# Chapter 4: Landscapes and Maps

## Seeing and Imagining

Even given all of the differences between landscapes and maps, which are indeed substantial, both record an image of the world on a two-dimensional surface. Yet, philosophers often divide these ways of representing space as being conceptually opposed and contrasting.[[1]](#footnote-1) And historians, in turn, apply this dualism to the history of Western art in order to categorize the landscape and map as emerging from irrational and rational drives, respectively. Further, until relatively recently, these visual representations have to a large extent belonged to the different disciplines of art and geography.[[2]](#footnote-2) And, overall, when or where both are actually used in field of geography, the landscape serves the purpose of topography, as an arrangement of the natural and artificial surface shapes of land or sea, and the map serves the purpose of cartography, as a practice of diagrammatic representation of an area and its features such as cities and roads. Moreover, these two genres of images, the landscape and map, are interpreted by art historians as formative in the divide between realism and abstraction. Thus, the distinction between landscape and map in geography as well as art history also intersects and overlaps with the distinction between vision and visualization in visual studies.

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|  | **Landscape** | **Map** |
| Geography | Topography | Cartography |
| Discipline | Arts | Geography |
| Visual studies | Vision | Visualization |
| Media | Photography | Drawing |
| Space studies | Place | Space |
| Subject-positioning | Author-centered; single-viewed | Audience-centered; multiple entries |

Table 3: Dualistic split between landscapes and maps

In the field of visual studies, this dualism between the landscape and map is attributed with even further connotations, as is perhaps most commonly exemplified by the distinction between photographic and drawing mediums. Yet, few authors define these distinctions in depth. Gilles Deleuze and Félix Guattari crucially define how these genre situate the viewer: ‘A map has multiple entryways, as opposed to the tracing, which always comes back “to the same.”’[[3]](#footnote-3) In other words, the landscape relies most upon the subjective gaze of its creator, while the map relies most upon the subjective gaze of their user. But also, these genre categories are about fundamentally different things, as the landscape describes place, and the map describes space. Thus, the image of a landscape is self-referential and can be interpreted in and of itself. Whereas the image of a map is externally referential and can only be interpreted in the context of that which it represents.

## Landscapes and Maps as Preferences

Both the imaging practices for mapping and landscape have evolved alongside the advancement of technology. During each period in history there have been different capacities for the production of representations of space and place. But also, preference for specific types of representation shifted over time. So, in Antiquity, the Medieval Period, and the Renaissance, people overall preferred the map, while later periods, especially the 17th to 19th centuries, people were most fascinated with the colorful, dramatic, and romantic landscape.

Figure 20: Monk of Colmar, *Peutinger’s Map,* 1265 (the work in the public domain)

Maps are the oldest abstract representations of space. And even today, children develop a cartographic literacy to one degree or another, whether through the study of geography in school or using applications on their smart phones. However, the first maps in Antiquity were more approximate than they were based on a system of measurement.[[4]](#footnote-4) Part of the reason for this was that they did not serve the same purposes of navigation and orientation as maps do today, and because there was no widely agreed upon system for notation in maps.[[5]](#footnote-5) For a long time, notation systems were flexible or unclear. But in order for a map to be a map, essentially, one needs to have an agreed upon and fixed measuring system, a set of rules for the composition, and consistent methods of reproduction. Thus, Denis Wood, John Fels and John Krygier claim that no maps existed before 1400, or maybe even 1500, at least in the sense that we understand the idea of the map today.[[6]](#footnote-6) Even if some maps dated to Antiquity have been found, they served more of a decorative rather than a navigational purpose.[[7]](#footnote-7) For the greater part of history, maps did not serve the purpose of navigating the world but to illustrate the way we humans conceive the world around us. Both the *ecumene* of Classical Antiquity as well as the *mappa mundi* of the Medieval Period represented the world which their creators thought as if it was the whole planet. Of course, at the time, the other parts of the Earth which we know about today had not yet been discovered. And, consequently, these maps depicted the earth as flat, and left out the *antoecumene,* opposite quarter of the earth, or southern half of the hemisphere.[[8]](#footnote-8)

