Table-Top Views

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

High resolution aerial photography has become widely available in the twenty-first century. Already accustomed to consuming data-rich bird's-eye views, we have eagerly adapted this scale of digital imagery for pleasure even while data analytics has emerged to treat such overviews as a new domain of research. Within a digital era proliferating with these images, we are aware that looking from an aerial viewpoint is not an entirely new practice; it was popular in many times and cultures before ours. *Table-Top Views* examines the persistent appeal of aerial pictures — the aesthetic allure that accompanies their historical and contemporary agency in urbanism, surveillance, war, and art. Elevated viewpoint images are studied through analogies to processes in related disciplines: cinematic methods like the aerial pan and the macro-to-micro zoom, the traditions of landscape painting in China and Japan, and image appropriation in digital image discourse. *Table-Top Views* then curates a series of images, a selection that confronts the world through an aerial viewpoint.

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INTRODUCTION

> To what erotics of knowledge does the ecstasy of reading such a cosmos belong? Having taken a voluptuous pleasure in it, I wonder what is the source of this pleasure of 'seeing the whole,' of looking down on, totalising the most immoderate of human texts. [1]
>
> Michel De Certeau, *Walking in the City*

Aerial images extend their power far beyond the disciplines of architecture and urbanism. They are the ubiquitous way of looking in surveillance, navigation, war, and modern art. Their power as tools for critique and for propaganda is seen again and again, although the image-makers and image-users often claim neutrality — objective truth — because of the characteristic distanced viewpoint. The aerial image is used to validate arguments regarding environmental issues, mass society, consumer culture, geopolitics, and urban and suburban layouts. Even if we can suspend disbelief for a moment, if we can pretend to be convinced of the neutrality of the image, there will be other parties projecting their own agendas into those pictures.

The aerial view has never been limited to functional uses. Improvements in image resolution and geospatial data give it extreme agency today, but the viewpoint from above was pictured thousands of years ago, when humans made geoglyphs upon the Nasca deserts of Peru. Nowadays, extensive, publicly-available satellite imagery encourages the exploration of the earth as a surface by people without any particular interest, let alone knowledge, in the history of aerial images. Yet these kinds of pictures are extremely popular with non-specialised audiences. Consider the Instagram account *@dailyoverview*. The project began in 2014 as a hobby for Benjamin Grant, a former brand-strategy consultant. The images posted on the account are all screenshots of satellite imagery from DigitalGlobe's publicly accessible database, colourcorrected to Grant's preference — often to make the images look "more realistic", as he says.[2] Within three years, the account gained over half a million followers and garnered Grant an avalanche of opportunities: a TED Talk; the exhibition of twenty-five prints in the exhibition *Welcome to the Anthropocene: The Earth in Our Hands* by the Deutsches Museum in Munich; the publication of a best-selling book of satellite pictures; numerous interviews with popular online news sites, such as *Slate* and *Reddit*; and founder's control of a brand with a mass audience who expect a new image every single day. Grant's self-assigned task — scanning the earth virtually via satellite imagery on a computer monitor in order to post one image a day — turned him from curious internet user into knowledge resource and accomplished image-maker of environmental issues. The overview stimulates assumptions; from afar it is easy to assume the role of environmentalist or scientist, artist or critic.

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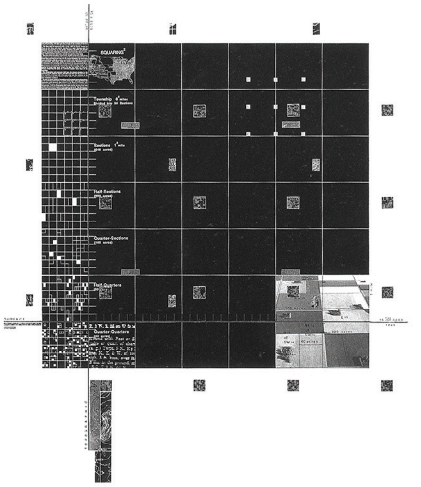
[1] Michel de Certeau, "Walking in the City," in *The Practice of Everyday Life* (Berkeley: University of California Press, 1984), 92.

Multiple functions of the top-view picture are apparent in the use of Alex S. Maclean's aerial photographs. Since 1975, he has taken pictures while piloting an aircraft, mostly for commissioned projects and collaborative books. Architects and designers interested in the landscape urbanism movement would probably recognise him as the photographer who worked across James Corner for the seminal large-format book from 1996, *Taking Measures Across the American Landscape*. Part text, part images, the book was an effort to illustrate land use through aerial photography, emphasising the historic role of geometrical surveying and the contemporary agency of creative mapping. The undeniably attractive hardcover book (perfect as a coffee-table book for the landscape connoisseur as much as the person with a mild interest in the subject) was an academic success, winning both the American Institute of Architects Book of the Year Award and the American Society of Landscape Architects Award for Communications. Short essays introduce Maclean's series of aerial photographs, placed next to Corner's 'eidetic' maps that abstractly illustrate the same landscapes **(figures 0.1, 0.2)**.

0.1 Alex S. Maclean, *The Survey Landscape from the Air*



0.2 James Corner, *The Survey Landscape*

Photographs by Maclean are as comfortable beside Corner's professional drawings and academic essays as they are in an issue of *Conde Nast Traveler*; the July 2014 issue of the travel magazine used full-bleed aerial photographs by Maclean **(figure 0.3)** as a backdrop to a brief article on America's landscapes of leisure. It's an advertisement posing as educational editorial: "Participating in summer's classic outdoor pastimes — from tennis to golf — is as much a rite of the season as cookouts, fireworks, and sleepaway camp. A portfolio of aerial photographs offers an arresting perspective on our nation's sporting life as it's played out across the landscape".[3] While the suggestions of the two publications are different — one aims for critical analysis and the other provides glossy browsing material — both are essays on American land use. The scenes are strangely similar, interchangeable; if not for the dissimilar contexts of publication, the viewer might understand the pictures in the same way. Even the two texts have a common underlying theme: both are interested in picturing the results of human use of the ground surface, be it for infrastructural agriculture or for recreational sport. Both illustrate these themes with the visually striking aerial viewpoint.

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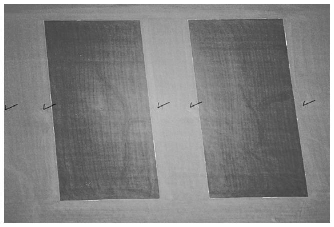
[2] Benjamin Grant, interview with Kristin Hohenadel, "Gorgeous, Stunning Satellite Images of Human Impact on Earth," *Slate Magazine*, accessed 24 June 2017, http://www.slate.com/blogs/the_eye/2015/06/19/daily_overview_by_benjamin_grant_features_curated_satellite_images_of_the.html.

[3] Lindsay Talbot, "Flight Patterns," in *Conde Nast Traveler*, July 2014.



0.3 Alex S. Maclean, *Unmarked Tennis Courts*

Viewing from above demonstrates a desire to look down at the ground. And looking down presupposes another action: moving up. The geographer Yi-Fu Tuan explains that while the body's relation to space varies greatly across cultures, spatial perceptions of the vertical axis, being "grounded on common traits of human biology […] transcend the arbitrariness of culture". [4] Humans are much more sensitive to vertical cues in the environment than horizontal, having an easier time recognising a line which is not quite vertical than a line which is not quite horizontal. [5] Partiality towards the vertical is demonstrated in the hierarchy symbolised by this axis.

> […] we attach values, such as those expressed by high and low, rise and decline, climbing and falling, superior and inferior, elevated and downcast, looking up in awe and looking down in contempt. Prone we surrender to nature, upright we assert our humanity. To go up is to rise above our earth-bound origin towards the sky […] Horizontal space is secular space; it is accessible to the senses. By contrast, the mental and mythical realm is symbolised by the vertical axis piercing through the heart of things, with its poles of zenith and underground […] The gods live on the mountain peak while mortals are bound to the plain. [6]

In mythology, while flying is the ultimate symbol of freedom and spiritual transcendence, there are also dangers related to it. "The vertical position stands for that which is instituted, erected, and constructed; it represents human aspirations that risk fall and collapse", [7] writes Tuan. Western mythology's Icarus connected the two distinct realms of sea and sky. The ambition to reach loftier realms met the physical danger of rising too high, and the moral danger of invading celestial territories. Here, the physical symbolises the moral: when Icarus flies into the realm of the gods, using a power that should not belong to him, he is scorched by the sun, and falls. In the story of the Tower of Babel, humans similarly disregard the sacred territory of the sky, building hubristic achievements that must be punished. Even when its physical dangers are overcome by technology, height still poses an ethical danger.

In a secular context, psychoanalysis relates the ambition for vertical height to that for discovery. In dreams, flying conceals a desire of a sexual nature, rooted in childhood development. Freud considered flying as a symbol related to the infantile curiosity about erotic acts which, to the naïve child, are prohibited and mysterious, yet clearly important. [8]

Across many cultures, architecture exhibits the physical manifestation of vertical hierarchies; consider pyramids, obelisks, domes, columns, spires, pagodas, Gothic cathedrals, and skyscrapers. Height in built form symbolically connects humans to a supreme realm; and on rooftops accessible to humans, symbolic power is superseded by the very real power of observation. The desire for height comes partly from the pleasure of escaping the routine of the urban dweller [9] and partly in gaining an elevated, panoramic view: a view of power, a *luogo privilegiato*. The draw isn't simply in being above or in being away from things — otherwise the suburb would suffice — but in having a *sito elevato*.

[4] Yi-Fu Tuan, "Space and Place: Humanistic Perspective," in *Philosophy in Geography*, ed. Stephen Gale and Gunnar Olsson (Dordrecht, Holland: Springer Netherlands, 1979), 393.

