# Chapter 1: Flat Earth

## New Flat Earthers

At the time of this writing, people all over the world have celebrated the 50th anniversary of Apollo 11, the famous spaceflight during which humans first landed on the Moon. But there are still millions of people who are skeptical that this Moon landing ever happened. In the past half century of continuing space exploration, scientific records have failed to convince a certain segment of the population to abandon their disbelief. On the contrary, their skepticism has only increased, and not only regarding our landing on the satellite Moon, but also the shape of the planet Earth.[[1]](#footnote-1) In fact, a recent article published by *The Guardian* newspaper refers to a YouGov poll which found that a third of all Americans between ages 18 and 24 were unsure about the shape of our planet.[[2]](#footnote-2) This is despite the vast amount of scientific proof that has been provided over two thousand years by sources ranging from Pythagoras to NASA. Other articles in the news media suggest that about two percent of the population in the United States distrust the scientific fact that the Earth is round.[[3]](#footnote-3) At first, this may not appear to be a significant percentage. But when taking the entire United States into account, two percent of the population refers to approximately 6.5 million people who do not believe that the Earth is round. And this number does not appear to be decreasing. In the 21st century, the theory that the Earth is flat has become the source of humorous Internet memes. However, advocating this ‘flat Earth’ theory is far from harmless.

Figure 3 - Flat Earth meme (Internet meme)

Figure 4 - Flat Earth meme (Internet meme)

Flat Earth theories are no mere comedy, and the argumentation which is used in support of such theories must be taken seriously. As an educator, I am convinced that such things should not go uninterpreted. Thus, in this book I will ask the question: in the postdigital era, how this division and interaction between human and nonhuman perception, works on the rise of a belief in the flat Earth theory? As I begin to explore this question, it is important to first define what is meant by ‘the flatness of the Earth’. In this book, I distinguish between three positions: ontological, epistemological, and medial. From an ontological position, to make the claim that the Earth is flat is to argue that our planet is actually, in reality, physically flat. Those readers who are convinced that this is indeed the case may stop reading now, as I will not try to prove, and will do everything I can to disprove, such a theory. From an epistemological position, to make the claim that the Earth is flat is to argue not that the planet is flat, but that we may experience it as flat, given a constrained view of the planet as a whole. Such a theory would enforce relativist position in the theory of knowledge, claiming that all our knowledge is partial and dependent of our view-angle. And finally, from a medial position, to make the claim that the Earth is flat is to argue that regardless of what shape the planet does or does not in fact have, the only way we can approach its shape is by the media, which determines our knowledge. In this case, according to media theory, any flatness of the Earth is a problem of mediation and the limitations of given media language. This media position is the one which I will explore in this book. I will claim that in post-digital media, the Earth is more frequently represented as a flat plane than a round sphere and, further, that this process of mediation eradicates the perspectival views of the human subject from photography.

Throughout this book, in order to distinguish between the one and only planet Earth and its many possible representations, I will use the capitalized proper noun ‘Earth’ when referring to the planet and the lowercase common noun ‘earth’ when referring to its representations.[[4]](#footnote-4) In this chapter, I will begin to address this idea of the Earth and an earth, laying down arguments for how the phenomenal world may appear to be visually flat in the contemporary era, in order to be able to analyze these representations in more detail in the upcoming chapters. My focus in the first chapter will be on the question: How does our knowledge of the Earth condition our representations for an earth and, vice versa, how do these representations for an earth influence our knowledge of the Earth?

Figure 5 - Flat Earth meme (Internet meme)

Figure 6 - Flat Earth meme (Internet meme)

## Down-Dimensioning

Figure 7 – Cover of Flatland by William Abbott Abbott, 1884.

