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Lehtinen, Sanna

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Aesthetic Values in the Maintenance of Urban Technologies

Sanna Lehtinen, Aalto University
ORCID: 0000-0003-1901-3584

Abstract

How technologies make cities look and feel is not a question that is often asked. We take the presence and state of various types of technologies in the urban lifeworld largely for granted. Urban technologies can become even emblematic of cities, fetishized for their connotations with the urban lifeform and advancements in science and technology. Urban technologies mirror the societies using them, thus also their uses and upkeep are likely to change when societal values change. Postindustrial development in Western countries and the more recent sustainability concerns are examples of this, making some urban technologies either redundant or available for further, new types of uses. This brings attention to what extent aesthetic norms and values are present in the decisions on maintenance. In this chapter, recent insights in aesthetics of care are used to explore how aesthetic values in the maintenance of urban technologies could be based on the notion of care. This opens a new, empathetic way of thinking about what type of world and cities we will leave to the future generations of humans and nonhumans alike. The perspective underlines ownership, responsibility, and collaboration in maintaining those structures that support complex lifeforms in cities. This requires defining, discussing, and deliberating aesthetic values so that they would be better aligned to support more general goals of how cities should function. The chapter brings together ideas from contemporary urban aesthetics, philosophy of the city, and philosophy of technology.

1. Introduction

Urban technologies and their maintenance provide an interesting and even somewhat unexpected angle to study the city and its aesthetic dimensions. This perspective is strongly influenced not only by the way in which we define technology, but also how the city in question is imagined: whether it is an actual place or the idea of the city in general. As a new topic for philosophy of technology, maintenance opens up new perspectives within the existing discourse on urban aesthetics by refocusing our attention on technologies over time. In order to begin bridging the approaches of urban technological aesthetics and their maintenance, it is important to emphasize that urban technologies are understood quite broadly in this context. This means that the focus is not only on digital technologies or the latest smart city developments which have been largely driving the latest technology-inclined studies of the city but also more rudimentary technologies. The definition of technology used here follows that utilised in recent work delineating a specific field of study for the philosophy of urban technologies (Nagenborg et al. 2021) and thus probes more broadly into the existing and fast-developing plurality of human-technology relations in cities. The benefit of this is a broad understanding of urban environments and especially their aesthetic implications. Further analyses of different types of technologies can build upon these insights by providing a more detailed understanding of the contemporary urban lifeworld[1].

It is possible to approach cities themselves as technological artefacts. This is because they are, to a large extent, produced by human intentional activity and considered prime examples of complex systems. The focus of this chapter, however, is on technologies of varying scales which one can encounter perceptually and experientially in cities either directly or through their use and impacts on urban surroundings. Most of the time, these types of technologies have some sort of perceivable presence, and their implementation, use, and upkeep have an impact on how the city looks and feels to its inhabitants and visitors alike. This type of experiential emphasis typical of philosophical urban aesthetics has strong phenomenological underpinnings. It is further brought together with a postphenomenological[2] understanding of different types of human-technology relations that characterize urban everyday life. This broader take is necessary in order to show that the aesthetic dimension of cities affected by urban technologies is not only a matter of design or a step in the early phases of their realization but an iterative, ongoing process and a topic for an open deliberative debate for which studying the basic tenets of the aesthetic experience of the city is of crucial importance. In philosophy of technology, there has been a disproportionate focus on design which has led to the neglect of maintenance and its further implications as a lucrative topic for the field.

Aesthetics has for the most part of the 20th century been strongly associated with the arts and philosophy of art, especially in the Anglo-American context. Topics such as intentionality and interpretation have been developed in the specific context of Western art forms. Although there is an obvious link to the theme of maintenance through designers' intentions which already take a stance towards how the designed artefacts or places are to be maintained, the central insights of contemporary aesthetic theory have not been applied as broadly outside the sphere of the arts as they could be. Since the turn of the 21st century, the overlooked questions about how things should and could look like and how their aesthetic value is linked to other values and practices have, however, been proven increasingly relevant as a much broader take on the aesthetic dimension of human activities has been developed in the form of urban and everyday aesthetics. Ecological, environmental, and everyday-focused approaches in philosophical aesthetics have become prevalent and subjected to systematic analysis since the 1960s. The increasingly complex problems and grand challenges that humanity is facing have shown the need to understand human aesthetic values far beyond the limited, albeit fascinating context of the arts. Motivated by growing environmental concerns, this broadened academic interest has increasingly been directed to the influence and aesthetic impact of human activity on various types of environments. Urban environments have gained more relevance in academic discussions in the few last decades, when cities started to be perceived not only as the unavoidable by-products of societal development but as places of central aesthetic relevance for humans. This shift in mindset is important for the interest in the aesthetics of