[5] I.P. Howard and W. B. Templeton, *Human Spatial Orientation* (New York: Wiley, 1966), 183.

[6] Tuan, 395.

[7] ibid., 395.

[8] Sigmund Freud, *Dictionary of Psychoanalysis*, ed. Nandor Fodor and Frank Gaynor (New York: Barnes & Noble Books, [1950] 2004), 43.

[9] Reinhard Bentmann and Michael Muller, "Satellite Town and Penthouse," in *The Villa As Hegemonic Architecture* (New Jersey: Humanities Press, [1970] 1992), 131-49.

The panoramic views of the city from the top of a hill, reserved for the ruler's palace, are translated today into urban penthouses for the wealthy. An elevated position is not just about looking down, and neither is it only about being high up — it is the combination of both that results in power.

These narratives of desire form the base of the habitual production and appropriation of aerial images. Next to their agency to create systematic language in social, geographical, architectural, and diagrammatic methodologies, they lead a parallel life of visual magnetism to an unspecialised audience, who consume and reproduce them at high speeds. We are in an age of image-excess, when aerial pictures can be endlessly copied and easily disseminated. So are they still interesting? To assign value to them do we need to filter and authenticate them, distinguish their real function out of their many uses?

It seems impossible, even in disciplined uses of aerial pictures, to totally truncate desire from function. The simultaneous oppositions are dependent on each other, enabling each other — not a matter of coincidence. The aspects that make them useful in various fields — the broad framing of space, the supreme vertical position, the physical distance, the treatment of things as objects over a surface — are possibly the same things that make them aesthetically pleasing. The power that aerial pictures generate make them easy objects of commercialisation, political propaganda, and social critique, but this does not necessarily oblige a moral critique of them, as has often happened. Critics like Michel de Certeau, the author of the seminal book on urbanism *The Practice of Everyday Life* (1983), claim the aerial view turns the world into a mere picture of itself. A critique is valid, given the historical use of aerial pictures as tools of objectivity — apparently ethically sound by their physical detachment — but to dismiss the aerial picture is to ignore its importance.

While the aerial image has been a useful viewpoint for many centuries, it gains renewed relevance during the contemporary age of image excess, an age during which we must select pieces of visual information out of the vast and detailed amounts if we are to retain anything from the flow of data. The discourse of digital images transforms our contemporary ways of looking. These habits are enforced by the aerial image, which sees the world as a surface filled with information. It makes sense, then, that the aerial image speaks more powerfully than ever, and through so many modern disciplines and leisure activities.

This study developed out of a close interest in the uses of aerial pictures, which seem to be inextricably bound to an essential, ineffable desire — independent of any technical reasoning or post-rationalisation. In order to study aerial pictures as a type of language within a discourse of images, I have gathered works, some aerial and some not, to study their conceptual and formal content. Aerial pictures become symbols for the whole world — in that sense totalising it by being synoptic devices for it. The first chapter, *Scanning the Surface*, compares collections of aerial illustrations and photographs to the pan and the zoom functions of the cinematic camera. Aerial images reveal — and enforce — our habit of panning and zooming over and into the surface of the earth as we scan it to frame portions as pictures. The frame is a conceptually moveable one. Even if the larger surface is not literally depicted, it is easily imaginable. The second chapter, *Operating on the Surface*, considers another method of synecdoche that aerial pictures use to condense information of the larger world. Image-makers develop familiar visual vocabularies to summarise information from above; these formal languages allow additive and subtractive synthesis of elements. This is demonstrated through key conceptual frameworks of Chinese and Japanese painting — which are, as I will explain, formally aerial depictions. Parallels to the practice of the twentieth century painter Agnes Martin further clarify these operational processes. The final written chapter, *Using the Surface*, addresses the reproducibility and popularity of the aerial image. Recontextualisation is a key issue, expanded with discussions on conceptual artists such as Daniel Spoerri and Ed Ruscha. The concluding chapter is a curation of aerial images — a picture-book for the reader, who can skim the pictures or scrutinise them, projecting their own desires into and out of the them. Basic information on the pictures can be found in the front matter, separated to allow for a total visual immersion in these aerial pictures, which are reproduced and resituated from their original form, yet still retain their magnetism.

These chapters illustrate the aerial image as a depiction of the world that caters to our desire. The architect and writer Robert Harbison said that "human things have their end in suiting us and we must coax the until they do, making ourselves at home there by investigation and argument". [10] *Table-Top Views* takes as its subject one of those types of human-made constructions. In this sense, the following chapters speak about visual enjoyment. They are reflections on a discourse of images that indulges desire. They are digressions that draw alternate routes to the regular, defensive trails of justifications for our methods. The inevitable aesthetic desire for aerial images doesn't diverge from the disciplined use of it but moves in the same direction, not strictly parallel, nor converging, but wandering.

[10] Robert Harbison, *Eccentric Spaces* (Boston: David R. Godine, 1977), foreword.

1 SCANNING THE SURFACE

THE DISEMBODIED, MOVEABLE EYE

The ambition to fly was manifested through centuries and cultures in pictures, dreams, and myths; but in the nineteenth century, technology began to physically fulfil the desire, replacing imagined views and finally lifting us off of mountains and belvederes. As hot air balloons, airplanes, satellites, and drones moved us further and further away from the ground, visual apparatuses improved the resolution of what was below. Today, image databases like Google Earth produce a detailed and virtually uninterrupted image of most of the planet's surface. In a top-view or an oblique 'bird's-eye' view we can move over and into this surface, itself a transposition of the ground surface to a flat monitor. As casually as we pan around the surface, we scroll in and out on it — focusing wherever we want, to an invasive point of detail. While Google Earth follows some ethical boundaries of privacy and political boundaries of invisibility, CCTV monitoring and military drones deliberately push past these barriers, creating images that provoke issues of unconsented voyeurism and unethical warfare.

The work of the German photographer Andreas Gursky reflects on the current state of voyeuristic, aerial surveillance. His work is often considered distinctly representative of the spirit of the age;[1] and apparently so, with journalists and scholars often using his images to support their own theses on contemporary conditions. The art critics who praise his work often focus on the clarity with which he depicts mass culture and modern 'globalism' — a shockingly common word, for its vagueness, among those who write about the work. However, it is much more than simply the subjects he depicts — be it throngs of people at a rave, a stock exchange, or a bike race **(figure 1.1)** — that make his photographs such appropriate portrayals of modern culture. These works enforce a certain way of looking, a manner of moveable probing.

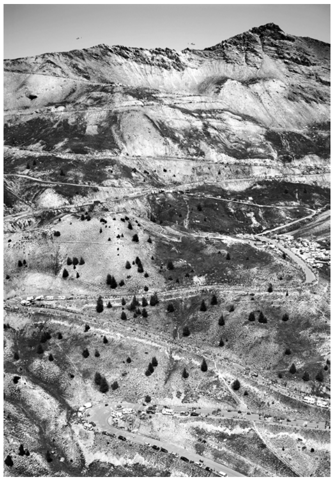
This way of looking is also induced by Abstract Expressionist painting. Approaching one of Gursky's images is similar to approaching the all-over,

[1] Ralf Beil, "Just What Is It That Makes Gursky's Photos So Different, So Appealing?," in *Andreas Gursky: Architecture* (Mathildenhohe Darmstadt: Hatje Cantz, 2008), 8.

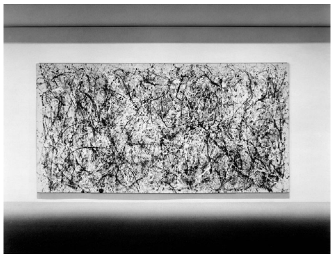
mural-sized surface of a Jackson Pollock painting. The painting is first comprehended as a whole, catching the eye from afar. Approaching, we gain the ability to focus on details, but also the problem of choosing which zone of details to concentrate on. We must therefore scan the whole before focusing on parts; only once this overview is complete will the eye hone in more closely. Spending time on one area prompts the realisation that the task of looking at everything is actually manageable. With one part under control, our minds relax as we realise it doesn't matter which details we study first, because the rest remain there as reality would never wait; after looking at the first cluster of details, we can leisurely pan over the surface to any other mass. The artist seems highly attuned to this visual oscillation between the macro and the micro (the whole and the detail), [2] employing it as a signature technique in his large-format photos. He reveals his awareness when he compares his own work to Abstract Expressionism in his photograph *Ohne Titel VI* **(figure 1.2)**. This work is a picture of Pollock's drip-painting *One, Number 31* hanging on a wall of the MoMA. The simultaneous all-over-ness and detail characteristic of Abstract Expressionism is also a visual method shared by the photographer; the stunning detail of humans captured by Gursky can be compared to the numerous layers of thin lines strewn over Pollock's work. Both artists make vast images filled with precise articulations; both ask us to come closer to those images, to spend time looking around.

In the same manner that we scan details on the surface, we can imagine looking outside of the picture. Acting like the photographer, we would zoom out, move the lens elsewhere, and zoom into another interesting area. Gursky's images encourage the movement of the eye, the mind, and even the body in order to see across the several meters each work spans. Each image forces us to practice this movement in order to engage with it. This is neither challenging nor new; we are already accustomed to panning around satellite maps and scrolling through nearly endless image databases. On the internet, we are accustomed to shifting our attention and viewpoint, continuously scanning to comprehend massive amounts of information and choosing which details deserve our time — a commodity spread thin over an ever-expanding stream of images. Gursky's works do not simply frame the age of excess, they mirror it. They enforce the practices of viewing taught to us by digital image discourse. They copy the panning movements with which we look at our world, letting us move around in immersive photographs the way we move over large surfaces within our digital monitors.