In order to understand the division between the reality of the planet Earth which we inhabit and the ways in which one may perceive and represent multiple earths, I will begin by introducing the novel *Flatland*, written in 1884 by English schoolmaster and theologian Edwin Abbott Abbott.[[5]](#footnote-5) Through the voice of his narrator, ‘Square’, Abbot describes a hypothetical, multilayered universe. This four-dimensional system has many populations living in it. They all live in the same space and at the same time but are not necessarily able to perceive each other. or the world works as hyperworld, in which, despite its complexity, only one layer can be seen at the time. This is because each group of beings is limited in the number of dimensions which they are ‘programmed’ to be able to perceive. That is, each class or demographic of beings can only perceive one dimension less (-1) than it needs in order to exist. In other words, in Pointland, a single being (the universe in one) consists of a dot who has no dimension whatsoever. In Lineland, beings are lines of a certain length who perceive themselves as dots which have only a single dimension. In Flatland, which is more advanced, beings have two dimensions and perceive themselves as lines. Finally, in the last world described, the three-dimensional world of Spaceland, is being clearly visible only from a next and fourth dimension. However, Abbott does not elaborate on this last world in his book, as obviously that is the space of the Square who would need to be seen by someone in a higher dimension in order for his own world to be defined. Reading the novel *Flatland*, we learn that the inhabitants are confined to their world by their perception of that world, which therefore does not necessary correspond to reality itself. Further, most of the inhabitants stay assured and confident in the sense-data around which they build their own understanding of the world. For example, in Flatland, the inhabitants, like Square, perceive themselves as lines. To be capable of distinguishing different shapes, some of which can be dangerous, such as lines, the inhabitants introduce a strict law on the colors they should be wearing. However, such a fully ordered world would continue working according own principles in peace if there would not be a main protagonist. Square somehow manages to grasp that there exists a higher dimension beyond his direct and immediate experience, without ever having directly perceived it, after establishing contact with this dimension. And Square begins to share this knowledge with his fellow citizens in Flatland. But because this population is not able to perceive such a dimension for themselves, Square is misunderstood. And the other inhabitants of Flatland fall back on their old belief that there are hidden forces at work, controlling their world, rather than dare to imagine that there is more to their world than meets the eye. Abbott narrativizes this event through the character of the Cycle, who rules Flatland, and prophecies the arrival of a new group of invaders, giving the narrative both political and teleological significance.[[6]](#footnote-6)

Besides questions about how the world appears to Flat earthers, Flatland tale also raises another question: how does the same world appear to those who perceive an additional dimension? This question can be seen in the way Sphere from Spaceland sees Square from Flatland: as a two-dimensional spatial form, while Square from the Flatland sees everyone in his land as lines. Sphere is thus empowered and can control the population in the lower dimension, which, in turn is not able to directly know the upper dimension. In the real, rather than fictional world, each and every population must surpass its own image-space in order to define where they live and their place in the world. In other words, to define a space requires an additional dimension.[[7]](#footnote-7)

By stratifying dimensions in a formula ‘+1’, Abbott anticipates Austrian mathematician and analytic philosopher Kurt Gödel’s incompleteness theorem. Almost fifty years after Abbott wrote Flatland, Gödel argued that in order to define a set we need at least one statement which does not belong to that set and which cannot be proven by it.[[8]](#footnote-8) For Abbott, such a mathematical statement is a dimension. Furthermore, Abbott’ novel *Flatland* can also be read from the perspective of Benoit Mandelbrot’s notion of the degree of resolution, to which I would come back later in the book when I speak about scales of measurement.[[9]](#footnote-9) Here, the perception of the size of an element, or its magnification, and therefore the determination of whether something is a dot or a ball, a line or a thread, depends upon the distance to it.[[10]](#footnote-10)

Abbott’s work reminds us not only on complexity of the world but also on the cognitive distortion of individuals that might live in the downgraded dimensions, under ideologies of any kind. In addition to satirizing the stratification of the classes in Victorian society, Abbott’s *Flatland* describes the ways in which religious practice and cognitive ability may be entangled. To bring this discussion back to my main theme about representing the shape of the planet, in Abbott’s novel *Flatland* different population groups have different perceptions of the world and experience the same world differently. An argument in favor of the parallel existence of both conceptions of the planet is especially visible in various phenomena lower dimension world ascribes to the higher dimension one, decoding them as mystic. And indeed, by reviewing the appearance in history of a thesis of the flat earth, even the contemporary one, supports the thesis of the religious background of the New Medievalism, I described in the Introduction.

## Debate on the Shape

The world described by Abbott has more dimensions than can be perceived by its inhabitants. And for the most of human history, this has in fact been the case. The people who lived in ancient civilizations such as Egypt, Babylon, Mesopotamia, and early Greece thought that the world was flat largely because they did not know about other places which were far away.[[11]](#footnote-11) The territories which these peoples inhabited were relatively small in size and thus appeared to be flat. It is no wonder then that an idea of the Earth as flat is also present in writings of Thales, Anaximander, Anaximenes, and other pre-Socratic philosophers. Their ideas can also be traced in the writings of other authors. And the idea of a flat Earth continued in works of Anaxagora, Leucippus, and Democritus.

