Article

Landscape Cognition in the Era of Mobility of Things: The Notion of Platform Urbanism and Taskscape

Li Won Kim

The Graduate School of Environmental Studies, Seoul National University, Seoul 08826, Korea; gddfhfg@snu.ac.kr

Abstract: The mobility of things is becoming increasingly significant in modern cities owing to the ‘untact’ phenomena to sustain people’s lives during the COVID-19 pandemic and adopt platform urbanism. This study argues that the feature of mobility had a significant impact on the formation of modern cities’ landscapes. We examine the necessity for a distinct perspective on the urban landscape based on the mobility of things. Consequently, a literature research on mobility and landscape concepts and fieldwork such as shadowing and contextual interviews was conducted. The findings suggest that the notion of taskscape can be used as the interaction of actors within mobility tends to shape the landscape of the mobility of things. It discusses the re-recognition of the landscape concept according to the phenomenon of the mobility of things, which is significant for future landscape research in sustainable urban planning. Landmarks also exhibit the qualities of a mobility scape that acquires a high-level image at a high speed and a navigation landscape that experiences space through a mobile map in the mobility of things. Further, platform urbanism allows for the implementation of the mobility of things’ landscape in both physical and virtual spaces, creating a virtual landscape in mobile applications.

Keywords: mobility of things; landscape; platform urbanism; taskscape; mobility scape

1. Introduction

As mobility is a moving phenomenon, constant new perspectives and research are required [1,2]. Epistemological transitions introduced as mobility paradigms have begun to draw attention to the so-called “on the move” research methodological innovation and the moving research subjects [1–5]. Urban mobility systems have a significant impact on and affect the shape of cities [6,7]. In addition, the changing shape of a city forms a landscape, which is a regional environmental characteristic of space [7,8], and it functions as an institutional world, a montage of society, records, and evidence of earlier generations [7,9–11].

Mobility of things such as delivery, which has been accelerated by COVID-19 and platform services, is a major mobility style that occupies modern cities and has a great impact on the exterior of a city. Platform technology plays a central role in forming the vision, practice, discourse, and materiality of future cities, resulting in platform urbanism [12–15]. The extremely active desire for convenient consumption activities of urban residents is owing to MOT (Mobility of Things) and platform urbanism, which have mobility characteristics that consumers with desires do not move directly, but move ‘things’ through the presence of a deliverer [16]. Therefore, to grasp the characteristics of platform urbanism and the MOT, it is necessary to study the landscape from the perspective of both actors and hidden actors according to the MOT phenomenon. This study argues that the feature of mobility had a significant impact on the formation of modern cities’ appearance, and it examines the necessity for a new perspective on the urban landscape based on the mobility of things, thereby highlighting the issue of expanding future landscape research and sustainable urban planning.
2. Materials and Methods

This research aims to understand the urban landscape in which the mobility of things changes, with a focus on platforms. To that end, a literature review was conducted on (1) the patterns of change in the concept of landscape according to mobility and (2) separation of actual and virtual landscapes according to platform urbanism. It has been argued that the ‘hybrid’ mobility landscape is caused by urban residents’ active needs and actions. This study proposes Ingold’s taskscape as a concept for understanding the MOT landscape. Unlike customary landscapes, taskscape considers non-human beings as a major factor in identifying landscapes \[11,17\]. Objects should be considered as elements and actors that form the landscape with humans because they provide movement to change the environment, such as possibility and resistance, within social relationships \[2,11,17\]. The taskscape—which emphasizes the importance of nonhuman objects in landscape formation, including the relationship between objects and humans—is appropriate as a framework for interpreting the active interaction between objects, humans, and spaces in the MOT process.