This ‘whole world’ theory is exquisitely recorded, for example, in the *Tabula Peutingeriana* or Peutinger’s Table. This 6.74-meter-long panoramic scroll depicted a roster of the *cursus publicus* or road network which connected Constantinople to more than five hundred Roman cities and thousands of other sites.[[9]](#footnote-9) The *Tabula* served to map the late Roman Empire to the fullest extent possible at the time and revealed the spectacular size of the Roman’s domain. Because of its layout, however, Peutinger’s Table has remained one of the greatest enigmas of Roman cartography. During the Medieval Period, the *Tabula* was reintroduced and along with it the idea of the planet as flat. Of course, the world was not represented as a spherical globe in the Tabula, even though this reality already common knowledge for ancient Greek cartographers, but rather as flat plane.[[10]](#footnote-10) Consequently, historians have interpreted Peutinger’s Table as a sign of decay in knowledge about space from Antiquity to the Medieval Period.[[11]](#footnote-11)

The Roman original *Tabula Peutingeriana* from Antiquity has either not yet been found or has not survived. What has been preserved is a Medieval copy made by a French monk in the town of Colmar around 1265. This copy references the original, which is believed to have been created between the 4th and 5th centuries CE during reign of the Roman Emperor Augustus.[[12]](#footnote-12) As depicted in the *Tabula*, the geographic sites were constructed after the 4th century. And given the toponymic names for these sites, used in the manner customary during the Roman imperial period, the original map is usually considered to have originated at that time. In addition, because the toponyms are written in declinations, the map seems to have been revised in latter age, when these grammar rules as such had already been established.[[13]](#footnote-13) Besides this, however, some of illustrations do in fact resemble the architectures found at the respective sites. For example, the landmarks of Rome, Constantinople, and Antioch are represented using columns or arches particular to that location. Most sites, however, are marked with far more generic icons. These consist of two general types: the house-like and courtyard-like. Although there is no legend explaining this categorization. Both types of icons, however, are drawn from a bird’s eye or aerial view, as if seen from above, rather than not in the frontal or oblique view. Retrospectively, from our understanding today, such a viewpoint gives the map a visual aesthetic or style like that in aerial photography. The other information in the map is schematic, both simplified and symbolic. Cities and roads are laid out upon the flat surface, and the complexity of the Adriatic landscape it reduced to barriers set out in front of a traveler, as are the rivers and largest mountains ranges. Compared to the much older map, but also to contemporary maps, distances in the *Peutingeriana* seem to be approximate, as if the official measuring systems of Roman cartography, or the system developed by Hippodamus, was never consulted. Being entirely abstract rather than realistic, clearly the *Tabula Peutingeriana* represents knowledge of the land rather than the land itself. Thus, while resembling a map, it doid not rely on any known precise measure.

Indeed, the *Tabula Peutingeriana* is really neither a map nor a landscape because as a visual artifact it is imagined rather than either measured or observed. In other words, the map records temporal rather than spatial dimensions, indicating the geographic duration that a journey might take rather than the geographic length between the points being depicted.[[14]](#footnote-14) Taking in consideration how the map represents only roads and various cities, it may even be assumed that it represents a kind of ‘travelogue’.[[15]](#footnote-15) This spatial distortion of the referential subject of the map, which presents more of an itinerary than a roadmap, may be due to the choice of the vehicle, such as a boat or a horse carriage.

After a time in the late Medieval Period and early Renaissance when maps were being repeated and reprinted, an age of discovery, as well as of colonialism, exploration, and imperialism, brought with it a renewed interest in maps and map-making.[[16]](#footnote-16) For example, in 1346 Fra Paolino da Venezia made *Civitas Venetiarum*, a map of of the city Venice, which in 1572 to 1617 led to the large cartographic project *Civitates Orbis Terrarum*, a great atlas edited by Georg Braun and illustrated by Franz Hogenberg. Published in six volumes, this atlas had 546 maps of different European cities, all of which simulated an aerial or bird’s eye view which. at the time was inaccessible to humans. Yet, these maps had the purpose of representing a small area rather than a big region. Only in the 19th century, with the influence of the work of German geographers Alexander von Humboldt and Carl Ritter, did maps begin to locate a specific place within the context of a general space; that is, of the whole Earth.