[1] A concept derived from Husserlian phenomenology, for the use in the specifically urban sense, see Madsen & Plunz 2002.
[2] Postphenomenological referring here to the views in philosophy of technology based on Don Ihde's work, see e.g. Rosenberger & Verbeek 2015.

urban technologies, as it leads to a a more all-encompassing idea of what constitutes quality of life in urban environments of various types (Lehtinen 2021a).

In its current orientation, as a relatively new branch of philosophy, urban aesthetics sheds light on how humans not only perceive and pay attention to but also further assess and evaluate the sensory and experiential features of contemporary cities globally. In traditional aesthetic theory, aesthetic judgments are linked to aesthetic values that have usually also strong collective and societal importance and that come up in public discussion on how cities normatively should look and feel like. The focus of inquiry can be on either a more distanced, conceptualized perspective of contemporary cities or the so-called inhabitant's perspective, which emphasizes lived everyday experience (Lehtinen 2020). Whichever perspective is taken as the main starting point, it is obvious that the realm of technology and the extent to which it becomes a quintessential part of the specifically urban experience, has not been traditionally at the center of attention in philosophical aesthetics (Lehtinen 2021a). In the context of contemporary cities globally, it is increasingly important to address this omission as we are faced with questions concerning 1) how urban technologies are impacting the overall look and feel of the city, 2) how different types of technologies make different values in the city perceivable, and 3) how to understand changes in the technological realm, that is, what actually changes in the urban lifeworld when new technologies enter the picture?

This chapter has been developed around two central arguments. The first one is that the maintenance of urban technologies is an aesthetic issue in the first place, not just a purely practical or functional issue. The second argument goes further to claim, that the maintenance of urban technologies is of key importance in showing care for future generations. This goes to show how flexible aesthetic values can and could be when societal priorities change. The first argument is made in order to broaden the disciplinary landscape of the emerging intersection of urban aesthetics, philosophy of the city, and philosophy of maintenance as part of philosophy of technology. The second argument is developed further to show how the care and aesthetic attention with which humans tend to urban technologies, can provide insight into how we may care for and maintain the planet in a less destructive way for various human-affected ecosystems. The end goal is to show that care in itself does not compromise aesthetic values: on the contrary, it is crucial to ask what type of values and ideals are the main drivers behind current maintenance practices and in what ways they may need to be rethought and adjusted in order to achieve a future we desire.

2. Traces of the past, traces of the future

Urban technologies can be defined in various overlapping or even conflicting ways. For the purpose of looking into their aesthetic character and capacities, they are sometimes part of a larger architectural ensemble, or at least implemented in a way that is indiscernible from buildings themselves as objects. They can be built in from the beginning, as in the case of smart architecture, or implemented later on. The latter strategy is referred to as retrofit practices, in which compromises in design solutions need to be made in order to fit new technologies into the already existing structures of the built environment. Oftentimes technologies are also distinctly separate and physically clearly detached from buildings, sometimes in order to ease the implementation of future upgrades. This implies already a temporal disconnect between the basic building stock of the city (which is approached in aesthetic terms commonly as “architecture”) and the more anonymous technologies that are either hidden or just bluntly attached for the time being to the facades or other surfaces of buildings. Often urban technologies are implemented in ways which suggest they are regarded as uninteresting or as having low aesthetic value. The assumed anonymity and replaceability of technology, for example, culminates in the way more recent digital technologies are designed into the processes of the city. The implementation of 5G antennas and small cell towers into urban neighborhoods is an example of this, showing a whole breadth of different strategies of aesthetically “dealing” with them, ranging from camouflage to full-on takeover of public space both visually as well as spatially. (Lehtinen & Fantini van Ditmar 2022)

