each different process of technological mediation.

The current forms of urban life provide an interesting case in this sense, as the human ability to conduct intentional activity and collaboration is at the very core of the existence of shared urban life. Without organized activity, various forms of collaboration, and goal-oriented planning, it would not be possible to design, let alone lead a life in urban environments. In this sense, technology should be understood as something radically distinct from the rest of the structures and processes of the city. As a thoroughly human-made context, cities are entirely dependent on complex technologies from the beginning of their creation, whether temporarily distant or taking place currently. The city itself is a multifaceted processual and technological construct.

Echoing some of the core ideas of pragmatist philosophy, the postphenomenological approaches in the philosophy of technology emphasize that it is a more reasonable idea to study individual technologies instead of aiming at a very generalized ponderation over the larger notion of Technology

(Verbeek, 2005; Nagenborg et al., 2020). In the same way, it is more useful to zoom into a more focused group such as urban technologies through a more defined approach, such as their aesthetic impact in the case of this paper. One potential aesthetically positive way to approach new and emerging urban technologies would be through the notion of *the urban sublime*. (Den Tandt, 2014) Even though the sublime is not definable entirely in positive terms, the overall variety and diversity in aesthetic scope is significant in the case of the sublime. The sublime in the case of the urban environments has already been linked to technology in particular, through the notion of *the technological sublime* which is described also in relation to the urban experience. (Nye, 1994) The sublime in the context of technology underlines first how the technologically mediated experiences cannot be defined entirely as positive or negative and how technology, also aesthetically, bears this element of mystery that is linked to its functioning. The technological sublime has been used to describe the experience of e.g. the industrial ruins in cities, but I find it a useful term to approach the underlying aesthetic tensions in the relation with contemporary technologies very much in use.

In the case of new technologies, it is important to remember that instead of a contemplative approach to the urban everyday, they become experienced through being used in an active engagement. This is a significant aspect of how the aesthetic scope of their use is determined. In philosophical aesthetics, disinterestedness as a sort of distanced appreciation without ulterior motives has been defining aesthetic experiences to a significant degree. Digital technologies, for example, unless they are used in artistic context, are first and foremost a tool and something that is utilized to reach a certain goal. Most often these goals are predetermined, even though new ideas might stem from their use as well. Spontaneous new uses are, however, relatively rare in the case of many new types of technologies. When they exist, they usually form significant examples of urban activism, tactical urbanism and other types of bottom-up movements which aim at strategically shaking the established socio-technological systems.

It would be important to understand firstly the extent to which the urban *lifeworld* is already highly technologized, and secondly, that most of those technologies are not explicitly visible or that using them does not equal recognizing them. The relatable suspicion towards new and emerging technologies and their use should not prevent from staying actively interested and engaged in the development of these new types of technologies. The aesthetic consequences for urban everyday life could span from building information modelling (BIM) applications used for orientation and navigation purposes (Vihanninjoki and Lehtinen, 2019) to technologies for accessibility or enabling better communication. We need a better understanding of how technologies are experienced especially in cases in which social justice is at stake. A better recognition of how new technologies are affecting the distribution of attention or aesthetic qualities of everyday environments is thus something in which philosophical and applied aesthetics can assist.

5. Conclusions

Wireless, portable and connected technologies are changing the urban experience at a rapid pace. As these changes are often accepted as 'inevitable' improvements, the critical assessment of their use and effects is still scarce. On the other hand, also the fierce resistance towards new technological phenomena can seriously impede discussing what their true role, potential and consequences could be. Thus, both the utterly indifferent or defensive approaches might hinder the discussion and development of more human technologies with broad experiential reach.

In this article, I have proposed that the new technologies affecting mostly the urban everyday life can be grouped in three different categories according to their aesthetic qualities. The aim has been to show how this grouping will help to gain a better understanding especially of those technologies which belong to the third category and consist mostly of invisible, networked technologies but which however have also some visible effect in the urban space. I have aimed at showing that the aesthetic approach to these technologies does not consist only of the most obvious aesthetic consequences, but needs to take a deeper look into how the use of these technologies is changing the aesthetic scope of the urban everyday.

Further on I have presented the notions of the banal and the sublime, which in this context can be helpful in bringing these effects into discussions about the present state and the future prospects of cities globally. These technologies are becoming increasingly complex and require further embedded technologies on the structural level of the city. A better understanding of the complex technologies is important, not only for any average citizen (if one should base assumptions over such a figure existing), but to those professing in philosophical and applied aesthetics.

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