Cartographic reasoning has been at the heart of the Western thought since the dawn of the age of discovery. Maps were the product of scientific discoveries but also imperial tendencies. By the time of 18th century, the surface of the Earth had been mostly discovered, leaving only a few places yet unknown. ‘It is not a new terra incognita for explorers in colonial headgear. It is by no means a res nullius, ready to be appropriated’, wrote Latour, describing that time.[[17]](#footnote-17) Slowly each undiscovered country that had been vaguely represented in maps disappeared. With the loss of the sense of mystery surrounding these territories, the map primarily become a tool for navigation of the known world, rather than for illustration of the unknown world, and this remains its function today. With the closing in and completion of this total image of the world, cartographers went on to draw its ever-smaller details and, as Virilio notes, the map began more and more to be copied rather than created, with the landscape as a genre again becoming a more frequently employed means for the representation of space.[[18]](#footnote-18)

At the time when more attention was being given to the details in maps than map-making itself, the interest in the map was replaced by interest in the landscape. The image of the landscape occurred on an iconographic or symbolic level already by the 15th century. Still, it took a few centuries for the landscape genre to flourish. And only between the 17th and the 19th century did the landscape become a dominant art genre. With the Industrial Revolution, however, landscape painting became more and more important, as if a harbinger of the world-scale problems which this progress would lead to.[[19]](#footnote-19) In paintings by British artists John Constable and J.M.W. Turner, for example, a warning appears to have been issued about industrialization and the consequent pollution or, at least, the paintings can be interpreted this way in the light of history).[[20]](#footnote-20) Unfortunately, the teachings of such landscape painters were not recognized until more recently, when the consequences of the coal industry among others has reached a tipping point. Today, in an time not only of climate change but of climate crisis, landscapes are frequently employed to depict the loss of nature, while maps can be used to demonstrate the changes in the environment which have been introduced by humans show the destruction and intrusions of industry into this land.

The last moment in history in which the landscape held vital importance in the visual arts and for visual representation coincided with the invention of the photograph, which itself was a consequence of the Industrial Revolution of the 18th and 19th centuries. With the invention of camera technology, the photographic medium achieved greater and greater significance in the arts, relegating the painterly genre of the landscape to ‘Sunday painters’ in the open air. Indeed, Denis Cosgrove claims that as a visual genre in the 19th century the landscape was again replaced by the map, at least in part because it was in this moment that visual tools other than painting become capable of naturally and realistically depicting the immediacy and intimacy of place.[[21]](#footnote-21) By the end of the 19th century, both photographic as well as aerial technologies were developed, which would lead to their fusion in the next century.[[22]](#footnote-22) Edward Casey thus named this era ‘the age of world picture,’ referring to Heidegger’s theme of the ‘world image’, a concept which is paraphrased in the title for this book.[[23]](#footnote-23)

Today, the entire surface of the Earth is continuously photographed from the air. As Siegfried Kracauer wrote in 1928, ‘This equation is not made without good reason. For the world itself has taken on a “photographic face”; it can be photographed because it strives to be absorbed into the spatial continuum’.[[24]](#footnote-24) The consequence of such over-photographing is that today there are no secret or unexplored territories left on Earth. Satellites used by Google discover some previously hidden part of the world on the daily basis.[[25]](#footnote-25) Or, as Virilio writes, ‘There are eyes everywhere. No blind spot left. What shall we dream when everything shows visible? We’ll dream of being blind’.[[26]](#footnote-26)

Yet, even such photography is conditioned by maps and map-making practices and processes, as I will analyze in Chapter 5. Many maps today do not prove a direct correlation between physical measures of the land, instead representing it symbolically. Schematized, they simplify and reduce the information into what the author of the map, whether an individual or institution, deems to be the most important, which in turn leads to maps which are embedded with a priori interpretations. And moreover, they are adapting to the user, diminishing distinction by which landscapes used to depict places while maps spaces.

The development of maps has in recent years significantly accelerated in comparison to the development of landscape during the same time-period.[[27]](#footnote-27) But cartography as we have known it no longer exists. Cartography has become emancipated from the role of the human to become an autotelic activity. Today, many types of maps are being implemented, including aggregated, data, geo-, and raster maps, which do not represent the world as it is experienced, measured, or lived by humans but some interpretation of information about this world. In other words, the cartographic reality is no longer directly connected to a single geographic reality. And there are so many maps online, each tailored to a specific need, or by a particular investor, leading the viewer to some product or purpose. We have arrived at an era of overlapping visual geographic material, due to mapping and photographing services, included in most mobile gadgets from phones, watches, laptop, to even cars. There are more maps, and more photographs, of the same place existing. The same place is found over-represented in many systems at once. Multimodal images have further distorted our visual conception of reality by producing multiple and different maps referring to the single place.[[28]](#footnote-28)