The majority of Gursky's works depict spaces from an elevated viewpoint. This position presupposes a movement upwards in order to see down. Movement then, is natural to the aerial image; the static picture — even one with a much tighter view-cone than the utopic one used by Gursky, who creates stitched, multiple viewpoint murals depicting vast grounds — asks us to imagine a prior movement, and a continuing one too, for we never would be satisfied hovering in one spot. The power to choose viewpoints in the sky — one open, traffic-less plane compared to the obstacle course of designated paths on the ground — is too tempting.

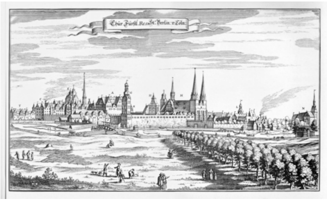


1.1 Andreas Gursky, *Tour de France*

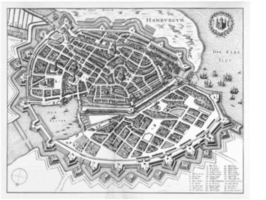


1.2 Andreas Gursky, *Ohne Titel VI*

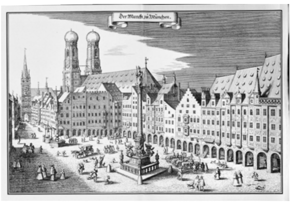
[2] The macro-micro function in Andreas Gursky's works are expanded by Bence Nanay in "The Macro and the Micro: Andreas Gursky's Aesthetics," in *The Journal of Aesthetics and Art Criticism*, vol. 70, no. 1 (Winter 2012), 91-100.



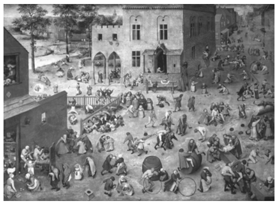
1.3 Matthäeus Merian, *Berlin*



1.4 Matthäeus Merian, *Hamburg*



1.5 Matthäeus Merian, *Munich*



1.6 Pieter Bruegel the Elder, *Children's Games*

COLLECTIONS, MULTIPLES, SERIES

This may be why an aerial picture is often one in a collection of aerial pictures, gaining narrative power in numbers. The makers of historical aerial images could not resist flying between pictures, either. An excellent example from the 17th century is the *Topographia Germaniae*, a 38-volume series of books describing the natural and built topographies in regions of Germany, France, and Italy. Published over twelve years, these books collected Matthäeus Merian's etchings of cities from elevated panoramic views. [3] In these, the 'bird's eye' doesn't maintain a rigid position in order to mechanically catalogue each place, but moves around to take a unique place over each city: a view towards old Berlin from south of the Spree, standing on a small hill that lifts us barely higher than any of the subjects in the picture **(figure 1.3)**; a fully airborne view of Hamburg that discards the horizon for a cartographic ground that lies parallel with the picture plane, substituting foreshortening with an approximated oblique projection of buildings **(figure 1.4)**; a view floating inside Munich's main city square, depicting architectural forms and facades in detail while maintaining an elevation that allows the scattering of citizens into a receding background **(figure 1.5)**, calling to mind the Dutch paintings of Pieter Bruegel the Elder **(figure 1.6)**. Short texts accompany each panorama, describing pleasant characteristics of each city. The changeable viewpoint is deployed to illustrate the distinguishing features of each city as described in the text.

For a twentieth-century example we might look at the work of an Italian photographer, Mario Giacomelli (1925-2000). The photographs he took of the fields of his native country — mostly from airplanes, sometimes hilltops — were untitled, simply labelled as part of the series *Paesaggi*, or '*Landscapes*' **(figure 1.7)**. Taken from above, all the photographs are edited to blurry abstractions, with greys approximated to a funereal blackness. The images span some thirty years: a substantial portion of the artist's career. While Giacomelli was by no means an 'aerial photographer' — he took many similarly stark photographs and portraits from the ground — there was an obvious allure that drew him back again and again to look down at familiar landscapes with a consistent viewpoint. Given the nearly complete absence of distinctive names, series numbers, or dates on the photographs, they seem not to be produced to satisfy a request of consistency from a dealer or clients. It seems as if last thing on Giacoemelli's mind was to sell these. The most precise textual descriptions would be the designation of some of these pictures as part of a sub-series called *Presa di coscienza sulla natura*, or '*The Awareness of Nature*'. (The dates of this series is also unclear, varying across different sources.) If we could recall a particular photograph by its visual formalities, it would be a shot in the dark to search for it online. And maybe fittingly so. These images — though numerous, and each picturing expansive landscape — feel private, quiet, serious:

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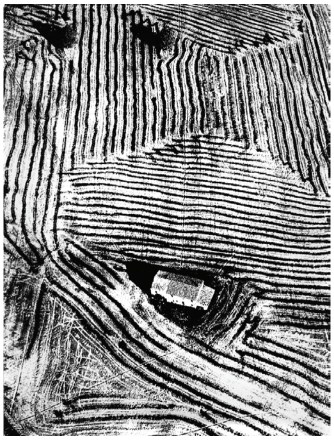
[3] Fifty-two panoramas of German cities were collected from the volumes and reprinted in a book of fold-out plates. See Matthäeus Merian, *Deustche Stadte* (Hamburg: Hoffman und Campe Verlag, 1962).

> Through photographs of land I try to kill nature, to take away that life given by I don't know whom and that has been destroyed by the passage of man, to give it a new life, recreated according to my criteria and my world vision. Nature is the mirror in which I reflect myself, because by saving this world from the misery of devastation, I actually want to save myself from my inner sadness. At times I even used an expired photonegative, a tool already dead, to emphasize this feeling […] [4]



1.7 Mario Giacomelli, *Paessagi*

Maybe Giacomelli's steady accumulation of works on the same theme was involuntary — following a compulsion to build a wall, a stable structure of pictures to hold out against his "inner sadness", a sadness whose image the landscape could hold on his behalf.

Olivo Barbieri's oeuvre of photographs has, for the past twenty years or so, been an insistent experiment in viewing the world as if it were a model — effortless to move over and study in detail **(figures 1.8, 1.9)**. Employing a tilt-shift lens technique, he constructs the illusion of any given city as a miniature, as if delicately captured on a camera equipped with a macro-lens. The tilt-shift method takes on a second function as it blurs the scene to direct the gaze to a specific plane within the depth of field: unlike Gursky, Barbieri controls exactly where the viewer can focus their attention. He dangles in front of us the possibility of a broad picture covering an expansive (yet miniature) territory; then he censors the view, revealing only particular zones on the surface. At first the eye is happy to comply, naturally focusing on the sharp portions of the photograph. Upon longer inspection we wonder what is hidden away by the artist; we wonder what might exist in those blissfully blurry areas we were previously happy to skim and fill-in with our own assumptions. Yet we cannot worry for long, as sunny days and saturated colours render these environments even more toy-like, mocking the viewer who takes the game too seriously. In his later works, he uses collage techniques to more explicitly subtract, add, and combine existing parts. In all his works, the artist subjects these urban landscapes to a treatment that does not only call attention to his own hand on the environment but to the whole environment as artifice. By choosing the locations of all these photographs (especially those in his project *site specific_03-13*, a series of tilt-shift and collage photos spanning ten years and thirty-six cities) he crafts a subjective summary of the world, a curated overview, making more pictures of some, less of others, returning to certain cities several times. Perhaps Barbieri's consistency is a result of marketability to his clients, but it forms nonetheless a specific manifesto.

1.8 Olivo Barbieri, *site specific_ ROMA 04 (Pantheon)*

1.9 Olivo Barbieri, *Siena 2002*

In each of these collections is a desire to form narratives by means of the

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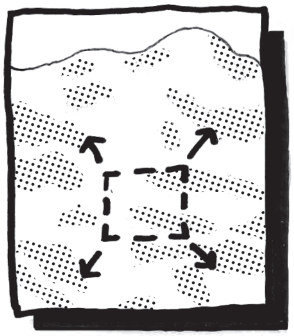
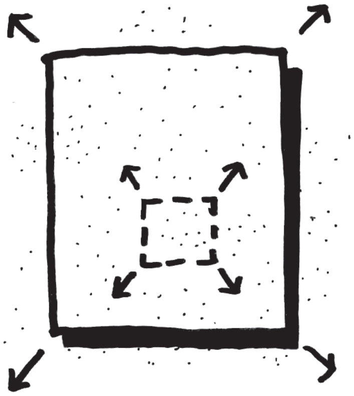
4 "Awareness of nature (Landscapes)", *Archivo Mario Giacomelli*, accessed 24 June 2017, https://www.archiviomariogiacomelli.it/en/presa-di-coscienza/.



1.10 Panning around *Tour de France* by Andreas Gurksy



1.11 The panning frame of study within the panning frame of the aerial picture

aerial view. These image-makers use aerial images to show huge amounts of the world, expressing it not as is, but through their own interpretation: liberally using their judgement to frame certain parts of the world, through certain filters. These are not truthful images of the world because they are aerial images. They are not detached from everyday subjectivity. They are just like any other representations, like a photograph of a person that captures their face just at that moment, at that angle, in that light — and not in the way the next photograph does, taken a second later. Images, and particularly image series, frame the world in specific ways to form arguments, going so far as to literally blur out information like Barbieri — in a reversal of the accomplishments of photographic technology — to focus the viewer somewhere else. But when resolution fails — when an image-maker like Giacomelli abstracts the surface in forming their vision of the world, presenting fewer and fewer shades of detail — what remains still is the awareness in the viewer, and probably the maker, of a power to move in, out, and around to find what we are looking for. Within all these collections is the sensation of power to choose what to look at. It is common for non-studio photographers to wait for long periods to 'find' an image — a miracle of chance that can happen at any time. Waiting long enough or looking hard enough seems to inevitably lead to a special photographic moment. The idea of finding events by luck augments the sensation of control: of being able to see unique and 'random' moments, record them, then knit them into stories.