To examine taskscape, the study’s second methodology introduces field studies such as archiving and shadowing \[18\] a mobile research method \[1–5\]. The study’s spatial context is the Korean metropolitan area, where the number of mobility services such as delivery and pickup has increased 2.9 times in four years \[19,20\]. During the shadowing process, the researcher observed food delivering platforms’ workers (A and B) riding motorbikes to deliver food. A is a dual-job deliverer who primarily delivers through platforms such as BAEMIN and Uber Eats, and B is a delivery company employee who delivers through various MOT platforms. In this process, a GoPro mobile camera was attached to the bike to record the study subjects’ perspectives, and a total of 15 delivery processes were recorded. In addition, the researcher self-experienced as the Uber Eats platform’s bicycle deliverer and captured the scenery visible during the routes with a GoPro. Furthermore, in-depth interviews were conducted in the contexts of delivery, purchase, and walking to capture the interaction and experience of each actor, such as four deliverers (including A and B), three consumers, and three pedestrians (See Figure 1).

This study aimed to witness the taskscape, which is the external aspect of the MOT era, in both virtual and physical spaces simultaneously. Further, the author proposes that this taskscape and hybrid landscape perception will be critical to understanding the MOT landscape and platform urbanism in the future.
3. Results
3.1. Landscape Changes according to Mobility

Lynch argues that the appearance of a city is important for understanding the city in general and categorizes the image elements that comprise the landscape as paths, edges, zones, nodes, and landmarks [21]. These are physical units of cities that humans perceive visually, and cities understood as such structures are interpreted as physical and visual observation methods.

Landscape, as in Lynch’s study, is a concept of observing space from an aesthetic and visual perspective. With the dominance of visual hegemony, the landscape has become a principal method of appreciating or consuming space. The modern era strengthened its consumption characteristics, and in the mid-nineteenth century, the language of view and panorama determined the composition of visual experience and emphasized spectacles [7]. Urry describes how landscape thinking is changing in terms of ‘distancing’ and ‘dominating’ the place because vision is superior to other senses [7]. A landscape is defined as an environment accompanied by intangible resources that have a prominent appearance and focus on human leisure, recreation, and visual consumption. The traditional landscape perception structure is built on the morphological elements included in the city’s appearance, which is an analysis method that fits the city’s characteristics where the behaviour of space is based on points.

However, as mobility becomes more prevalent in cities, people’s perceptions of the landscape are shifting. The growth of commuting had an immediate impact on the built environment, its landscape, and human attitudes about the landscape [3]. The invention of railways brought significant transformation for mankind among means of commuting. As Schivelbusch [22] noted, the invention of railroads liberated humans from their dependence on the foreground, allowed them to travel through space, and expanded their awareness of their surroundings. However, the railways simultaneously dehumanized the landscape as well [22]. The landscape became a panorama passing fast within a fixed frame with the development of the railway, rather than an object of sketches or paintings [7], and as Ruskin stated, ‘it transmutes a man from a traveller into a living parcel’ [23] human activity was limited with the advent of the railway.

The train’s effects on the landscape were not restricted to the ground. The Metropolitan Railway’s Paddington-Farrington line, which opened in 1862, was the world’s first subterranean railway. It was extremely popular with passengers, but it was also associated with the practice of burial [8]. Despite this unfavourable cultural association, underground and metro systems gradually spread worldwide, and the Paddington-Farrington route is considered the beginning of the current underground landscape.

In defining the commuting context, there is a significant difference between private automobiles and trains. The car’s prototype was developed in 1891, and by 1912, the number of private cars owned in the United States had surpassed one million, making it a major mode of transportation alongside railways [8]. As reported by Simmel [24], railways inevitably involve meeting and contact with others, while cars commute in independent spaces where they are the ‘captain of each small ship’ [8]. The introduction of private cars has had a critical impact on the current urban landscape, as evidenced by the reckless housing growth in the suburbs connected by roads or the intention to build road infrastructure leading to highways. In the 1960s, the battle between Jane Jacobs and Robert Moses over New York City’s highway infrastructure was a significant event that demonstrated the conflict between the landscape of human behaviour and car-centred urban planning.