Susan Sontag once warned, hyper-photographing reality or photographing it to an excessive or exaggerated, extent, can lead to our complete detachment from it.[[29]](#footnote-29) Following Sontag’s line of thinking, we may now ask ourselves: what is the consequence of our hyper-mapping and hyper-photographing of reality? Thirty years ago, Henri Lefebvre asked: how many maps do we need to understand a single place? [[30]](#footnote-30) As the number of maps for a single place today grows exponentially, authors as such as Gunnar Olsson and Tom Conley claim we are living in the age of the ‘cartographic reason.’[[31]](#footnote-31) The data-driven characteristics of contemporary culture demonstrate the pervasiveness of what James Elkins term the ‘post-medieval mapping gaze,’ whereby people fail to learn how to see for themselves the infrastructure of the geography around them.[[32]](#footnote-32) Other authors note that we are today even fixated on such a ‘cartographic gaze.’[[33]](#footnote-33) This overabundance of maps leads to general crisis of representation for the Earth, which in turn produces a ‘cartographic anxiety’, and, ultimately, according to what Flusser heralded as the ‘end of cartography.’[[34]](#footnote-34)

## Space and Place

The crucial difference between the landscape and map, as already noted by Deleuze and Guattari, is in the positioning of the viewer. With the landscape, the position of the author is often repeated by the viewer. But there is no such view that can be repeated with the map. Thus, the landscape indicates the place of an actual viewer, while the map depicts the space for many potential viewers. Such concepts are useful because they demonstrate the role and significance of the social formation behind our ideas of environment and habitat. Ideas about place, however, from a sociological perspective, are commonly defined as being immediate and therefore localized. In contrast, space is always and necessarily defined as something at once elsewhere and everywhere. From a sociological perspective, ideas about space and place are informed by our social unconscious as communicated through the language and images which frame our cognition.[[35]](#footnote-35)

The distinction between concepts of space and place in sociology is commonly attributed to French sociologist Michel de Certeau.[[36]](#footnote-36) Place is what there is and physical space is what could be.[[37]](#footnote-37) Pierre Bourdieu further elaborated upon this distinction.[[38]](#footnote-38) And by 1996, he had reformulated his theory, defining the distinction between the communal and geographic spaces, attending to a more abstract level of meaning than with his original materially-based definition.[[39]](#footnote-39) Bourdieu’s division departed from the strictly physical definition of space to the one based on the experience of living (in a society). Bourdieu, as a sociologist, was focused on ideas of communal space. This he defined as an interpretation of the real or geographical space, formulated through the ways in which a certain population captures their belief systems through perception and production in order to produce a coherent and consistent meaning of their own habitat.[[40]](#footnote-40) This amplified the distinction between communal and physical spaces, where communal space is based on the immediate experience of some place, and physical space is based on a variety of possible experiences of the same place. Yet, through his analysis, Bourdieu pointed out the interaction between the communal and physical space in general.

Urban sociologist Henri Lefebvre, who succeeded Bourdieu, also distinguished between space and place, and termed these ‘conceived space’ and ‘perceived place’ or the ‘represented space’ and the ‘lived place’ (or maybe even ‘livable’, as a place having a capacity to be inhabited), providing a direct link between space, place, and their representation.[[41]](#footnote-41) Furthermore, Lefebvre distinguished between the representations of space and representational space or, in terms from my analysis, the image of the space and the space of the image, which correspond to the distinction among the conceived versus perceived (or lived) space.[[42]](#footnote-42) Lefebvre’s ideas about representational as well as abstract space would have a considerable influence for visual studies, and especially the differentiation between two main geographic genres: landscape and maps. While landscapes show an excerpt of the view of the author in the space, which is defining the place, maps lays down the space without placement of the author and have to be used in the placement of the audience. Still, with new technologies it is the precise place of the audience which is being mapped in an abstract space.

## The Frame and the Space

In visual studies, space is a more of an abstract construct, particularly in discourses about photographic representation, whereas place is a more of a concrete instance, in terms of the precise geophysical location of a photographic shoot.

The photographic medium, because it can represent the landscape with precision, further complicated the space-place distinction. Photography cannot record anything else but a place, and yet a photograph can refer to the existence of space. At the conclusion of the photographic process, an image is realized which is a concrete object. Despite this, however, the relationship between image and place is not realized materially but referentially. Thus, the epistemic value of the photograph, as Jonathan Cohen and Aaron Meskin defined, is derived from the distinction between the general space of photographer and the specific place of the photograph, also known as egocentric and allocentric space.[[43]](#footnote-43) The distinction between such kinds of spaces is important in order to understand the truth claim of the photograph. That is, while it is true that when a viewer looks upon a photograph what they see is a scene which a photographer has already seen, it does not represent an actual place, because the egocentric view of the photographer is already more than the allocentric view in a photograph.