The aerial image-maker invites us to move around these places with them. We are not passive viewers. Essential to the appeal of aerial pictures is their ability to induce imagined movement. We feel as if we might move and construct narratives as the image maker does. This sensation is so strong that we don't need to study every single picture in these collections to be satisfied, to feel empowered. (In this sense the imagination is not limited to only the locations actually presented, either.) Not many people would actually have the patience or desire to study every picture in these collections; but knowing they are all there, encompassed in a book, summarised by a table of contents, is comforting. We do not need to look at everything anymore; by seeing one image, we can imagine seeing the rest in the same way. Every aerial image is just a fragment of a bigger surface **(figures 1.10, 1.11)**.

THE AERIAL PAN

Flight between pictures is easy to imagine when the cinematic aerial pan constructs a virtual reality of it. It is an extremely common shot for visual impact in popular films. There are also documentaries that use aerial shots as a primary method; for example, *Watermark* (2013) **(figure 1.12)**, a collaboration between the film director Jennifer Baichwal and aerial photographer Edward Burtynsky, or the famous short film from Ray and Charles Eames, *Powers of Ten* (1977) **(figure 1.13)**. These documentaries piece together the aerial images collected in multiples and series, revealing the movement required in between all those snapshots: a movement that does not need to be visualised for us to smoothly stitch them together in our minds. The aerial pan is derived from the movement of a photographer, fulfilling a visualisation between separate pictures. This often brings about a bizarre feeling of dreaming, of groundlessness. The long, panning shots in *Watermark* bring a simultaneously steady and destabilised movement to life. While the Eames' frame only zooms in and out, Baichwal and Burtynsky's adds panoramic movement around the surface too, seemingly limitless in its flying ability. And while we are aware that the 'continuous' zoom of *Powers of Ten* is a product of a careful combining of separate, high-resolution photographs, [5] we know that *Watermark's* shots are non-illusionistic. They are 'real': continuous single shots captured on cameras attached to unseen flying apparatuses. Instead of performing tricks to highlight what a video camera cannot do, the camera demonstrates abilities we didn't know it had. The camera moves along the ground, but instead of stopping at the edge of a cliff as the basophobic viewer hopes, it continues off the cliff. But it doesn't fall; instead it moves upwards to reveal that it was airborne the entire time. Strapped onto a drone, the camera captures scenes previously impossible to visually access legally or technologically, flying high and low over air-restricted parts of China, moving over and into gorges too small for helicopters. This sensation of freedom is also triggered by the still aerial image, which today is always situated in an omnipresent context of the larger surface. John Ellis, a professor of media arts at the University of London writes that "the characteristic voyeuristic attitude in cinema is that of wanting to see what happens, to see things unrolling. It demands that these things take place for the spectator, are offered or dedicated to the spectator".[6] The desire for visual discovery is often discussed in the sphere of cinema, but also has a strong presence in aerial image collections and aerial panoramic pictures.

1.12 Jennifer Baichwal and Edward Burtynsky, Image grab from *Watermark*

1 meter
10^0 meters

1.13 Ray and Charles Eames, Still from *Powers of Ten*

Since the aerial image involves the mind as much as the eye, it is never as objectively detached as the literal distance it achieves from its subjects because we search the surface of the earth until we find what we are looking for, and then we make pictures of that. Tied inextricably to the desire to fly, to detach oneself from the earth, to see what's next, and to construct narratives, aerial views are not emotionally mute, no matter from how far a distance the viewpoint is. In his essay "The Eiffel Tower" (1979) Roland Barthes describes the key role of the projective imagination when one views a city panorama, especially from a high elevation. The mind reflexively fills in information it already knows and presumes. Barthes furthermore argues that the aerial image requires intellect to reattach it to the memory of a place already experienced. There is an intense interaction between the perception of the image and previous knowledge:

> Hence we approach the complex, dialectical nature of all panoramic vision; on the one hand, it is euphoric vision, for it can side slowly, lightly the entire length of a continuous image of Paris, and initially no 'accident' manages to interrupt this great layer of mineral and / vegetal strata, perceived in the distance in the bliss of altitude; but, on the other hand, this very continuity engages the mind in a certain struggle, it seeks to be deciphered, we must find signs within it, a familiarity proceeding from history and from myth […] for the bliss of sensation (nothing

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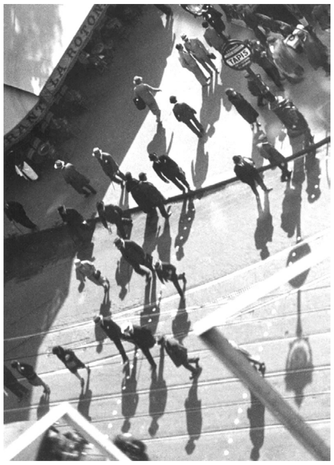
[5] James Hughes, "The Power of Powers of Ten," *Slate Magazine*, 4 December 2012, accessed 24 June 2017, http://www.slate.com/articles/arts/culturebox/2012/12/powers_of_ten_how_charles_and_ray_eames_experimental_film_changed_the_way.html.

[6] John Ellis, *Visible Fictions: Cinema, Television, Video*, rev. ed. (London: Routledge, 1982), 45.

1.14 Marianne Breslauer, *Paris*



1.15 Marianne Breslauer, *Galerie Lafayette, Paris*

> happier than a lofty outlook) does not suffice to elude the questioning nature of the mind before any image.[7]

When presented with visual representations, we mediate the viewing experience with our own subjectivity.

VOYEURISM

We visualise the world by piecing together surfaces in literal or imagined panoramas. The aerial panorama does not need to follow the horizon in one long sweep, but can explore the surface of the earth to create a map expanding in the x and y directions. The projective opportunities of this conception of the panorama are rejected by critics who consider the image a superficial method of representation. In his seminal essay, “Walking in the City” (1984), the sociologist Michel de Certeau criticised the aerial image as a tool of urban analysis. De Certeau attributed the desire for the aerial view to certain ‘erotics’ of seeing: to voyeurism, to seeing all without being seen. However, the voyeur does not only exist in the sky. The scopic gaze is not unique to the aerial view: it is only one way of accomplishing it. De Certeau smoothly mixed his understanding of the view from above with an understanding of all views. He focused his critique of the “scopic” drive on aerial views — the paradigmatic view of the voyeur — when his definition of scopic refers, in fact, to any purely visual readings of the city. Aerial images took the brunt of his critique because, to him, they symbolise the ultimate pictures, taking a viewpoint that renders the city as a flat surface, an automatic image. His politicised argument uses the aerial picture as a foil to walking in the city — what he understood as the authentic experience of the city, the only way to discover its ‘invisible’ facets. The visible realm is contrasted to the invisible, the aerial view to the street experience.

> These practitioners make use of spaces that cannot be seen; their knowledge of them is as blind as that of lovers in each other’s arms. The paths that correspond in this intertwining, unrecognised poems in which each body is an element signed by many others, elude legibility. It is as though the practices organising a bustling city were characterised by their blindness.[8]

The realm of the invisible is not any more visible in a photo taken on the street than one taken from the air. Walking is essential, but there are limits to De Certeau’s critique of the aerial view: of course aerial images cannot replace experience of place, and neither can other images. Does Google Streetview replace walking? No. The voyeur exists on the ground too, even before the age of vehicles equipped with fifteen-eyed cameras — the tradition of street photography appeals the eye of the voyeur, so much so that it is commonly denounced by artists and critics as too invasive a method to understand social urban space.[9] In contrast to the historically male-dominated practices of traditional art mediums, the newer practice of photography opened up many opportunities for women — Berenice Abbott, Lee Miller, Diane Arbus, and Marianne Breslauer **(figures 1.14, 1.15)**, for example — to create important images; but nonetheless a 'male gaze' is often associated with the street photographer, with the camera which follows and documents people within their urban environments, in the contexts of both street-photography and illusionistic cinema. The discussion of voyeuristic tendencies in film was legitimised by the theorist Laura Mulvey, whose article "Visual Pleasure and Narrative Cinema" (1975) analysed the visual mechanisms of mainstream cinema designed to appeal to male desire.

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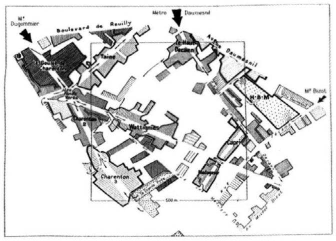
[7] Roland Barthes, “The Eiffel Tower”, in *A Barthes Reader*, ed. Susan Sontag (New York: Hill and Wang, [1979] 1983), 243-4.

[8] Michel de Certeau, “Walking in the City,” in *The Practice of Everyday Life*, trans. Steven Rendall (Berkeley: University of California Press, 1984), 93.

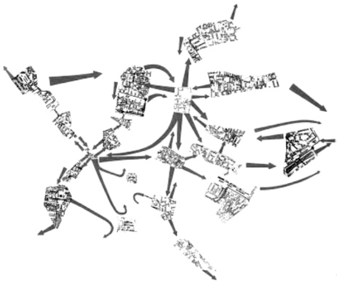
[9] Lynne Warren, *The Encyclopaedia of Twentieth-Century Photography* (New York: Routledge 2005), 1506.