Commuting roads are roadways that have been established as a result of urbanization and the separation of work and home. Further, in modern Korea, commuting roadways primarily comprise roads for vehicles and railroads for trains. These roads of mobility are man-made creations of urban planning, and when they first appeared, they drastically altered human perceptions of space and extended human-recognized space [2,22].
Urban planning did not simply applaud the birth of the mobility system. High-speed railways, bus lanes, and freeways were all vigorously promoted. In the instance of Korea, railways were built to aid Japanese colonial power, while expressways were built in the 1970s to meet the head of state’s ambition for faster expansion [10]. We are now locked in traffic jams that flood the roads in the morning and evening owing to the coordination of mobility systems and urban planning. The scenery of such a high-mobility society alters people’s perceptions of the landscape portrayed by a mobility scape. In other words, as the movement becomes active and cities compete on a global level, the sense of feeling the scenery changes from the deep, slow, and multi-sense-oriented characteristics of walking human gaze to those of various mobility means. Consequently, in addition to the characteristics of modern cities, the mobility scape recognition framework necessitates that the study method of urban landscapes goes farther in physical appearance analysis. This argues that sensory geography based on ‘fast, moving, colourful techniques’ should be able to record human behaviour that is both swift and varied.

This shows that to interpret the landscape of the city occupied by mobility, identification beyond visual and aesthetic sentiments is required. The landscape has evolved as a key concern in various academic fields in the mid and late twentieth centuries as an interest in space, which was previously referred to as ‘academic oblivion’, according to Hongjung (2005). Moreover, the author mentioned that the landscape was born as a result of the structural change in the modern visual system, and it is expressed as an ‘institutional world’ rather than an aesthetic object [25]. This is because, along with spatial transformation, the way of reading space is recognized as a way of interpreting the world, as the perspective of looking at space undergoes significant change.

The landscape is expressed as a ‘montage’ [25] of how society and culture are constructed, just as Benjamin’s [9] photograph of the landscape of the Paris Arcade acts as a kaleidoscope in which the era’s substructure is expressed as scenery alongside capitalism. Beyond only a formative description, the landscape that conveys society’s invisible qualities is crucial as a technique of interpreting society. The landscape as an approach for researching cities and spaces, which views the world through the lens of space and its symbolic representation, is becoming increasingly relevant. Thus, in this study, the concept of landscape serves as a significant framework for comprehending the society of MOT.

In this regard, filmmakers Steyerl and Berardi [26] also express that the importance of a specific viewing angle varies with the times; in particular, the reason why the omniscient view, or bird’s-eye view, is quickly embodied in services such as Google-map and Drone view is that people’s ‘temporal sense of direction’ has ‘dramatically’ changed as a result of new technologies. Accordingly, the paradigm, including the existing perspective, loses its power and another paradigm emerges. Therefore, as the mobility pattern transforms from human to things’ mobility, with ‘things’ becoming the main object of mobility, it changes the understanding of human spatiotemporal orientation, the way human groups operate, and the type and style of perception. This inevitably changes the perspective and direction of our view of the landscape.

Despite this shift in the landscape’s orientation and the necessity to broaden the notion, the current landscape concept remains a visual hegemony and a human-centred shape. Mobility scape, a landscape change according to actual mobility, also has a limitation in interpreting contemporary MOT landscape as the only human viewing angle in fast-moving transportation [27]. Fundamental adjustments in the landscape idea and the concept of taskscape are recommended as the existing landscape concept makes it difficult to observe social circumstances such as activity and relationship change between humans and objects.