The idea of a spherical Earth originates in late Antiquity also with the Greeks. It appeared in works by Pythagoras and Parmenides, followed by the writings of Plato, Aristarchus, and Euclid. At 50 BCE Aristotle formulated an argument which I will call the ‘argument from experience’ based on the observation that the stars ‘make it evident, not only that the earth is circular, but also that it is a circle of no great size. For quite a minor change of position to south or north causes a manifest alteration of the horizon’, as he noted.[[12]](#footnote-12) Thus, Aristotle turned to common sense, accessible and demonstrable types of evidence, and empiricism. His claim was further proved by Erastothemes, whose calculations Claudius Ptolemy later compiled in his *Almagest* or *Syntaxis*.[[13]](#footnote-13) And Ptolemy’s as well as Aristotle’s description of the world as a sphere would be generally accepted until the fall of the Roman Empire.

But by that time, unfortunately, the idea that the world is flat came back by way of the Germanic peoples that conquered Rome.[[14]](#footnote-14) This idea aligned with the doctrines of Christianity which proposed the Earth as fixed, immobile, and permanent. As such, a flat earth was soon accepted in Christian societies. Because of its consistency of Christian dogma, the idea become so popular that by the time of Saint Augustine it was accepted as the only possible truth. And from the 4th to the 12th century CE, only a few sources remain which questioned the shape of the Earth.

The idea that the Earth is spherical in its shape was revived through works by John Sacrobosco, Thomas Aquinas, Jean Buridan, and further researchers whose names are today associated with the birth of modern science, Galileo Galilei and Johannes Kepler. Yet, the processes of again proving the thesis of a spherical Earth took centuries. It took centuries for the sphericity of the Earth to be rediscovered. This was first done by sailors who had direct experience with the shape during their travels. As Richard Buckminster Fuller wrote:

[…] the big thinking in general of a spherical Earth and celestial navigation was retained exclusively by the Great Pirates, in contradistinction to a four-cornered, flat world concept, with empire and kingdom circumscribed knowledge […] Knowledge of the world and its resources was enjoyed exclusively by the Great Pirates, as were also the arts of navigation, shipbuilding and handling, and of grand logistical strategies and of nationally-undetectable, therefore effectively deceptive, international exchange media and trade balancing tricks by which the top pirate, as (in gambler’s parlance) “the house,” always won.[[15]](#footnote-15)

Indeed, it took even longer to prove for a second time that the Earth is round than it did to conceive that the Earth is flat.

Figure 8: Flat Earth map drawn by Orlando Ferguson in 1893 (the work in the public domain).

In the centuries that followed, the roundness of the Earth became an axiom of modern science. It was an unquestionable fact. At least, that the Earth is round was a fact until some researchers began to challenge it again. Samuel Birley Rowbotham-Parallax with *Zetetic Astronomy: Earth Not a Globe* (1865), Alfred Russel Wallace with *Water Not Convex, the Earth is not a Globe* (1870), and William Carpenter *One Hundred Proofs the Earth is Not a Globe* (1885), for example, again started to cultivate the idea that the Earth has a flat surface. Today, a sect of the Flat Earthers even continues to use and expand upon arguments from Wallace, Parallax, and Carpenter. Today the idea of the flat Earth is institutionalized by the Flat Earth Society, as well as the members of other formal and informal organizations, which promote the idea that the world is flat.[[16]](#footnote-16) Besides holding meetings and attending conventions, promoters of this idea also run several YouTube channels.[[17]](#footnote-17) Marc Sargent, a key figure in the so-called Flat Earth Movement in California, is pictured at conventions standing in front of an image of a flat earth, as he describes the planet as being similar to this flat image, advocating for such a flatness as an ontological conception.[[18]](#footnote-18) In just the last few decades, this theory has gained a particularly large amount of attention, reaching a peak in February 2019 according Google trends[[19]](#footnote-19).