It's at least understandable, if not reasonable, that De Certeau and the Situationists used the aerial view as a scapegoat in their urbanistic critique, arguing for alternative methods for social analysis in a field where the aerial photograph is often given inappropriate amounts of authority in designing space. Still, as scholars like Tom McDonough have addressed, the Situationist International appropriated analyses based on aerial photographs in their formation of purportedly anti-aerial, anti-pictorial understandings of the city.[10] In their political theory of psychogeography, the Situationists used graphics and concepts based on the earlier sociological studies by Paul-Henry Chombart de Lauwe, who analysed Paris with photographs he took from an airplane. He conceived of the city as separate localities — "quartiers" — not logically defined districts, but areas that "reveal themselves [...] to the attentive observer [in] the behaviour of the inhabitants, their turns of phrase"[11] **(figure 1.16)**. These studies were published in 1952, five years before Guy Debord's "Theory of the Derive" and the famous map of cut-out neighbourhoods in *The Naked City* **(figure 1.17)**. Seen from above, the Situationist inhabitant wanders through these zones of dérive that are conceptually and visually familiar — evidently derivative of earlier, uncredited photographic aerial analyses.

The aesthetic appeal of the aerial image can lead to superficially designing the earth's surface from that view. Problems arise when its authors or users claim any objectivity; however, it is not as superficial as critics often make it out to be. To express contempt for its aesthetic allure is no better than advocating it for aesthetic desire. A lack of interest in the conceptual framework of the aerial image results from the misconception of the aerial image as no more than a pleasant picture. De Certeau critiques the aerial image as such — as a flattened picture of reality, achieving only a "fiction of knowledge".[12] This opinion is consistent with a historical Western understanding of the effective image as one depicting an illusionistic depth of field. In contrast, the fields of aerial imagery and cartography prove the communicative abilities of a flat surface. De Certeau's argument becomes outmoded in a contemporary context, when aerial images (and images in general) have more agency than ever, functioning as efficient mediums of communication in professional and leisurely practices. Consider modern urbanism or warfare — fields that layer aerial imagery and data analytics in order to construct and destroy real space. In an age of high-resolution satellite imagery, pictures are an inevitable medium for understanding space. De Certeau's critique of the



1.16 Paul-Henry Chombart de Lauwe, *Les unités résidentielles du secteur "Wattignies" dans le XXe arrondissement de Paris*



1.17 Guy Debord, *The Naked City*

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[10] Tom McDonough, "Situationist Space", in *Guy Debord and the Situationist International* (Cambridge, Massachusetts: MIT Press, 2002), 252.

[11] Paul-Henry Chombart de Lauwe, "Paris et l'agglomération parisienne", in *Paris, Essais de sociologie, 1952-64* (Paris: Les éditions ouvriéres, 1965), 19-101.

[12] De Certeau, 92.

aerial image predates its widespread availability. Written in a pre-digital age, in a sociological context, the writing lacks engagement with images. It discusses pictures, but includes none. It favours text over image as authoritative description of reality. The argument predates the context of contemporary discourses on spatial representation, ignoring the complexities of the top-view.

What Laszlo Moholy-Nagy (an artist notably obsessed with the aerial view) said nearly a century ago has only become more relevant: "The most essential for us is the airplane view, the complete space experience". [13] The idea of the aerial image capturing a total, definitive view explains De Certeau's and other's assumptions that it is the most picture-like picture, capable of presenting the most beautiful and most comprehensive vision of the world. And it sheds light on the consideration of any given photograph of Gursky as a definitive picture of contemporary society, a single "image that could stand for all images" [14] (as the artist himself has said of his work), what critics have gone so far as to consider a "universal image that contains in compressed form all the values of civilized existence". [15]

1.18 Gianfranco Gorgoni, *Michael Heizer: Circular Surface Planar Displacement Drawing*

BORED VOYEURISM

Aerial collections, panoramas, and macro-micro scale photographs construct image discourses that reinforce our habits of scanning the surface, of moving over the whole in search of interesting events. We do this inside the frame and outside it, on a larger surface imaginable if not pictured. However normalised these behaviours have become, we haven't grown tired of the power offered by the aerial view. We are captivated by aerial images we haven't seen before; even those which are centuries old can be as compelling as newly manufactured satellite images. We have had plenty of time with this viewpoint, yet it still hasn't worn out its charm, always seeming to be 'new' in a different context or with a different marketing technique. American land art in the 1960s was not a new practice **(figure 1.18)**; its artists cited ancient sources, drawing into the land the way the ancient Peruvians drew in gigantic scale on the Nasca deserts. This was only one example of the renewed interest in the aerial view in twentieth century art. The airplane view inspired the manifestoes of the Suprematists and the Constructivists; the 'aerialised' rooftop photography of Aleksandr Rodchenko, André Kertész, Marianne Breslauer **(figure 1.15),** and other street photographers; and the oversized photographs of contemporary artists like Wolfgang Tillmans, Michael Wolf, and Andreas Gursky.

In its completely pragmatic uses, the view retains its allure. Even military drone pilots are inclined to describe its beauty despite their circulation and repetition of the same aerial routes every day. [16] The aerial image, although subject to extreme aestheticisation, is not simply superficial in its appeal. Its formal qualities connect it to conceptual frameworks extending beyond the merely visual. The deeply rooted desire for detachment from the ground surface, for freedom of movement up and around, suggests that it is not a style of viewing we might get bored of or that we might escape. It generates a habit of viewing, a practice rooted in primal desires. It is no small accomplishment

[13] Laszlo Moholy-Nagy, *The New Vision: From Material to Architecture* (New York: Brewer, Warren and Putnam, Inc., 1932), 178.

[14] Andreas Gursky, quoted in *Andreas Gursky*, exhibition catalogue (Cologne: Kunsthalle Zürich, 1992), 7.

[15] Hans Irrek, "Fragmente einer weltsiht," in *Andreas Gursky: Montparnasse*, exhibition catalogue (Frankfurt am Main and Stuttgart: Portikus, 1995), 8.

[16] Omer Fast, *5000 Feet is the Best*, digital video (US: Commonwealth Projects, 2011).

to break through the infinite line between the sky and the earth — two realms historically and mythically divided by the horizon. Do these images — whether they are used for academia, art, propaganda, or journalism — carry the same symbolic function in each context? Are they all copies of a single trick, repeated over and over as a ploy, a trope, a distraction to make you believe whatever else accompanies the image? The ability of the aerial image to speak to primordial desires makes it an easy formula to generate power. Information effloresces and concentrates onto the surface. These images instantly entice new viewers, yet mysteriously avoid definition by those who carefully study them. Maybe, as with the work of the Pop artist Andy Warhol, these pictures are so ineffable because of the explicitness of their surfaces. [17]

The aerial image offers symbolic power over more than what is visually explicit. It is not simply a picture of everything. It is a frame with the power to picture everything. The ease with which it communicates information on its surface suggests that we could look at anything with that same ease. The aerial image gives us the freedom to move without restriction, to see as much or as little as we want, to quickly scan the whole or study the details — it even gives us the opportunity to become bored with it all, to glaze over with disinterest. To have the choice to be voyeuristic or bored, or both at once. The concept of the scopic 'eye' evocates the 'mind's eye', not only the corporeal eyes that physiologically transmit information. Pleasure comes from the idea of control — not from literal sight. The imagination of knowledge proves more important than the reality of it. The aerial picture suggests more than it depicts; it is in this sense that it could be considered the 'ultimate' picture, the totalising picture. Historical and contemporary aerial images endow us with the sensation of unlimited sight and imagination, cementing practices of viewing into routine. The comfort of habit might make us forget the heavy hand we had in creating these practices for our own pleasure.

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[17] Warhol famously said, "Just look at the surface of my paintings and films and me [...] There is nothing behind it". Andy Warhol, interview with Gretchen Berg, "Andy: My True Story," *Los Angeles Free Press* (17 March 1967), 3.

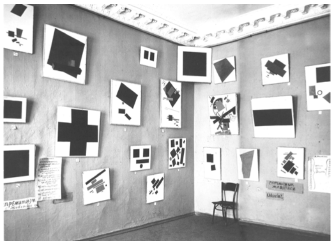
2 OPERATING ON THE SURFACE

AERIAL ABSTRACTIONS

As the human eye moves further away from the earth to look at more of it, it loses the ability to discern details. Without magnification, what is left is only what is large enough to form a pattern. But the large bits aren't necessarily important; the remains of the visible are not the most essential. They are leftovers. An optically accurate view from the air filled with atmospheric haze is unfavourable; accordingly, historical and contemporary image-makers, unsatisfied with the natural limitations of optic physiology, decide what remains and what becomes visible in the aerial image. The leading provider of Google Earth's satellite imagery, DigitalGlobe, continually works to refine resolutions, remove perspectival distortions, and hide the earth's curvature, implementing technology systems like CAVIS (which corrects variable atmospheric conditions: Clouds, Aerosols, water Vapour, Ice, and Snow) to automate standardised images from space, unobstructed by reality.

The aerial image-maker edits until they see the way they want to. Instead of patiently panning around the surface to find what they want, they may as well cut it apart — operate on it, collage reality into a re-construction of itself — as Gursky does in his semi-realistic photo-collages **(figure 1.1)**. There joints are seamless, inconspicuously blending events onto a field, ignoring the realities of time and distance that used to separate them. The imaginary is constructed out of pieces of the real, as the dream impossibly draws together the incongruences of actuality. The aerial image — a picture rather than a copy of the earth — can add, subtract, multiply, and divide, operating in any combination to make a liberal translation of reality, depicting invisible networks and forgetting irrelevant facts.