These distinctions can be further applied to analyze the space of the object (the actual physical space being presented in the image), space of the author (the original perception of some actual physical landscape), and space of the viewer (the different real place where the image is experienced), as I have defined in my previous work.[[44]](#footnote-44) I will call these spaces the real, experience, and visual or, in other terms, the actual, perceived, and represented, so as to define three different ways in which the Earth has been described. The first level of space, the real-actual, is independent; the second, the experiential-perceived, is characterized by its consumption and the perspectival view; while the third, the visual-represented, has been located by that view, which it re-experiences. Here, the author has some information about the real-actual space which they represent, while audience has some idea about space of the space the author represents, but also his own place. So, the author of an image ‘sees’ only a section of the view of the space, which he transfers to the audience. Each of the subsequent spaces carries elements of the previous one, and they are being framed by the perspectival view of two places; the one the author finds inside and the one the audience finds inside.

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|  | **Space** | **Limit** |
| Object | Real / actual |  |
| Author | Experienced / perceived | Position in space |
| Viewer | Visual / represented | Frame of |
|  |  |  |

Table 4: Analysis of three spaces in photography

In ‘ordinary’ photography, as I will here refer to photographs which are produced in the course of our everyday activity, the audience sees only the section of space which was in front of the author. This section of space is determined by the author’s choice, the type of photographic lense, as well as exposure settings. This is a small section of some place, about which the author can know much more than is shown in the photograph. Thus, contrary to the three types of spaces, there are only two types of places, because the object and an author or photographer reside at the same place, which becomes important particularly in remote photography. While both places, that of the object and that of the author, are located in the same place, the author’s place is commonly not visible to the audience, but has to be reconstructed, whether through perspectival analysis or some other visual methodology. Therefore, the place of the author is not represented but only trajectory, defined through the transmission of the characteristics of the author’s place to the audience’s space. Because of this, an individual of the audience can produce completely different meanings based on numerous other factors such as her or his social and political contexts. If the perspectival analysis or visual method is successful, the author’s place and audiences’ space may come into alignment.[[45]](#footnote-45) But, while the place of the author can only ever be two-dimensional rather than three-dimensional to the audience. Perspective is constrained by the fact that the audience cannot put their head into the picture, as Cohen and Meskin claim, and turn around to see what was behind the view of the author at the moment of recording. The audience ends up only being able to vaguely estimate spatial relationships surrounding the author according to their own personal and subjective perception.

In contrast to maps, photographs represent a certain place, which is also made by an author and interpreted by the audience. The place described in a photograph is not filtered through the technology of the camera in the same way as a map is filtered through the visual language and iconic vocabulary of the map-maker. This might be one reason that photography has since its earliest days been transformed in order to become more like maps, the development of which I will analyze in Chapter 5.

William Cartwright and his coauthors valorize the distinction between the space presented in a map and the place depicted in a photograph.[[46]](#footnote-46) He claims that the location of the user of a map still does not produce a located space, because dot produced on the crossroad of the orthogonal lines is not a territory, as dot is basically single-dimensional.[[47]](#footnote-47) This difference between a specific place and a general space becomes even clearer when dealing with the non-places which emerge with post-digital photography in the age of total images.

Such non-places, consumed through strategies of over-mapping such as Google Earth, lack the signature and specificity necessary to be determined as particular places.

## Media Spaces

With new media, especially the rise of the digital media, these theories about space and place can appear over-simplistic, as Doreen Massey has already noted, because place is constructed through an understanding of space.[[48]](#footnote-48) Indeed, the dualism between place and space turns out to be quite limiting. The complexity of the space in post-digital photography emerges, in principle, from a divide between the space as it is represented and the place which has in some way been broadcast or transmitted into this space. Such a simultaneity, with its vague origin, trajectory, and destination, leads not only to a ‘middle’ space negotiated by the audience or user, but also to a proliferation of multiple spaces. It is therefore crucial to revise our definitions of space and place, through the analysis of the complex, assembled spaces which today are nevertheless generated from actual recordings of specific places.[[49]](#footnote-49)

For our definition of virtual space, Henri Lefebvre’s definition of abstract space is important as is the manner in which abstract spaces is produced in relation to real space. This includes the historic, military, urban, and economic narratives within these spaces which in turn can make abstract spaces more complex and thus, at least to a limited extent, more real.[[50]](#footnote-50) Supported by Lefebvre’s distinctions between the conceived and the perceived, the represented and the lived, contemporary media epistemology suggests that we do perceive virtual space as if it is real. And we do not disregard the knowledge that it is being transmitted. Rather, we live in both virtual and real space simultaneously.[[51]](#footnote-51) Thus, W.J.T. Mitchell distinguished between the virtual space that is transferred by a media and the unmediated ‘feeling’ of a place in reality.[[52]](#footnote-52) That is to say space is epistemological while place is phenomenological, space is conceived while place is perceived. Yet, today space that is constructed around place, or digital space, is perceived as being integral to our life experience as well.