Figure 9: Azimuthal equidistant projection (Strebe [CC BY-SA (https://creativecommons.org/licenses/by-sa/3.0)]

## Ontological Conception

Five hundred years after the Copernican Revolution, in which our understanding of the solar system shifted from a Ptolemaic to a heliocentric model, and the likes of Marco Polo, Christopher Columbus, Bartolomeu Dias, Vasco da Gama, and Amerigo Vespucci, who sketched sections of the planet after their long sails, we once again find ourselves faced with the growing belief that the world is flat.[[20]](#footnote-20) The comeback of the flat Earth conception of the planet may be related to the rebirth of other Scholastic *doxa* or opinions, a kind of New Medievalism, if you will.[[21]](#footnote-21) The relationship between such doxastic or belief-based arguments and the Flat Earth Theory is quite evident. For example, Flat Earthers rephrase the ‘Intelligent Design’ argument, which refers to the existence of higher intelligence on the basis of perfection of the world.[[22]](#footnote-22) This theory underlines, in essence, an ontological idea that derives from a utilitarian principle which states that everything in this world happens or exists for a reason or is designed with a reason. From the ontological position of the Flat Earthers, a spherical world would be impractical to use by God, here pictured as a limited physical being, in his observation of humanity because God would not be able to see everywhere all at once on a sphere as easily as he would on a plane. Because it is implausible to think that God would create a world which he cannot use, a spherical world does not have a reason to exist. Some authors also find lines in support of the flat earth theory in the Bible.[[23]](#footnote-23)

As presented in online videos, other arguments used by the Flat Earthers to support their version of Intelligent Design are based on the direct subversion of scientific authority, or by demonstrations of arguments against scientific axioms.[[24]](#footnote-24) In addition to denying the shape of the planet, Flat Earthers also deny certain axiomatic scientific knowledge, such as the theory of gravity. Moreover, they propose pseudo-academic theories to explain how things do not fall off the planet. To resolve this problem, for example, they introduce a theory of continuous lifting of the Earth’s crustal plates, which draws objects down to the ground by their own weight and its force. This concept is also believed to explain how water from oceans does not spill off the edge of the Earth.[[25]](#footnote-25)

The Flat Earthers, while advocating for their own representation and conception of the Earth, also discredit the images from scientific authorities which do not show the planet as being flat in shape. To these sphere-sceptics, photographs of the planet do not and cannot prove its dimensionality. Instead, they argue, these images depict the Earth as a flat plane. And any image that shows otherwise must have been either fabricated or manipulated. To conspiracy theorists with a strong distrust in science, NASA is often the prime suspect or public enemy number one. Flat Earthers even directly accuse this independent agency of being the puppet-master behind the conspiracy of the so-called ‘spherical Earth’, and of secretly trying to control people through its fake images of the Earth taken from space and by satellite.

## Media Argument

The skeptical attitude of the Flat Earthers is reinforced by the fact that, among the images of the Earth which are taken from outer space, there are two principle types: images which are made using powerful telescopes, and images which are visibly fused together from more than one picture in order to produce a more encompassing view.[[26]](#footnote-26) Much of the variation between photographic representations of the planet can be explained by differences in the technology used to create the image, especially the lens. Moreover, as not all the parts of the Earth can be clearly seen from the point of view of a satellite or satellite system. Due to the presence of clouds, barriers, shadows, or reflective surfaces, there are always places in an image which must be completed or reconstructed. Indeed, since The Blue Marble image of the Earth was taken on December 7, 1972 from a distance of about 29,000 kilometers from the planet’s surface by the crew of the Apollo 17 spacecraft, most images released by NASA have been composites made from satellites at shorter distances. In point of fact, while telephoto lenses cause less distortion than wide angle lenses, they nevertheless produce notable alterations to the measurement of reality by introducing an inherent flattening distortion. That the Earth looks like an eating plate in these images is a frequent objection made by Flat earthers, who notice variations in the sizes of the Earth as a whole, as well as its parts, but also in terms of color.[[27]](#footnote-27) Yet curiously enough, it was the original photograph, and not the constructed photographic assemblages, made on the photographic base, which had this visual flattening effect. Thus, paradoxically, according the advocates for flat Earth theory, if the image of the planet is recorded using a telephoto lense, then it is shown as flat, but if it is made using a composite technique, then it is untrustworthy. In comparison, composite photography, which combines more than one photographic source into a single image, helps to create an image of higher resolution, which is also sharper, thereby avoiding the effect of making the Earth look like a flat round plate which is used for eating or serving food.