The aerial image is more a method in optical distortion than resemblance. Western art in the twentieth century provides an example of the tension between sight and aerial image. A simultaneous polarisation and connection between the two arose as the image of the world as a surface became routine, with the popularisation of aerial photography around the beginning of the twentieth century. This occurred — not coincidentally — as painting took a turn toward the 'modern', away from the picture plane as a transparent window into a scene. One of the explicit references of Suprematism was the aerial view, which visually flattened objects onto the earth's surface, creating a figure-ground image. Aerial photographs were common in Russian newspapers since the Wright brothers' flying demonstrations of 1908 — several years before Kasimir Malevich's first Suprematist painting appeared in 1915.[1] By 1927, when he published his artistic manifesto, *The Non-Objective World*, the vision of vast landscapes from above must have been fully normalised in his mind and synthesised into his motives. With the caption, "Inspirations for the Suprematist", Malevich included in his manifesto many photographs of cities from above and of the aircrafts from which to see them. Ironically, modern painters, claiming to cut off all ties to normal vision,[2] had only to take this completely optical cue as a starting point for new practices allegedly predicated on non-visuality. The aerial view, especially of landscape, seemed to edit detailed information into essential shapes and patterns, appealing to the evolving ideas of twentieth century painters **(figure 2.1)**. It was a direct answer of how one might see in a new way. The automatic reduction of the detail and recognisability of objects characteristic to aerial views would lend itself easily to the 'non-objective' or 'objectless' ideal. These abstracted colours and forms, in turn, were essential to producing emotional responses connected to a spirituality operating in a realm beyond the merely visual, and far beyond the illusionism of pre-Cubist painting. The inspiration of sight became non-representational, moving into the realm of the imaginary, the internal, spurred on by the physiological effects of visual language. These depictions were not illusions of what things look liked; they were communications of things not visually apprehendable under usual circumstances.



2.1 Photographer unknown, *0,10 The Last Futurist Exhibition of Painting*

The aerial view is like any other representational method except it happens to frame huge amounts of things. Elements are scattered on a surface, as if they should be moved and have already been moved, as chess pieces on a gridded board. Recordable and moveable. The actualised view from above, facilitated by the concurrence of the airplane and the camera, allowed artists to reach this realisation, coincidentally at same time they were looking for an escape from the perspectival cage built by their predecessors, during the Renaissance. The aerial inspiration would have been especially attractive because it was clearly still a 'universal', microcosmic view. In the Renaissance, this had been accomplished with the perspectival convergence of all things towards the eye of the viewer; in the aerial, it is accomplished by the distribution of things before the viewer, on a flat field, a table of observation.

THE LOWER PLANE

The aerial view separates the world into two parallel planes: above and below. From the detached plane above, it is easy to judge the one below. The commonality of aerial images today, especially in satellite maps and surveillance technology, establishes a routine of virtually projecting our minds into the sky. With a disembodied gaze it is easy to become judgemental observers. The top-view lends a "one-way gaze of superiors onto inferiors, a looking down from high to low". [3] The lower is the plane of ignorant obliviousness; the higher is the plane of omniscient knowledge.

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[1] Christina Lodder, "Transfiguring Reality: Suprematism and the Aerial View," in *Seeing From Above: The Aerial View in Visual Culture*, ed. Mark Dorrian and Frederic Pousin (London, New York: I.B. Taurus & Co., Ltd., 2013), 97.

[2] Frank Stella, *Working Space* (Cambridge, Massachusetts: Harvard University Press, 1986), 158.

Before the age of publicly available satellite imagery, there was no shortage of literary examples imagining an aerial viewpoint in order to describe some (often appalling) truth about the lower plane. This position is not new — it is simply given further agency with surveillance technology. In *The Mass Ornament* (1927), Siegfried Kracauer was a spectator of society, watching and writing on the mass culture of the European blue-collar worker in the 1920s. The short essay "Analysis of a City Map" critiques the proliferating consumerism of Paris: the material-obsession of the faubourgs that seeps through the streets, threatening to pollute the core of the city. Kracauer lived in the city for almost a decade, but instead of speaking from the street-level as a participant, he projected himself into the sky to judge the city as a "map"; from this imagined, macro-viewpoint he commented on the micro-activity of the streets. His critique seems more credible from here than it would from within the urban space. Similarly, Victor Hugo's much longer work, combining fictional narrative, historical preservation effort, and social criticism into a single artistic ensemble, assumes a viewpoint from above to form a compelling defense of Gothic architecture in the French capital. Published in 1831, at an intense point of public disdain for Gothic buildings, it was named after the main offender — which becomes the novel's main character and its main stage — *Notre-Dame of Paris*. Hugo personified the building to its fictional bell-ringer: the outwardly terrifying Quasimodo, who is as hunchbacked as the gargoyles atop the cathedral's towers. The 'bird's-eye' view, commonly used to summarise narratives in literature and in pictures, is concentrated into the single working eye of Quasimodo, a metaphor for the "eye" [4] of the cathedral's rose window. From the height of the Gothic structure Hugo wrote to save, the stories and atrocities in the city, past and present, are all visible. The inner beauty of the all-seeing cathedral is analogous to the hunchback's, whose inner desires are more wholesome than the other characters, and whose outer actions only mirror the moral ugliness and physical savagery of his surrounding Parisians. Hugo used the view from above, the view of Notre-Dame, to create a critique of a higher, omniscient being — while tying the narrative to the secular, human ground plane into which the foundations of the building are set.

The top-view often suggests that the viewer has taken an impartial role to the subject, and therefore a more accurate one. This might stem in part from its similarity to the plan, the fundamental view of the architect and the cartographer, who use formalised language to flatten spatial relations into two dimensions, simplifying measurement and communication. The rationality that inaugurates this view into a methodology imposes itself outside of the discipline, giving all top-down pictures a false character of neutrality. The only real sense of the 'object' is not in the objective — but in the objectification of things. [5] From above, we are concerned with movements on the ground plane below — among the objects with which we usually interact instead of the trajectory of our own aerial movements. Distance, fundamental to the aerial view, encourages objectification. On the ground, walking generally corresponds with one's sightline; this straightforward manner of experiencing the world opens up to complex interactions with it. Our relationships to objects drastically change as our angles and proximities shift. We normally exist in a three-dimensional sphere of spatial dynamics and sensory stimulation. But when we look down from above, our movements depend on the movements of other things. At this distance, senses are useless to understand what is happening below, except for one: vision. The lack of other sensory stimulation, in addition to a disregard for the trajectory of one's own body, encourages an exclusively visual objectification of those objects on the field below.

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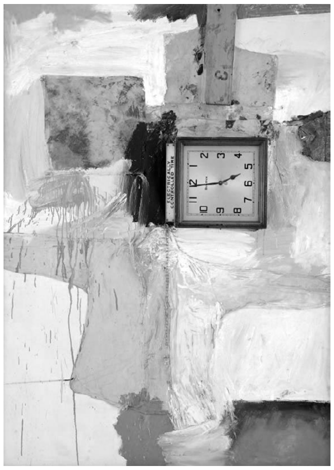
[3] Hito Steyerl, "In Free Fall: A Thought Experiment on Vertical Perspective," in *The Wretched of the Screen*, ed. Julieta Aranda et al. (Berlin, New York: Sternberg Press, 2012), 24.

[4] Victor Hugo, *Notre-Dame de Paris*, trans. Isabel F. Hapgood (Project Gutenberg, [1831] 2009), Book Seventh, Chapter 1, https://www.gutenberg.org/files/2610/2610-h/2610-h.htm.

The image from above does not only promote the judgement of objects, but the manipulation of those objects, too. Distance renders a heterogeneous plane: a kind of table for subjectification on which things can be judged and compared. [6] Over the same abstracted plane, these things can then be organised hierarchically. The aerial image invites the participation of the image-maker. As an equalised field over which to scatter an array of objects, the image is an opportunity to discern the characteristics of those objects — to draw lines to separate and to connect them. Judgement leads to mental categorisation, then a diagrammatic system of a grid or a web, whose lines might be visible or implied. Each object on the surface has the opportunity to relate (or not) to every other thing around its perimeter. The art critic Leo Steinberg famously described the organisational surface of a picture as a 'flatbed'. Using the work of Robert Rauschenberg as the paradigm **(figure 2.2)**, he explained that modern picture-plane has nothing to do with how the upright human views the world; instead it refers to the world of data processing. The picture-plane becomes a reference to culture, not nature — it becomes a table for organising things, a computational surface with networks between elements in a manner that relates technological computation to dream narrative:

> [The flatbed is a] garbled conflation of controls system and cityscape, suggesting the ceaseless inflow of urban message, stimulus, and impediment […] Rauschenberg's picture-plane had to become a surface to which anything reachable-thinkable would adhere. It had to be whatever a billboard or dashboard is, and everything a projection screen is, with further affinities for anything that is flat and worked over — palimpsest, cancelled plate, printer's proof, trail blank, chart, map, aerial view […] Rauschenberg's work surface stood for the mind itself — dump, reservoir, switching centre, abundant with concrete references freely associated as in an internal monologue — the outward symbol of the mind as a running transformer of the external world, constantly ingesting incoming unprocessed data to be mapped in a overcharged field. [7]



2.2 Robert Rauschenberg, *Third Time Painting*

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[5] The feminist writer Catharine MacKinnon writes: "to look at the world objectively is to objectify it" in her book, *Feminism Unmodified* (Cambridge, Massachusetts: Harvard University Press, 1987), 50.

[6] Michel Foucault, "The means of correct training," in *Discipline and Punish: The Birth of The Prison*, trans. Alan Sheridan (New York: Vintage Books, [1975] 1995), 170-94.

[7] Leo Steinberg, "Other Criteria," in *Confrontations With Twentieth-Century Art* (New York: Oxford University Press, 1972), 88.

The "aerial view" is specifically mentioned as a type of flatbed. This is an interesting inclusion. To Steinberg, the aerial belongs to family of images that has nothing to do with vision. To him, a pre-modern picture (i.e. a Renaissance picture) "evokes sense data which are experienced in the normal erect posture", relating to "a visual experience of nature". [8] Today, the aerial could be described as a thoroughly natural way of viewing the world — being a common viewpoint as well as a viewpoint to study nature. But Steinberg considers it to oppose 'natural' viewing because it transforms the world into a manipulated surface that destroys the painterly rules of Gestalt, of visual perception based on the viewer's orientation to the picture plane.