Aside from the precise placement of the viewer onto the map, there is yet another distinction of the new images – the question of the author which is now not placed into own, separate place, but can reside also in the audience space, which now co-creates the map by its use. Besides, the creator can also be nonhuman. Such is the total image made using artificial intelligence. Artificial intelligence is conditioned by biology, perception, or society the way human intelligence. And artificial intelligence does not interpret photographs from within the framework of the ‘human photographic condition’, as I have defined it in the Introduction. That is, the computation of these machines is not based on the distance from the scene, view angle, or individual frame which determines how the photographic medium is necessarily subjective. Moreover, place as such does not exist to artificial intelligence because any the concept of dimensionality would not be related to a physical place but rather to an overlay of space as an objective or pseudo-objective category. Therefore, to an artificial intelligence, all places are seen at once in so far as many places are computed or aggregated together.

1. Although, as Gilles Deleuze and Félix Guattari noted: ‘Have we not, however, reverted to a simple dualism by contrasting maps to tracings, as good and bad sides?’ Gilles Deleuze and Félix Guattari, *Thousand Plateaus: Capitalism and Schizophrenia,* trans. Brian Massumi, Minnesota and London: Minnesota University Press, 1987, 13. [↑](#footnote-ref-1)
2. The science of geography was initiated in Antiquity, such as in the works of Ptolemy and Strabo. Historians describe Ptolemy as the founder of map-making and cartography, while Strabo as the father of the landscape. [↑](#footnote-ref-2)
3. Deleuze and Guattari, *Thousand Plateaus,* 2. [↑](#footnote-ref-3)
4. Tom Conley, *Cartographic Cinema*, Minneapolis: University of Minnesota Press, 2007. [↑](#footnote-ref-4)
5. This drawing, still, according to some presents merely a realistic drawing of the animal’s spots, rather than a sophisticated abstract map. [↑](#footnote-ref-5)
6. Denis Wood, with John Fels and John Krygier, *Rethinking the Power of Maps,* New York: The Guilford Press, 2010. [↑](#footnote-ref-6)
7. Wood, Fels, and Krygier, *Rethinking the Power of Maps.*  [↑](#footnote-ref-7)
8. Similarly, the first settlers’ maps, according to Moore and Drecki, left unvisited areas blank. See: Antoni Moore and Igor Drecki (eds) *Geospatial visualization,* Berlin: Springer, 2013. [↑](#footnote-ref-8)
9. As the author is already mentioned Marcus Vipsanius Agrippa. [↑](#footnote-ref-9)
10. Greek cartographers, as Anaximander (c. 610-546 BCE), Hecatus of Miletus (c. 550-476 BCE) in his *Ges Periodos* already used the circular representation of the known world, ecumene, while Erastosthenes (c. 276-194 BCE) used the system of parallels and meridians. In works by Posidonius (c. 150-130 BCE) there is a measure of circumference of the Earth, which was latter corrected in Strabo’s (64 BC-24 CE) *Geographica.* Pomponius Mela went out of ecumene, anticipating the existence of the world outside of it to be discovered. Marinus of Tyre (c. 120 CE) invented equi-rectangular projection, allowing contemporary cartography. He also gave a shape of this world by referring to China and Fortunate islands. Ptolemy (c. 150) in his *Geography* used Marinus’ system, calculating absolute distances. [↑](#footnote-ref-10)
11. Most of the maps from the Classical and Medieval periods, such as the Ptolomaic as Peutinger maps, with all earlier editions and versions lost to time, exist today only as some post-Medieval variant. [↑](#footnote-ref-11)
12. Konrad Peutinger was a German antiquarian who kept the map originally discovered by Conrad Celtes. Peutinger family has kept the map for hundreds a years until selling it to Prince of Savoy in 1714 who bought it for the public library in Vienna. [↑](#footnote-ref-12)
13. For further details, see: Benet Salway, ‘The Nature and Genesis of the Peutinger Map’, *Imago Mundi* 57.2 (2005): 119-135. [↑](#footnote-ref-13)
14. Another itinerary map from this era is the *Itinerarium Antonini,* which lists places and distances. [↑](#footnote-ref-14)