3.2. Landscape in the Era of the Mobility of Things

In terms of a new paradigm of urban mobility, a city with increased MOT is a phenomenon in which the movement of things is maximal and diverse in terms of quantity and variety and is subordinated to modernity. Furthermore, it follows movement trajectories with sporadic starting and ending points, constantly moving. As mobility evolves, so
must people’s perceptions of the landscape. MOT’s axes of movement are random and unusual, unlike commuting, which builds a regular axis of movement around events at defined coordinates. Mobile actions targeted at moving things other than humans are simultaneous and unplanned, resulting in arbitrary and unpredictable movements each time the application’s information value is provided with IT technology. Consequently, the entire city infrastructure where MOT occurs, rather than the ‘point’ of view, becomes a place where viewing behaviour occurs. The actors who comprise MOT’s taskscape are classified as sellers, purchasers, deliverers, pedestrians, and consumers in this process, and the meaning of time and space on the movement line is reconstructed based on their actions (See Figure 2).

![Figure 2. Actors and spatial structure of the mobility of things (Source: Author’s creation).](image)

Furthermore, the city’s components change in response to changes in the MOT pattern, which is structured along the route throughout the MOT. As a result, the spatial composition for the taskscape of MOT consists of a commercial space, which serves as the starting point for goods to begin moving; a road, which serves as a means of moving things; and the entrance of the consumer’s private space, which serves as the destination.

Traditionally, considering that nomadic metaphors lose their place, the movement of deliverers who understand the destination as a functional element of simply a stopover seems ‘placeless’ [28]. Further, Adey [29] explains that the act of moving into academia was understood as the process of leaving the place. Thus, there was a perception that being on the move was placeless and fixed the superficial scene.

Conversely, deliverers move to transport products from one location to another. That mobility mechanism has a placeless aspect and connects the stores and recipients in each space. The store that accepts food and the front door that arrives for delivery function as a halt in a continuous movement, not as a place for them. Owing to the deliverer’s movement, all spaces in this process are re-territorialized, and the most important space becomes the moving path. Deliverers evolve into beings that move through space and interact with it in the flow of movement routes (See Figure 3).
Figure 3. Deliverers’ flow of movement routes from shadowing (Source: Author’s creation).

The line linking one point to another seemingly moves functionally; however, the interaction occurs at each point for delivery. It is crucial to comprehend these interactions to comprehend the taskscape of MOT. First, the deliverer is continually looking for directions to deliver quickly to a new location, which is dependent on GPS and navigation. A digital map called navigation is the primary medium via which the deliverer experiences geographical recognition. Matsuoka [30] identified these digital maps as a technology that allows people to focus on the ‘Now, Here’ beyond one’s body, using terms such as localization, realization, navigation, ubiquitousization, optimization, and personalization. Second, individual landscape perceptions have diverged from overall, social, or global perceptions as a result of the growth of mobile-based platforms and MOT. People focus on themselves on a mobile map where the location is fixed using GPS, and the individual’s sight is therefore fixed on ‘now, here’, as Matsuoka indicated. In this regard, existing perspectives lose potency as humans become more comfortable with the omniscient viewing angle, according to Steyerl and Berardi [26]. The omniscient point of view in drones and Google maps on mobiles are set to produce another powerful visual hegemony of geographic perception, just as Brunelleschi invented perspective in the Renaissance and had a tremendous visual hegemony.

However, as the map on the deliverer’s mobile device is only presented inside the mobile device, their spatial recognition area is fairly limited to the smartphone screen. This is because the process of identifying space is fragmented into the smartphone itself, which can approach the destination by following the projected direction and methods of travel [30]. Furthermore, the urban scene is ‘vicarious experienced’ by data on the mobile phone and navigated as it relies on its coordinates moving in the smartphone monitor (See Figure 4).
When a deliverer gets close to the destination, the scenery they saw via a proxy returns to reality. When they enter the gate area, the mobile map will not be able to direct them to the door of consumers. The scene in which the deliverer identifies space physically begins at a large gate of a residential complex with this mechanism. In precis, the deliverer determines whether it arrived in good condition based on the navigation path from the facade, which is the front of the building that can be recognized in architecture. Furthermore, as Interviewee B notes, finding a destination is difficult because the appearance of new city apartments is similar; therefore, in fast-mobility cities that recognize urban scenery through mobile maps, clearly distinguishing facades as recognition elements of physical scenery becomes critical.