What makes digging into the implicit aesthetic assumptions regarding “urban technologies” difficult, is common, shared understandings of the definition and range of technology needs to be always specified in relation to the particular task in question. Not all specifically urban forms of technology are accessible to everyone and often their functioning is not understood or consciously paid attention to when engaged in activities they enable. There is sometimes significant overlap with different categories of urban technologies which makes analyzing them difficult. Recent philosophical accounts of urban technologies take into consideration their broad and varied nature and their impact on urban life. Epting (2021), for example, provides a taxonomy of urban technologies that is based on their role in facilitating sustainability transitions and securing a livable environment for citizens. According to Epting, urban technologies can be thus either “wicked” or “saving”, depending on what their main impacts on cities are and whether they are ethically justifiable. Nagenborg et al. (2021), on the other hand, offers a view of new and emerging urban technologies that focuses less on judging their moral character and more on how they function and are used to mediate the relationship between citizens and their environment. This mediation can be seamless and unperceivable or more articulated and impactful in shaping our experience of the urban environment. It is advisable to keep both ways of defining technologies in mind, although the human-centric mediation role tends to be more central for the aesthetic repercussions discussed further in this chapter.

To investigate the aesthetic dimension of urban technologies and their maintenance in particular, one can start with the existing elements of the built environment. On the level of individual buildings, the scale in a city varies from the smallest micro houses to high-rise tower blocks and skyscrapers, which could not be built without the very existence of multiple technologies and innovations, for example those enabling mechanical vertical transportation in the form of the elevators or escalators (Graham 2018). Contemporary buildings, even in their most simple forms are highly technologized artefacts produced by human intentional design to complement the current form and ideas of what a city is or should be. Buildings as advanced technological objects are thus not detached from urban imaginaries and the aesthetic forms they often take. It is tempting to speculate that these imaginaries have a far longer lifespan than what concrete urban plans and designs specify which is reliant to a great extent reliant on technological possibilities, whether presently at hand or imagined towards the future.

The construction phase of an entirely new building attaches certain meanings to the urban environment which becomes always to some extent rearranged by the new building and its subsequent uses. How built places are then further maintained and cared for, gives some insight into the values of the community that uses and maintains them. Concrete maintenance practices can be telling of how a community relates itself to their technological surroundings in cities. Showing care to buildings, either in the form of everyday maintenance practices such as cleaning and painting or through symbolic acts through more speculative or artistic means, is a very concrete way of making attachment and ownership of a place tangible (Lehtinen 2020b). To what extent manifesting this care extends to the details and varied examples of the technological realm, has been less easy to trace and depends again on what types of technologies are in the focus. Tending and caring for the technological realm and specifically their aesthetic range, however, represents a potentially significant shift in thinking. This can have repercussions in moving towards more sustainable technological practices, in which continuous upgrading is not a goal in itself.

Even in cities, all technologies do not work in direct contact with architectural constructs: technologies are to be found also in a more independent form in urban environments: we find examples of this on the streets and in the so-called in-between spaces in cities. Infrastructural technologies are often hidden, either completely or partially and this affects to which extent they draw attention or stimulate imagination through their aesthetic qualities. Technological constructs of the particularly detached type, such as electrical grids or telecommunications-related constructs, often take up space from non-human species when they are installed in places in which animals could potentially find shelter or in which plant ecologies are affected by human intrusion. Technologies within urban ecology can also offer refuge to animals, although this is most often an unintentional consequence. Bees or birds can build their nests under the coverings used to shield technologies against the elements or spiders weave their webs in places where electricity produces extra warmth emanating to the surface of structures. Technology thus sometimes provides habitats to animals in urban environments, but most often technology and natural ecology in cities are kept intentionally apart. The presence of animals and vegetation is often seen as an uncontrollable element in the maintenance of technologies, and the long-term impacts of urban technologies on non-human ecologies are not fully known either (Hernan & Ramirez-Figueroa 2022). There is a deep ontological divide in thinking about cities in these terms: the natural and the human-originating are easier to manage when kept apart whenever possible. This goes to show, that human decisions on maintenance affect other-than-human ecologies even in cases where there is an especially strong intention to keep them separate on purpose.