15. If we compare this map to a recent project of mapping by Space Humanities on Stanford, giving us possibility to understand the travel in Roman era, a difference of time-map and map on time (in real space) comes obvious. Namely while time distort the Peutinger’s map, the map of the Stanford project is the precise one provided by geometry, only being furnished with historical data. Still, while we can imagine travelling on Peutinger’s map, it is more likely we will understand and learn objectively what it was during the Antiquity with Stanford map. [↑](#footnote-ref-15)
16. Andrew Pettegree, *The Book in the Renaissance*, New Haven: Yale University Press, 2011. [↑](#footnote-ref-16)
17. Bruno Latour, *Down to Earth: Politics in the New Climatic Regime*, Cambridge: Polity Press, 2018, 78. [↑](#footnote-ref-17)
18. Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, Los Angeles and New York: Semiotext(e) and MIT Press, 2002, 53 [↑](#footnote-ref-18)
19. Gombrich analyses how even in the 16th century, the landscape it preserved the features of innovation in technology. See: Ernst Gombrich, *Norm and Form:* *Studies in the Art of the Renaissance*, *Volume I: Norm and Form*,London: Phaidon Press, 1994. [↑](#footnote-ref-19)
20. Edward Casey, ‘Between Geography and Philosophy: What Does It Mean to Be in the World?’, *Annals of the Association of American Geographers* 91.4 (2001): 683-693. [↑](#footnote-ref-20)
21. Denis Cosgrove, *Social Formation and Symbolic Landscape*, Madison, WI: University of Wisconsin Press, 1984. [↑](#footnote-ref-21)
22. Cosgrove, *Social Formation*. [↑](#footnote-ref-22)
23. Casey, ‘Between Geography and Philosophy’. [↑](#footnote-ref-23)
24. Kracauer, *The Mass Ornament*, 59. [↑](#footnote-ref-24)
25. Because of Google introducing Google Earth Engine, a cloud-based, planetary-scale computing platform for environmental and geospatial analysis, many countries have complained about the military secrets being accidentally revealed. Through the satellite images on Google Earth, everyday people have even seen places such as detention centers for refugees and asylum seekers, classified airports, and sentries training at secret military compounds. See for example: ‘Google Maps Update Accidently Reveals Secret Military Sites’, *ZDnet*, https://www.zdnet.com/article/google-maps-update-accidentally-reveals-secret-military-sites/; ‘Taiwans Darkest Military Secrets Revealed Google Maps’, *SCMP*, https://www.scmp.com/news/china/military/article/2186351/taiwans-darkest-military-secrets-revealed-google-maps?li\_source=LI&li\_medium=section-top-picks-for-you. [↑](#footnote-ref-25)
26. Louise Wilson, ‘Interview with Paul Virilio: Cyberwar, God and Television’, http://ctheory.net/ctheory\_wp/cyberwar-god-and-television-interview-with-paul-virilio/. [↑](#footnote-ref-26)
27. McKenzie Wark, *Virtual Geography: Living with Global Media Events,* Indiana University Press,1994. Thus, Buci-Glucksmann thus invites for a formation of yet another gaze, that would be in capacity to bridge the great divide of real and virtual, the '’meta-gaze’, ‘which bears the modalities of the exercise of its execution and exhibits its syntax’. Buci-Glucksmann, ‘Icarus Today’, 61. [↑](#footnote-ref-27)
28. Cartwright, *Multimedia Cartography.*  [↑](#footnote-ref-28)
29. Sontag, *On Photography.* [↑](#footnote-ref-29)
30. ‘How many maps, in the descriptive or geographical sense, might be needed to deal exhaustively with a given space, to code and decode all its meanings and contents? It is doubtful whether a finite number can ever be given to this sort of question. […] We are confronted not by one social space but by many indeed, by an unlimited multiplicity or unaccountable set of social spaces.’ Lefebvre, *The* *production of spaces*, 85. [↑](#footnote-ref-30)
31. Gunnar Olsson, *Abysmal: A Critique of Cartographic Reason*, Chicago: University of Chicago Press, 2007; Tom Conley, *Cartographic Cinema*, Minneapolis: University of Minnesota Press, 2007. [↑](#footnote-ref-31)
32. Elkins, *The Poetics of Perspective*, 135. [↑](#footnote-ref-32)
33. Christine.Buci-Glucksmann**,** *L'oeil cartographique de l'art,* Paris: Gallilee, 1996**.** [↑](#footnote-ref-33)
34. Vilém Flusser, ‘Das Verschwinden der Ferne’, *Arch plus* 111 (1992): 31–32. [↑](#footnote-ref-34)