OPERATIONS ON EAST ASIAN SURFACES

The natural and the computational have not been historically conceived as separate things in other cultural contexts. Centuries ago in China, optical reception of the world did not correspond to imagery of it — visual resemblance was not a goal. As early as the fourth century B.C., structured artistic traditions of formal language began to grow out of the religious and cultural belief-systems, only becoming more inseparable from those systems as centuries passed. A common philosophy was shared by poets, painters, academics, government officials, and everyday people: nature was not outside them but in and around them, everywhere at all times. Humans were not the measure of all things; therefore, there was no conceptual struggle against a transcendental, capitalised Nature, as there was in the West. Painting was to communicate the cosmic energy — *ch'i* — running through nature and all other things. This was achieved by representing a 'spirit consonance' — *ch'i-yun*. Kuo Jo-hsu, a painter from the eleventh century, wrote that spirit consonance "necessarily involves an innate knowledge […] It is an unspoken accord, a spiritual communion; something that happens without one's knowing how […] a painting must be complete in spirit consonance to be hailed as a treasure of the age. Otherwise, even though it reaches the utmost in clever thought, it will be no more than common artisans' work. Although called 'painting', it will not be painting". [9] The belief that the world should not be conveyed through lifelikeness was so strong that the ninth-century painter Sou Che wrote: "He who judges painting according to the concept of resemblance shows the understanding of a child". [10] (This, in a nutshell, explains the resistance with which Italian Jesuit missionaries were met, during the sixteenth century, when they attempted to impose the Western perspectival method in China against the long-standing artistic practices so tightly bound to the cultural beliefs of the nation. [11])

Landscape painting as distinct genre in China came about as early as the Six Dynasties period (220-618 AD), flourishing to a height of accomplishment during the Northern Song Dynasty (920-1279). So many artists contemplated the ways of achieving this elusive spiritual connection that a precise methodology was formalised. The method involved the use of an aerial view to organise landscape elements over the image. Shen Kuo, of the Northern Song Dynasty, wrote that "the proper way of painting a landscape is to see the small from the viewpoint of the large, just as one looks at artificial mountains in gardens”, [12] while his contemporary, Kuo Hsi, wrote similarly, “There is a proper way to paint a landscape […] There is also a proper way to look at landscapes […] Landscapes are vast things. You should look at them from a distance. Only then will you see on one screen the sweep and atmosphere of mountain and water.” [13] With a distanced aerial view, even the largest mountains could be painted together on a single surface. Conventions of projection were dependent on the medium of the work, of which there were several standards: oval fan, folding fan, folding screen, single-panel screen, sliding wall screen, hanging scroll, handscroll, and album book **(figure 2.3)**. On a vertical hanging scroll — the most typical medium for landscape painting — mist, between the base of one mountain and the peak of the next, was a formal technique to transition between different elements and viewpoints, condensing large distances without confusing the viewer with grafted adjacencies. Elements float as objects in a plan view while retaining a primarily elevational quality — instead of becoming a geometric pattern one would expect in a top-down view. The best way to understand this is to imagine that the ground plane before us is tilted upwards **(figure 2.4)**. The elements on that ground plane, instead of angling with it, are detached from that plane. Shrouds of mist act as mediators, functioning to cover the feet of the ungrounded elements and to transition between them. The transitional function allows each element to be depicted in the best expression of its *ch’i*, its spirit: a different viewpoint for each mountain. This package of conventions, among others, indicates a conscious severing of optical likeness from aerial image; it was obvious to the Chinese that “the imperfections of the eye afforded no reason why the objects of nature should also be copied as imperfect”. [14]

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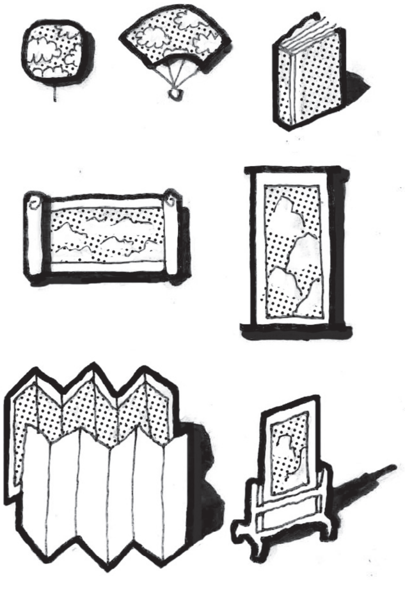
[8] ibid., 84.

[9] Susan Bush and Hsio-yen Shih, *Early Chinese Texts on Painting*, (Cambridge, Massachusetts: Harvard University Press, 1985), 95.

[10] Sou Che, quoted in Massimo Scolari, "The Jesuit Perspective in China," in *Oblique Drawing: A History of Anti-Perspective* (Cambridge: MIT Press, 2012), 348.

[11] Scolari, 341-57.



2.3 Standard Chinese landscape mediums

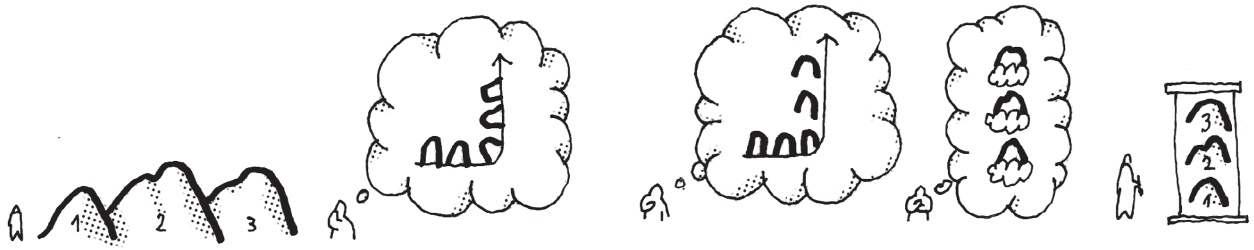
Thus, the surface was not a reductive approximation of reality. Since the Chinese made no attempt to copy reality, their artistic depictions of landscape were much more functional and significant than the real vision of those landscapes. They transmitted invisible experiences — for example, of time spent wandering through the landscape. Picturing nature’s true spirit required that the painter had wandered through it and contemplated it at length in order to absorb its essence. [15] Mounted on the walls of imperial palaces, the masterpieces of the most accomplished artists transmitted these experiences so successfully that viewing the paintings was considered equally, if not more, rejuvenating and pleasurable for the royal subjects as wandering through the landscape itself. It was explicitly understood and agreed that the image carried this function; its surface was an opportunity for enhanced dimensionality, not a concession to a superficial flattening of the world. In the English-speaking world, the words ‘surface’ and ‘superficial’ share the same etymological origin (Latin: ‘superficies’) and have, unfortunately, become almost synonymous in their ability to bring up negative associations. The double designation of the aerial image as a surface — its treatment of the ground as a surface and itself being a surface — further condemns aerial images to an apologetic existence in the West. Even the successful graphic designer Edward Tufte wrote about

[12] Joseph Needham, *Science and Civilization in China*, Volume 4, Part 3 (Taipei: Caves Books, Ltd., 1986), 115.

[13] Kuo Hsi, quoted in *Early Chinese Texts on Painting*, 151.

[14] John Barros, *Travels in China* (London: T. Cadell and W Davies, 1804), 119.

[15] Edward Casey, *Representing Place: Landscape Painting & Maps* (Minneapolis: University of Minnesota Press, 2002),106.



2.4 Landscape projection

the surface as a morally barren "flatland" that must be escaped in order to find the redemption of real experience. [16] He finds ways to make the surface rich, as traditional Chinese paintings do, but not before admitting to the deadness of the flat page, verbally discrediting his own diagrammatic accomplishments. Meanwhile, Chinese painters centuries ago wrote on the divine ability of the surface: "In the few inches of a painting a hundred thousand miles of scenery may be drawn", [17] "…it is as if a thousand miles were right before one's eyes; there is an abundant spirit that is almost tangible", [18] "…the divine grace of creation, the light or darkness of yin and yang, a distance of a thousand miles — all this can be captured in the space of a foot". [19]

The usefulness of the aerial viewpoint in East Asia extended itself outside landscape painting to depictions of urban and domestic life as well. Again, resemblance was not a measuring stick for the value of representations. Oblique parallel projection from above was the proper way to depict architectural objects, as it geometrically described objects as they were — not as they seemed to the human eye (i.e. their parallel geometry does not converge, and neither should their depictions). This technique extended into the language of Japanese painting, where its implementation was stricter. Consistent angles in axonometric projection (without any foreshortening, nor horizon) were sustained through entire works; whereas in Chinese domestic and urban depictions, projection was often only localised, and foreshortening tended to occur towards the top edges of vertical and horizontal format paintings **(figure 2.5)**. [20] In Japan, a technique called *fukinuki yatai* — in English, literally 'blown-off roof' — preserved the ideal aerial method while revealing domestic narratives to the viewer of the painting **(figure 2.6)**.