Despite common tendencies to hide urban technologies from view, many moments of everyday life in cities nonetheless involve a recognition of urban technologies in use. Not all technologies are perceptually discernible as the aforementioned example 4G and 5G networks shows, but the installed structures and parts still have a noticeable presence in the urban environment. This perceptual dimension requires attention, recognition, and interpretation in order to be correctly linked to particular technology “in action”. In the 4th wave of industrialization and through the expansive digitalization of cities, the act of linking the perceivable structure of urban technologies and their “hidden” and often converged uses is becoming exceedingly difficult and often requires a high degree of technological expertise. This is especially pertinent in cases of breakdown which reveal, not only the vulnerability but also the opaqueness of increasingly complex technological systems. (Graham & Thrift 2007)

The selected examples from the technological realm have had a clear point of implementation to use and most likely will have also an expiration date in the urban sphere. These types of perceptually discernible technologies can be found on many scales of the city, ranging from traces of industrial founding phases of urban expansion to communication technologies that have had significant shifts throughout the 20th and 21st centuries alike. It is also important to consider the future impact of the implementation of such technologies. This goes to underline that the aesthetic impacts of maintenance decisions do not concern only how the appearance of technologies is kept as they have been designed in the first place but in thinking and rethinking how they could and should look in the future.

3. Aesthetics of care in maintenance practices

Maintenance, repair, and upkeep are areas of human activity in which human values become explicit and gain a perceivable, even tangible, dimension of some type. This dimension is temporally important as well, as maintenance is not only an act but a continuous cycle with consequences that reach far in time: it is tempting to state that, to a certain degree, maintenance gives perceivable presence and temporal longevity to human values. Maintenance practices mean taking an active stance towards keeping something – a more or less networked artefact of some scale – in good material and functional condition, looking and working like it is generally expected to. Sometimes maintenance might take even a form of ”curated decay”, in which the ultimate end goal is to align maintenance into collaborating with ecological processes rather than working against them as the logic of maintenance usually dictates (DeSilvey, 2017). In societies under chaotic conditions, this might be a prolonged reality, when resources are directed only to the bare essentials. I would argue, that even then the aesthetic value of urban technologies does not vanish but takes on another meaning for the citizens or from the perspective of maintenance decisions. The ingenuity with which citizens maintain living quarters in conditions of scarce resources can develop into original forms of creativity. This is visible for example in the aesthetically rich favela culture of Rio de Janeiro in which the creativity of the inhabitants often stems from a severe lack of resources. The solutions employed for extending buildings for example, or accommodating for a lack of infrastructure, produces aesthetically distinct forms and a layered overall look for entire neighborhoods.

To what extent different maintenance practices take the aesthetic dimension into account varies according to the maintained object, artefact, or process. Depending on the extent the technology in question is considered already an integral part of the make-up of the building, block, or neighborhood, its aesthetic value might not be contested. Very visible (and audible) historical mobility technologies are a good example, such as the street elevators in some Lisbon *bairros* or trams in many other historic downtown locations. Despite their very noticeable presence (or precisely even because of it), old, creaky, and rattling tram cars have become emblematic of the city- and soundscapes of particular corners in cities such as Lisbon. This type of established and culturally recognized aesthetic value is also tied to the heritage value of mobility technologies, which captures the complex interplay between current and past values implicit in human-technology interactions in cities.

Recognized cultural heritage value leads to certain expectations towards the object's aesthetic value that characterize some large-scale infrastructural technologies in cities. Bridges, for example, are often considered a part of the rich, vibrant heritage of cities and thus cultural as well as aesthetic values are more obviously a part of the discussion on their maintenance. It is relevant to point out that even cultural heritage is not enough to pinpoint the aesthetic values attached to human artefacts, as the aesthetic dimension implies the possibility of a more deeply personal take on how a particular artefact is perceived and how it contributes to its surroundings and the ever-changing lifeworld in flux. Aesthetic values can be a cause of extreme disagreement between community members, whereas heritage value tends to be something that is generally agreed based on shared historical and cultural perspectives and thus can often function as a foundation for long-term maintenance plans. The relative flexibility of aesthetic value depending on variations in personal experiences, interpretations, and nuances makes it more difficult to grasp. It is fair to assume, that this is one of the reasons why the idea of aesthetic value has been difficult to grasp in negotiations over the maintenance of such urban elements as technologies.