The experience of physical space begins in the delivery location’s facade without a map. Finding the given number on the indicated floor, taking the elevator, and visiting the customer’s door is a spatial experience for which the deliverer depends on his or her body. To avoid misdelivery, the deliverer should use tiny informational values such as numbers and plaques to distinguish between similar front doors. Consequently, in contrast to the hitherto extremely long delivery route, this time is paradoxically a time to enhance the sensory capabilities of the deliverer to recognize the place (Figure 5). Accordingly, the deliverer’s experience of a mobility scape extends from the mobility path of seeing the landscape vicariously through the navigation and mobile maps to the front door of clients who physically experience the place.

Figure 4. Deliverers’ moving coordinates on the smartphone monitor (Source: Author’s creation).

Figure 5. Boundary of public space and customers’ private space (Source: Author’s creation).
The sense of space and place is shifting as big logistics platforms become the major hub of consumption. As mobile applications become the main centre for consumer tasks, a location where customers obtain information in order to see, pay for, and wait for things to arrive turns into an online platform. In the online infrastructure, consumers make purchases through websites or applications. As a result, each website or application acts as an existing face-to-face commercial space, exhibiting things for sale in an appealing manner and constructing a showcase-like arrangement.

As Lury [31] reports, various objects that exist variably change their value in the process of moving between places; these change places, ‘are involved in the reconstruction of memories’, and the moving objects are reconstructing the commercial space in the monitor. Along with the physical space, these rapidly shifting combinations of items, humans, and space comprise ‘absent presence’ [2].

The flow of data and a method for improving it are part of the virtual interior area that the logistics platform employs as a foundation. Furthermore, the user interface and code of the mobile application that generates it are tailored to each company’s identity and strategy. The design of the distinctive app, as illustrated in Figure 6, allows the user to sense a specific spatiality and establish an awareness of network localization. As a result, consumers could discern a distinct placeness within virtual mobility.

Figure 6. Appearance of mobile applications forming a virtual landscape (Source: Author’s creation).

In the era of logistical platforms, the landscape of spectacle, characterized by Debord [32] as highly accumulated capital functioning as an image, is recreated by going from a physical commercial block to an application on a smartphone. Further, the web pages of unique online platforms create a differentiated user experience, which helps people distinguish each online platform space as a ‘place’. Shedroff [33] divided the user experience design of an online platform into structural, functional, and visual elements, while Kyungil and Junwo [34] analysed the web page experience through visual experiences such as shape, colour, movement, and image as well as usability of mobile-application function as a place.

Moreover, online commercial space has features that fit Massey’s description of space as a ‘product of interaction’, an area where multiplicity exists, and a constantly reconstructed existence [35]. Platform apps continuously and actively interact with users and have more multiplicity than any other medium or space for the influx and loyalty of various
customers. Consequently, the online commercial space is recognized as a space, and a virtual landscape and taskscape are established on the monitors of people who are constantly mobile thanks to the proliferation of cell phones.

Furthermore, purchasers’ perceptions of consumption tasks influence this virtual environment experience. For instance, when customers add items to their shopping cart and pay, they will be delivered at the specified time. This is a basic MOT method that ensures the time sovereignty of buyers by outsourcing deliverers’ movement. ‘Feeling like finishing a quest (doing a specified task within the game) and being rewarded’, says interviewee C-2 of the buying task through such a mobile platform. Consumers recognize shopping as a game on the mobile platform. He explained, ‘When I pay with an app like Coupang Eats, the app displays the location of the rider. I could see where this individual was coming from. If he or she looks slow, they will walk on foot. It’s for estimating when my supper will arrive’. Buyers who have been given permission to watch the deliverer watch the motions of things from an omniscient vantage point [26]. One ‘quest’ process ends when the deliverer’s coordinates reach the location of the customer’s house (Figure 7).