The bigger problem, however, is that some images of the Earth are not genuinely photographic but rather blended content. This can be done for many reasons. For example, clouds may have obscured the view, such that the image had to be ‘restructured’. Or the recording device may have been too near to the ground. Compositing images which have been taken at different times, and from various angles, distorts the relationship between the subject position and the object recorded, a relationship defined through focal distances, depth of field, and order of planes. Moreover, in such an image, the position of the subjective view is altered, and its original perspective is changed. What is problematic in this is that the photographic image, which historically has been taken to be indexical in relation to its reference, has been turned into a composite, which serves another purposes, as for example navigation. Although keeping the persuasive element of photographic image, these new combo-images distort the photographic description of the visual qualities of the photographic object, in a way other than by photographer decision-making or in photographic postproduction.

## +1 Dimension Perspectives

Yet another change in how the photographic space is being distorted comes from the introduction of new ways in which to combine images by merging materials together that have different qualities. Today, the subjective view of the photographer and, therefore, for the viewer of the photograph as well, has been largely eliminated in order to produce a more ‘neutral’ view, contrary to previous use of perspectival system.

As Friedrich Kittler defines, perspective is a code for a transmission among objects and subjects.[[28]](#footnote-28) Perspective system defines the space as well as the distance between objects. It not only serves representation but also metering of reality which is projected onto the flat screen or a ‘veil’ as Alberti names it.[[29]](#footnote-29) Through a perspectival system, distance can be measured by the size of the objects relative to the vanishing point, which is usually located on horizon.

In linear perspective, a vanishing point is needed to separate image from reality, as it provided a way of measuring in terms of distance, size of objects, and the ratio between these elements. All measurements in Western, linear perspective, are both fixed and calculable. For this reason, a perspectival system can assist in the development of precise knowledge about the reality which is being represented. And because of this, perspective has long been at the center of research in science and technology.[[30]](#footnote-30) Such an understanding of space continued to be present in succeeding technologies based on mirrors and mirror-reflex systems, leading to a line of historical development and media evolution from the camera obscura to photography.[[31]](#footnote-31)

In principle, for more than a hundred-and-fifty years, photography has served as a device of recording (and actually storing) physical reality, being an epistemic tool by which we access it, in which it simultaneously functions as a medium of transmission and a temporary screen The limits of the world are no longer the limits of the language, as Ludwig Wittgenstein noted, but ones of the physical screen. [[32]](#footnote-32) Contemporary visualizations, which are tied to the screens which display an image, even when exhibited or projected within a three-dimensional environment, reinforce this idea that the Earth and its spaces are flat by constructing those spaces within the orthogonal lines of a perspective system. And even though images of the planet may represent it as a sphere, they are screened and printed on flat media such as paper or screen. Indeed, the digital world does not allow us a view which encompasses depth or distance. The flatness of the screen only supports the idea that the dimensionality of the world is just an illusion of perception, as virtual reality.

Virilio observes that in post-digital images ‘depth no longer includes the visual horizon, nor the vanishing point of perspective’, but rather time becomes the most essential and important dimension.[[33]](#footnote-33) Our eyes move to analyze the space, not only orthogonally but also in depth, by focusing on various distances. But the interface, as a temporary image interaction, is also connected to our understanding of space as well as of time. The speed of the signal through the Internet or from a television network, as well as the speed with which this signal is carried through the device itself, has a temporal quality. This leads to the progressive disappearance of space-time, providing no illusion that the Earth is a sphere and that, hypothetically, one could travel around it endlessly, thereby introducing not only the idea of the finiteness of the planet but also the finiteness of the view. According to Virilio, this acceleration towards instantness has destroyed the fixity of both space and its visualizations.[[34]](#footnote-34) Our four-dimensional world, with its three dimensions of space (height, width, depth), as well as the temporal dimension, thereby becomes fixed or flattened.

The disappearance of perspective systems and the positioning of the subject in relation to the image has lead to two phenomenon: first, the absence of a measurement of distance between the subject and the environment in the representation of space; and second, the separation between a subject and objects. This denial of perspective in post-digital photography disturbs our processes for rationalization of the world. ‘Distances are no longer situated in any depth of field or “perspective”’, as Paul Virilio concludes.[[35]](#footnote-35) Further, the use of various technologies for transportation, such as airplanes, cars, trams, and subway systems, as well as various technologies for communication, such as cellphones, the Internet, and videotelephony, are all so pervasive that it distorts our intuitive, embodied knowledge of space.