Recent years have witnessed an increasing interest in "aesthetics of care" in philosophical and applied aesthetics, especially in relation to environmental and everyday aesthetics. One of the proponents of this new approach, Yuriko Saito, has proposed bridging Western philosophical aesthetics and Japanese aesthetics for a more comprehensive take on aesthetic sensibility. In her recent work, Saito links aesthetic interest and values with contemporary perspectives in care ethics (Saito 2020; 2022). The strong feminist underpinnings of the care ethical tradition direct attention to the underappreciated work and practices that enable the functioning of a society which are often performed by underprivileged social groups. This perspective is useful for discerning dimensions of aesthetics that have previously been left in the dark due to the common tendency to valorize innovation in many cultures.

Care can be understood in this context at least from two different yet often complementary perspectives. It can refer to 1) care towards material condition in the form of "attentive care" that is shown through maintenance and repair practices, or, 2) care towards future generations, whose living conditions are altered and maintained through decisions made today on the basis of current knowledge. These two modes of care are closely connected in most cases. Some important nuances can, however, be distinguished in concrete maintenance practices with the help of this distinction. One way of determining which mode of care is more central is by considering the relation to environmental harm and overall sustainability in particular maintenance decisions. If certain maintenance decisions and practices are likely to harm the living conditions of future generations of humans and non-humans alike, they cannot be considered to show care toward future generations. An example of this is the use and replacement of carbon-intensive materials, such as paint or glass, in building maintenance, which are now understood to contribute to a warming climate which threatens the livelihood of future generations. The realization of this type of temporal influence has recently led to a significant cultural shift which is still ongoing in many of the fields in which long-lasting decisions over maintenance are made. The increased recognition of our obligations and influence on the living conditions of future generations has encouraged a re-evaluation of Followed as a strict principle in various maintenance practices, many of the previously made decisions would not be feasible anymore.

The perceivability of care itself as a practice, and how it becomes visible and sensed is another important perspective to understanding maintenance practices and decisions from the care ethical and aesthetic perspective. It has thus been easier to focus on the first mode of care, as understanding the material conditions and ramifications of maintenance practices is perhaps the clearest point of entry to upkeeping elements of the urban sphere. It would be, however, ultimately important to link these two instances of care: focusing first on what is possible with what exists already and then understanding what the further consequences of these actions will be in times and locations far beyond one's immediate reach. Articulating more clearly this relation between the different dimensions of care will help in re-assessing further some of the maintenance choices that have previously been considered obvious and uncompromised. Through the lens of intergenerational aesthetics, in particular, a significantly new perspective can be gained on debated issues such as the renewal of parts of nationally significant built heritage. (Capdevila-Werning & Lehtinen 2021)

With the intergenerational focus in mind, the goal of maintenance, repair, and care can sometimes be to make material conditions to some extent better than before in clearly acknowledgeable ways. Perhaps faults have been identified in the original design or new ways have been found to improve on existing structures or systems. Instead of merely aiming at maintaining an existing state, this kind of incremental amelioration also often changes the appearance of the maintained artefact. An example of this could be changing the façade material of a building into something entirely new, after discovering that the original material has not proved durable or sustainable enough for the long-term use of the building (Capdevila-Werning & Lehtinen 2021). In such cases, even a significant change can be justified if it enables a building to avoid demolition and replacement. However, if the change in appearance is significant, it can often be important to communicate to stakeholders the reasons motivating the change in appearance or overall aesthetic status quo. Sometimes even the slightest changes in well-known or otherwise familiar elements of the city can produce discontent among the urban dwellers, especially in cases where the decision-making processes have not been transparent enough. As pointed out by Mark Thomas Young in his chapter in this volume, the Golden Gate bridge is a good example of this – the debate about whether to install suicide barriers often centered on the aesthetics of the bridge. Many worried that the addition of nets or raised guard railings would ruin the iconic look of the bridge, considered by many to be emblematic and beautiful in its unchanged appearance throughout the decades.