35. In other words, place belongs to the domain of epistemology, of the immediate experience, while space belongs to the domain of ontology, as the possibility of even the most unspecific existence. Simultaneously, the idea of space is necessarily connected to ideas on the level of metaphysics, such as religion or ideology. Consequently, place has been dealt with mostly in terms of sociology and psychology, while space was a subject of the disciplines given the highest place in Plato’s hierarchy of knowledge; mathematics, architecture, poetry, but also politics. Sociology is a discipline which compares and bridges the space and place. [↑](#footnote-ref-35)
36. Michel de Certeau, Luce Giard, and Pierre Mayol, *The Practice of Everyday Life*, *Volume 2: Living and Cooking*, trans. Timothy J. Tomasik, Minneapolis, MN: University of Minnesota Press, 1998, 117-118. [↑](#footnote-ref-36)
37. De Certeau et al, *The Practice of Everyday Life*. [↑](#footnote-ref-37)
38. See: Pierre Bourdieu, ‘Social Space and Symbolic Power’, *Sociological Theory* 7.1 (1989): 14-25. [↑](#footnote-ref-38)
39. Pierre Bourdieu, ‘Physical Space, Social Space and Habitus’, *Rapport* 10, Institutt for sosiologi og samfunnsgeografi Universitetet i Oslo, Oslo, 1996.  [↑](#footnote-ref-39)
40. Although society has changed since Bourdieu’s writing, especially regarding non-national colonization inside Western communities, I will continue to use his theory of consummation of space as directly connected to terms I use concept of gentrification. This, in terms of the previously, given example meant – replacement of the old population with a new one. [↑](#footnote-ref-40)
41. Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson, Smith, Oxford: Blackwell Publishing 1991. [↑](#footnote-ref-41)
42. Lefebvre, *The Production of Space*. [↑](#footnote-ref-42)
43. Jonathan Cohen and Aaron Meskin, ‘On Epistemic value of Photographs’, *Journal of Aesthetics and Art Criticism* 62.2 (2014): 197-210. [↑](#footnote-ref-43)
44. Peraica, *Fotografija kao dokaz*. [↑](#footnote-ref-44)
45. Sometimes the two gazes can overlap, as the author’s and viewers’ gaze, still, as mentioned in analysis of the Medieval images. And in some cases viewer’s view can be situated from the inside of the image space, thus having only a section of the author’s space. [↑](#footnote-ref-45)
46. William Cartwright, Michael P. Peterson, and Georg Gartner, *Multimedia Cartography*, Heidelberg: Springer, 1999. [↑](#footnote-ref-46)
47. Cartwright, Peterson and Gartner, *Multimedia Cartography*. [↑](#footnote-ref-47)
48. Doreen Massey, John Allen, and Phil Sarre, *Human Geography Today*, Cambridge: Polity, 1991. [↑](#footnote-ref-48)
49. Christopher Tilley has mapped even more spaces, according the way they are experienced: somatic space, perceptual space, existential space (as social), architectural space, and cognitive space, for example. Tilley, Christopher Tilley, *A Phenomenology of the Landscape: Places, Paths and Monuments, Explorations in Anthropology*, London: Berg Publishers, London, 1997. And Michael Dear defined how ‘the entire panoply of place-based contingencies involved in photographic production […] incorporates; […] - The place of production, which incorporates both the specific site of photography […]; - The production of place, including the narrative and compositional aspects of the image, as well as the spatial techniques employed by the image-maker […]; - The place of presentation, referring to the image and its mode of presentation […]; and […] - Reception in place, what happens to the image when it is released to the world of consumption’. Michael Dear, ‘Creativity and Place’, in Michael Dear, Jim Ketchum, Sarah Luria, and Doug Richardson (eds) *GeoHumanities: Art, History, Text at the Edge of Place*, London and New York: Routledge, 2011, 11. [↑](#footnote-ref-49)
50. A class struggle, Lefebvre noted, can exist within an image, representing space, in the way of its basic coding by the author as well as in the communal practice of reading. Lefebvre, *The Production of Space*, 210. [↑](#footnote-ref-50)
51. This obscuring of the line between the real and virtual has come the most visible in post-humanism, in which digital space has been recognized and acknowledged as reality, as it is been experienced as one. [↑](#footnote-ref-51)
52. Mitchell, *Landscape and Power*. [↑](#footnote-ref-52)