1. See for example: Bill Kayasing, *We Never Went to the Moon: America’s Thirty Billion Dollar Swindle*, CreateSpace Independent Publishing Platform, 2017.   [↑](#footnote-ref-1)
2. Trevor Nace, ‘Only Two-Thirds of American Millennials Believe the Earth Is Round’, *Forbes,* 4 April 2018,

   https://www.forbes.com/sites/trevornace/2018/04/04/only-two-thirds-of-american-millennials-believe-the-earth-is-round/. [↑](#footnote-ref-2)
3. Richard Sprenger, James Bullock, Alex Healey, Tom Silverstone and Katie Lamborn, ‘Flat Earth Rising: Meet the People Casting Aside 2,500 Years of Science’, *The Guardian,* 5 February 2019, https://www.theguardian.com/science/video/2019/feb/05/flat-earth-rising-meet-the-people-casting-aside-2500-years-of-science-video. [↑](#footnote-ref-3)
4. I refer here to the distinction Hubert Damisch made in his analysis of the visuality of clouds, using the formula /c/loud whenever he referred to its representation. See: Hubert Damisch, *Theory of the /c/loud*, Stanford, California: Stanford UP, 2008. [↑](#footnote-ref-4)
5. Edwin Abbott Abbott, *Flatland: A Romance of Many Dimension*s, new introduction by Thomas Banchoff, New York and Dover: Princeton University Press, 1993. [↑](#footnote-ref-5)
6. Abbott’s work reminds us not only on complexity of the world but also on the cognitive distortion of individuals that might live in the downgraded dimensions, under ideologies of any kind. In addition to satirizing the stratification of the classes in Victorian society, Abbott’s *Flatland* describes the ways in which religious practice and cognitive ability may be entangled. [↑](#footnote-ref-6)
7. Thus, Bernhard Riemann assumed the fourth dimension in defining the mathematics of the real space. [↑](#footnote-ref-7)
8. Also known as the Gödel’s second theorem. [↑](#footnote-ref-8)
9. Rhonda Roland Shearer. ‘From Flatland to Fractaland: New Geometries in Relationship to Artistic and Scientific Revolutions’, *Fractals* 3.3 (1995): 617-625. [↑](#footnote-ref-9)
10. Abbott’s understanding of epistemology in terms of geometry also had a direct impact on Einstein’s theory of relativity, as well as theories of hyper-dimensionality. R.R. Shearer, ‘From Flatland to Fractaland’. [↑](#footnote-ref-10)
11. # For more see: Dirk L. Couprie, *When the Earth was Flat: Studies in Ancient Greek and Chinese Cosmology*, Berlin: Springer, 2018.

    [↑](#footnote-ref-11)
12. Aristotle, *On the Heavens*, part 13. [↑](#footnote-ref-12)
13. Aristotle’s idea that that the Earth is a sphere not only competed with the idea that the Earth is flat, but also the idea that the Earth is a disc, presented, for example, by Thales, Anaximenes, Xenophanes, Anaxagora, Archelaus, Leucippos, and Democritus. [↑](#footnote-ref-13)
14. For the history of the flat earth idea see Christine Garwood, *Flat Earth: The History of an Infamous Idea*, Thomas Dune Books, Macmillan, 2008. [↑](#footnote-ref-14)
15. Richard Buckminster Fuller, *Operating Manual for Spaceship Earth,* Operating manual for the spaceship Earth, Lars Muller, 2008, 9. [↑](#footnote-ref-15)
16. Curiously enough, the segment of the population which believes the Earth is flat has announced their expedition to the North Pole in 2020, which reminds one of the expedition by Charles Marie La Condamine, Louis Godin, and Pierre Bouguer around the Earth in order to measure the Equator in 1735-7. [↑](#footnote-ref-16)
17. These YouTube channels include, for example, ‘Globebusters’*,* https://www.youtube.com/playlist?list=PLTgEApRWdweuqSBj3H7qV\_GmggIJHz4ah. There are also web pages such as ‘Testing Globe’*,* www.testingtheglobe.com. [↑](#footnote-ref-17)
18. See: Mark Sargent, *Flat Earth Clues: The Sky's The Limit*, Booglez limited, 2016. [↑](#footnote-ref-18)
19. According Google Trends, the major interest in flat Earth was by inhabitants of New Zealand, followed by Australia and United States. See: https://trends.google.com/trends/explore?q=flat%20earth. [↑](#footnote-ref-19)
20. This theory is challenged by Jeffrey Burton Russell states, ‘five hundred years after Christopher Columbus’ who claims the idea of the backward Medieval ages was introduced by Darwinists who wanted to stigmatize critics of their theory. Columbus, according Russell did not prove the Earth was round as it was already an accepted theory. Jeffrey Burton Russell, *Inventing the Flat Earth: Columbus and Modern Historians*, New York, Connecticut and London, Praeger, 1991. [↑](#footnote-ref-20)
21. Among definitely medieval beliefs surely is the one by Gregory Garrett defining the new age as Era of New Luciferianism. See: Gregory Garrett, *The Flat Earth Trilogy Book of Secrets I*, Gregory Lessing Garrett, 2018. [↑](#footnote-ref-21)
22. The Argument of Intelligent Design is derived from Descartes’ *Mediations*, in which, by the very end of the argument he resolves the total skepticism by stating that the world is conceived so intelligently that it would be impossible it was not designed by a higher being. See Daniel Dennett, ‘Descartes’ Argument from Design’, *The Journal of Philosophy* 7 (2008): 333-346. [↑](#footnote-ref-22)
23. # See for example arguments of Eric Tabborn, *PROOF: Does God Say the Earth is Flat?: Ending the Debate Between the Flat Earth vs. the Globe*, publisher unknown, 2018.