As concerns over the ecological and social sustainability of many human practices have grown, understanding the deeper consequences and implications of aesthetic choices in design have become increasingly important. This in turn has led many to scrutinize the aesthetic dimension of decision-making implicit in maintenance and repair decisions. Aesthetics opens a way to assess not only the chosen methods and goals but also the deeper layers of values that have directed the plans and designs. The aesthetic layer of human world-making does not refer merely to surface qualities that are to be taken into consideration as the last part of the design process. Conceptualizing the care aesthetical perspective and implementing it in the decision-making processes would be taking a step further in acknowledging the aesthetic importance of the various elements that create the urban lifeworld.

4. Deliberation of aesthetic values

It is safe to say that aesthetic choices of some caliber are made always when maintenance decisions are made. Often, they are by-products of some other choices but nonetheless, repercussions to the aesthetic realm will take place when decisions are put into effect. Further on, there are many detailed moments in the process of maintenance, which will result in some type of aesthetically relevant outcome. While these outcomes are often nuanced they can be more significant than we may often think. With repainting a house, for example, nuances in color choice might seem insignificant but the change in perception can nonetheless be very significant when the newly repainted house is contrasted with the colors of the adjacent buildings and the details of the streetscape. When it comes to architectural preservation and restoration, there are rules and guidelines as the preservation and maintenance of architectural heritage is already an established field in itself. The consideration of urban technologies however, has a much broader scope as it concerns a wider spectrum of different types of technologies than just those directly linked to architectural solutions. However, much like architecture, many of these technologies also have a significant effect on how the urban environment looks and feels to its various users.

Yet while any changes to the appearance of a city risks disrupting its aesthetic character, preserving cities as museums of outdated technologies is not a feasible goal either. So how should we keep track of and value past uses of the city in a way that does not hinder and even supports the current needs of the citizens? One way of approaching this question appeals to conceptions of “authenticity” which have recently been utilized to analyze the way cities are perceived and characterized (Wittingslow 2021). In the context of philosophical aesthetics however, this concept can be risky to use, as it implies the existence of some original, true-to-character form and identity of the city. Yet, many cities seem to genuinely have centuries-long histories and traditions that constitute a uniqueness to their character. Implementing new technologies into these kinds of environments can be especially difficult, as the layers of history often quite literally do not have space left for new layers to emerge. Consider for example the mobility problems currently facing many historical European cities, in which new metro lines are nearly impossible to build because of the constant discovery of archeological findings in the excavation sites of planned routes.

It is important to remember in this context, that the aesthetic layer of cities should not be considered only in the broad sense, from the so-called macro perspective with a strong visual orientation (Lehtinen 2021a). When decisions are made, the city or a part of it is often approached in imagination, based on impressions and ideas about the place and its aesthetic qualities. Even with detailed visualizations and plans, the so-called micro aesthetic layer is easily overlooked in these deliberations. Understanding how the aesthetic character of a place opens up through multisensory, street-level experience, in the midst of the hustle and bustle of everyday urban life, is of crucial importance when making aesthetically-informed maintenance decisions. This is, however, also very difficult in practice because of such processes often unfold. In planning or architectural design processes, participatory and citizen-oriented approaches have become more prevalent in recent years, but the described tension between the macro and the micro layers of aesthetics cannot be resolved only by making the inhabitants participate more in the processes. One solution to alleviate the friction in favor of more quotidian experiences is to expand the temporal scale of the discussions and to take them into the locations themselves, during many different kinds of conditions (seasons, hours of the day, and so on).

Approaching urban technologies as processes that require ongoing care and value deliberation to maintain, changes the perspective slightly and enables us to see these technologies beyond their most immediate use value. Another aesthetic dimension important to the continuous cycles of upkeep comes from the creativity that is required to tackle the challenges that time itself presents in the process. This applies both to the material world and the social sphere of the use of urban technologies. Materials decay and age in unexpected ways, especially newer plastic-based and composite materials that do not endure changing conditions, which complicates the task of maintenance. The aesthetic appreciations of individual people often change during their lifetimes and even societal aesthetic norms are prone to evolve. Because it is considered fickle and prone to change Aesthetics has often been considered a difficult area to tackle as a value domain. such perceptions arise at least in part through the influence of the long-standing idea of the autonomy of aesthetic value, based on the Kantian notion of aesthetic appreciation as disinterested. However, recent work on environmental and everyday aesthetics has often challenged the notion of disinterestedness and tends to put forward an idea of aesthetic interest and appreciation as deeply intertwined with ethical and social values (Lehtinen 2021b). At the very least, it should be acknowledged that the level of disinterestedness differs when considering the aesthetic value of something that we use and interact with on a daily basis. In comparison to artworks which form the traditional focus in the study of aesthetic judgment, aesthetic values in the realm of the everyday is part of a value network in which different values are interlinked in more complex ways than in the context of art.