![Figure 7. Virtual taskscape watching movement of deliverers (Source: Author’s creation).](image)

On huge platforms, deliverers are responsible for individual movement, and their locations are ‘shared’ across numerous commercial spaces, locations, and users. Consumers, as a result, see MOT as a shared good, experience a virtual taskscape by watching the movement of deliverers and instantly privatizing it with an omniscient vantage point.

4. Discussion

This study aimed to comprehend the city’s landscape by focusing on the quickly expanding mobility of things in accordance with pandemic and platform urbanism. Accordingly, first, a literature review was undertaken on the landscape of a high-mobility society, and the shifting notion of the landscape was investigated by focusing on ‘commute’, which is another mobility phenomenon in the modern city. Mobility is also crucial for the formation of urban landscapes because it is a key factor for humans to recognize cities. Urban landscape awareness generates a mobility scape with the introduction of commuting methods such as railways and private cars, as well as the rise of moving speed.

Second, field research was conducted, including shadowing and contextual interviews, to investigate how the landscape has changed because of modern MOT. As MOT landscape
tends to be formed by the interaction of actors within mobility, the concept of taskscape should be applied. In addition, the landmark is a fluid landscape that is not fixed to the surface base, and it has the characteristics of a mobility scape that acquires a high-level image at a high speed, and a navigation landscape that experiences space through a map on mobile.

Importantly, by platform urbanism, MOT landscape is implemented simultaneously in real space and virtual space, resulting in virtual scenery in mobile applications. This study argues that the concept of scenery that judges the exterior of the city should also change according to the phenomenon of things’ mobility, and it is meaningful in discussing the expansion of landscape research.

This study has a limitation that the research sample limits the international phenomena of MOT and platform urbanism to the metropolitan area of Korea. Furthermore, focusing on contemporary characteristics has the weakness of only considering contemporaneous MOT landscapes. However, this research is critical in understanding the urban scene, with a focus on MOT, which has hitherto been addressed primarily in the logistics industry. Furthermore, changes in landscape perception in the age of MOT can be used as a framework of sustainability for analysing the exterior of changing modern cities and developing appropriate urban planning strategies.

The study concludes by outlining the necessity for expanding MOT research beyond the study of landscapes to include economics, infrastructure, and education. In the MOT era, a third party acts as a delivery person to outsource customers’ direct movement, resulting in economic advantages such as securing customers’ time, preventing COVID-19, and obtaining significant funding for delivery platforms. This process is especially helpful and provides a variety of options to buyers who are faced with time constraints and find it difficult to move, such as dual-income families, caretakers, people with disabilities, and the elderly [36].

However, several drawbacks are threatening the MOT era’s sustainability. For instance, the movement of things requires packing materials, thus generating a significant amount of waste [37]. Additionally, as noted in this study, issues related to the platform, such as its omniscient vantage point, deteriorate delivery persons’ working environment [38,39] and are pressing problems of the MOT era that must be resolved.

In particular, both bikes and shared mobility become part of the urban landscape, with delivery persons using bikes as a means of transportation or using shared mobility such as e-scooters to reduce travel costs [40]. As a result, problems arise and reduce the utility of infrastructure. Delivery persons often misuse bicycles, e-scooters, and shared mobility to ensure fast delivery and high income, and this results in traffic order violations [16,41]. Accordingly, research on the norms of new means of transportation and education for long-term sustainability of the MOT era is required according to MOT, such as a study suggesting the norms of e-scooter and shared mobility [41–43].

MOT is a crucial service in contemporary society and has the potential to become a significant research topic for the study of cities, societies, and geography, providing even supra-municipal insights in the future. Therefore, further study is necessary, and active research must be conducted to enable MOT to advance more beneficially.

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