    [↑](#footnote-ref-23)
24. See: Elaine Chadwick Clanton: *Flat Earth for Dummies 101: Definition of Dummy: Indoctrinated in Globe from Birth*, Elaine Chadwick Clanton, 2018; Brett Salisbury, Dr. Lawrence Cohen, Dr. John Mack, Captain Obvious, *Spherical Trigonometry for Dummies*, Createspace Independent Publishing Platform, 2015*.* [↑](#footnote-ref-24)
25. For more arguments see: Kaleb Shuttleworth, *Planet or Plane?: A Debate of the 'Flat-Earth' Hypothesis*, unknown publisher, 2018. [↑](#footnote-ref-25)
26. Today, images of outer space can be realized from Earth using super-powerful telephoto lenses the shaft for which can range up to seven meters in length. See for example Pan-STARRS camera, the largest digital camera in the world, and for astronomic/space data https://panstarrs.stsci.edu/ [↑](#footnote-ref-26)
27. This peculiar distortion of telephoto lenses and reality metering was analyzed on the Mantegna’s foreshortening of the body of Christ, in the image of Christ in the temple, by Richard Latto and Bernard Harper. ‘The Non-realistic Nature of Photography’, *Leonardo* 40.3 (2007): 243-247. [↑](#footnote-ref-27)
28. Kittler, *Optical Media*, 208. [↑](#footnote-ref-28)
29. Flat screens also function aesthetically, as in the way Alexander R. Galloway defined ‘intraface’: ‘The *intraface* is the word used to describe this imaginary dialogue between the workable and the unworkable: the intraface, that is, *an interface internal to the interface*. The intraface is within the aesthetic. It is not a window or doorway separating the space that spans from here to there’. Alexander R. Galloway, *The Interface Effect*, Cambridge and Maiden, Polity, 2012, 40, original italics. [↑](#footnote-ref-29)
30. Samuel Y. Edgerton, *The Mirror, the Window, and the Telescope*: *How Linear Perspective Changed our Vision of the Universe*, Cornell University Press, 2009; Martin Kemp, *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat,* Yale University Press, 1992. [↑](#footnote-ref-30)
31. See Anne Friedberg, *The Virtual Window: From Alberti to Microsoft*, Cambridge, MA: MIT Press, 2009, 39 and 61. [↑](#footnote-ref-31)
32. Ludwig Wittgenstein, *Tractatus Logico Philosophicus*, London: Routledge, 2001, 68. [↑](#footnote-ref-32)
33. Virilio, *Lost Dimension,* 66. [↑](#footnote-ref-33)
34. Virilio, *Lost Dimension*. [↑](#footnote-ref-34)
35. Virilio, *Lost Dimension*, 103. Thus, Virilio introduces two points: a false perspective and a negative horizon. A false perspective is ‘opto-electronic pseudo-perspective’, ‘a fantastic acceleration perspective, one ruled less by the vanishing point than b the simultaneous vanishing of all points…’. And a negative horizon, still, is based not on direct visuality of night and day, but indirect visuality. Virilio, *Lost Dimension*, 114. [↑](#footnote-ref-35)