Something that once was fashionable, might once again come into vogue. Such fluctuations in aesthetic trends might be a tempting cue for determining long-term aesthetic value. It is at least useful to postpone aesthetic judgment until a more full picture of the significance of the artefact in question has been gained. Large-scale infrastructural technologies provide interesting examples of this. In lower Manhattan, New York City, dilapidated railroad tracks were turned into a hugely popular urban park, the High Line. In Paris, sections of the *La Petite Ceinture*, an inner city circular railway, were also rehabilitated and transformed into recreational areas. The development of both of these sites stems primarily from a commitment to saving the main traces of a city's past. Yet in addition forming parts of notable postindustrial landscapes, the unused railroads also exhibited unusual biodiversity. Demolishing these structures would have therefore meant not only erasing parts of the historical layers of each city but also erasing places that now support urban nature and function quite literally as breathing spaces within the city.

These examples show in significant ways how infrastructural technologies, as examples of urban technologies more broadly, are not discernible from the spaces and environments in which they have been built. They merge into new kinds of places that evolve towards new meanings as their past uses become largely forgotten and obscured. In the case of the High

Line, such processes are employed in the design of the new park as the old rail tracks are left visible and untouched, sometimes rendered into newer, stylized design elements of the trail. Deliberation of aesthetic values within the community takes place on multiple levels simultaneously and traces of past technologies act as cues for these deliberations. However, whereas the aesthetic dimension can be directly addressed, often it is merely implied by discussions on other topics. Similarly, decisions about aesthetics are often masked as something else, this is recognized at least in the sphere of architecture where the buildings that are considered ugly are more likely to be demolished than repaired. The decisions have aesthetic repercussions, so the supported and maintained state of urban technologies manages to make other central values perceivable.

5. Conclusions

When discussing the range and influence of urban technologies in relation to the use and overall look and feel of cities, aesthetic values are still an understudied element. This chapter has aimed to demonstrate how aesthetic value intersects importantly with other value considerations, having for example further ecological and social consequences through the ethical values that the appearance of urban places is interpreted to represent. The aesthetics of cities or elements of the built environment are not to be treated as a separate from other values but are deeply tied to how these elements are valued and what type of decisions are made over their fate. Technological artefacts, networks, or their perceivable parts should not be considered an exception to this. On the contrary, the maintenance of various types of urban technologies can be seen as indicative of aesthetic values more broadly extending to how well the society in question adapts to changing conditions for the human lifeform. It can serve even as a testing ground for increasing the flexibility of societally acceptable values.

Taking into consideration the ongoing shifts and tensions in aesthetic values would help to develop the burgeoning field of philosophy of maintenance further in order to better address the complex reality of the contemporary world. Especially in relation to urban environments and their development, aesthetics is rarely only about aesthetic values, but intersect also with social and ethical values. What there is to be sensed, perceived, and experienced in the first place, is indicative of societal values more broadly. This extends also to what is missing from the cityscape, as in the example of the many technologies which are hidden or simply erased when they become obsolete for most city dwellers. This implies that looking at cities over time might reveal new dimensions to established problems and issues in aesthetics.

While the ruins of the future might not consist solely of technological constructs even in the most highly technologized imagination, the appearance and perceptual qualities of human-designed technological artefacts form a great deal of the legacy that we leave for future generations. These should not be approached merely as traces of the past from a heritage perspective or as updatable elements from a technical perspective but also through their impact on the overall aesthetics of cities. The aesthetic perspective undermines the continuity of human-technology relations over time and also facilitates experimentation with contested aesthetic values and new possibilities. Understanding what is aesthetically pleasing, negative, interesting, or even merely tolerable could have further consequences on how to appreciate cities as complex systems, in which there is “something for every taste” and which conform and adapt to the increasing requirements for sustainability transformations.

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