Another aerial technique borrowed from Chinese painting was the use of mist, which took on a pictorial character in Japanese painting as billowing clouds that cut over and in-between scenes. Applied as gold foil or as gold wash over a relief of gesso, these elements demand visual attention and further emphasise these axonometric depictions as aerial views. Their formal function on the picture plane is to modulate between events normally separated spatially and temporally. Golden clouds are liberally used in the double screens of the six-panelled *rakuchu rakugai-zu* ('scenes in and around the capital'), a genre of work commissioned in great numbers by the courts of Edo period Japan (1600-1867) **(figure 2.7)**. In an easily identifiable, highly standardised formal language, they depict numerous festivals unfolding at

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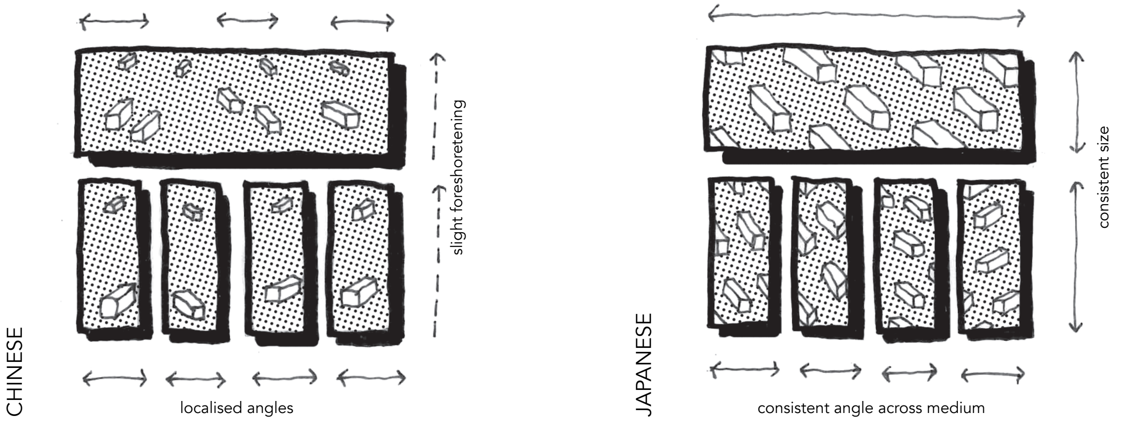
[16] Edward Tufte, *Envisioning Information* (Cheshire, Connecticut: Graphics Press, 1990), 12.

[17] Ching Hao, quoted in *Early Chinese Texts on Painting*, 172.

[18] Han Cho, ibid., 186.

[19] Shen Kua, ibid., 119.

[20] For a close study of orthogonal projection techniques in traditional Chinese painting, see Chien-Chung Chen and Christopher W. Tyler, "Chinese Perspective As A Rational System: Relationship To Panofsky's Symbolic Form," in *Chinese Journal of Psychology*, 53(4) (2011), 7-27.



2.5 Typical urban projection techniques

once, across different areas of Kyoto. [21] Looking over a pair of six-panelled screens transports one across a spatially condensed topography of the city. It is temporally condensed too, depicting the unified changes of nature and human activity through time. From right to left, the screens move through winter, spring, summer, and autumn, illustrating different festivals, all in full activity. This means that hundreds, sometimes even thousands, of small people populate the screens.

The additive processes of these screens are further emphasised when we consider the most probable origin the genre. During the years before the first appearance of a *rakuchu rakugai-zu* screen, series of small fans — each depicting a seasonal urban activity — were popular. These fans were made with the same materials and visual elements as the screens, on a smaller medium. A captivating use of the fans is an example of a six-panel screen onto which twenty-four fans are mounted, arrayed as a matrix of distinct scenes brought together on one surface **(figure 2.8)**. It is easy to imagine how the desire to see all these events at once could have led to the creation of synthesised *rakuchu rakugai-zu* screens, which combine spatially and temporally separate events. On a screen, the edges of the fans can be erased, allowing events to move around the larger medium of the screen while still remaining formally and conceptually divided, with golden clouds **(figure 2.9)**.The original compression of single events onto fans expands on the medium of the immersive screen.

The screens reconfigure space illusionistically, but also spatially around the viewer **(figure 2.10)**. Each screen is over a metre-and-a-half tall and three-and-a-half metres wide. Created in pairs, they form a system of twelve panels — over seven metres wide of panorama — in which a horizon line is completely absent, despite the primarily horizontal format of the medium. These aerial views totally encompass the geographic regions of Kyoto, as well as the entire body of the viewer, who is situated in the middle of this world, being spatially in the centre of the two enveloping screens. But illusionistically, the viewer is in every part of the city at once, participating through observation in all the activities occurring in different areas and in different months; and furthermore they are above it all, able to aerially observe distinct places (and times) in

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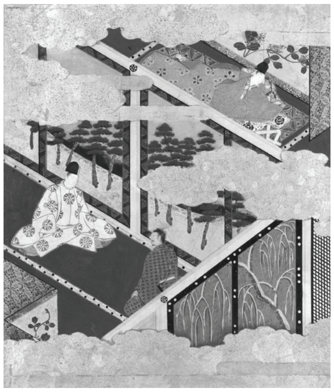
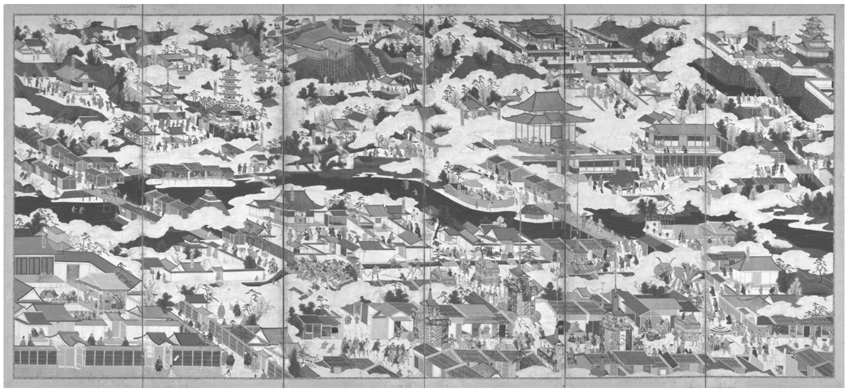
[21] For a comprehensive formal and political study of the rakuchu-rakugai-zu, see Matthew McKelway, *Capitalscapes: Folding Screens and Political Imagination in Late Medieval Kyoto* (Honolulu: University of Hawai'i Press, 2006).



2.6 Tosa Mitsuyoshi, *Scene from "The Oak Tree" from The Tale of Genji*



2.7 Artist unknown, One of a pair of *Rakuchu Rakugai-zu* screens

one sweep. The screens hold the attention of the viewer by the stunning detail of their depictions, forming a more convincing illusionistic narrative over the duration of viewing. Thus, the screens facilitate both disembodied and embodied experience: they destroy the viewer's relation to any realistic viewpoint of space, and they create new pictorial and tangible space. The impossible experience of aerial condensation illustrated by the works becomes less foreign as the viewer spends time in between the screens, and the formal consistency of the whole rakuchu rakugai-zu genre ensures general viewer comprehension of this new system. The makers of the screens do not only accept a total disruption of logical body orientation; they use it as a foundation to construct a dream space where the spectator takes the central position. Floating in this abstract space, the dreamer is the omniscient voyeur, seeing every important spatial event in the capital of Japan. The makers of the screens destroy, then reconstruct space and time around the viewer in order to immerse them in the pleasure, and the power, of observation.

MNEMONIC LANGUAGE

The more totalising the surface — the more it condenses, the more area it encompasses — the more it must leave out. When it summarises — when it is "synoptic" [22] (or synopsis-like), as it is so often described — it subtracts detail. This necessitates judgement. A synopsis must condense something large into an inevitably less-detailed version of itself. An essential version of itself. The conflated multiplicity of the world is made simple. The architect and writer Robert Harbison describes the clarifying characteristics of maps, which are themselves top-view images: "[They] give the joy of paring down to the bare minimum […] [they] simplify the world somewhat in the way a heavy snowfall does, give the sense of starting over, clarify for those overstimulated by the ordinary confusion. Each path in the snow…makes one feel there is a manageable amount going on". [23] Smaller marks replace and symbolise whole things. In this way, the habitual use of aerial images actually allows symbolic language; repetitive representational techniques allow recognition of synechdochic marks. Consider symbols on a road map, such as green zones, which we know are parks or forests, without the depiction of any trees.

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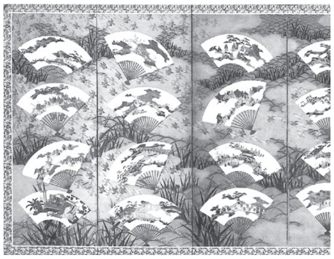
[22] E.A. Gutkind, "Our World From the Air: Conflict and Adaptation," in *Man's Role in Changing the Face of the Earth*, ed. William Thomas, Jr. (Chicago: University of Chicago Press, 1956), 44.

[23] Robert Harbison, *Eccentric Spaces* (Boston: David R. Godine, Publisher, Inc., 1988), 127.

In Chinese landscape painting, aerial representations of natural features became such a formalised tradition that they dependably communicated energies of the environment in a language of economical brushstrokes. The use of this vocabulary was expected among painters of high calibre. Exhaustively outlined by the famous *Mustard Seed Garden Manual of Painting* (1679), these conventions are recognised by viewers of succeeding generations up to the contemporary age. [24] These mnemonic symbols are legible because they are visual enough to be "apprehended, conveyed, and recognized for what they are, yet abstract enough to confer upon the forms thus created the validity of a general, eternal truth". [25] The mind is free to fill in information because of the minimal illustration of the 'essence'. The reduction of forms into symbols is not a loss of detail in a negative sense, but a suggestion — a provocation — of detail.



2.8 Unknown artist, Detail of *Flowing Fans of Famous Sights in the Capital*

Mnemonic symbols lend a freedom to the imagination which is itself capable of producing new narratives. Many diagrammatic examples exist in the architectural field. These are attempts to collect cities and landscapes as logical groupings of objects in order to analyse space and generate new form: Kevin Lynch's paths, nodes, districts, points, landmarks; Stan Allen's points and lines; OMA's strips and confetti of Parc de la Villete competition; Bernard Tschumi's points, lines, and surfaces for the winning design of the same competition. These symbols are as much for the continued generation of narrative as they are for recording what exists or what a designer imagines. The aerial view creates an image of the earth as a surface onto which subjective languages can be mapped.

The reduced, formalised elements of the aerial image allow it to be an additive surface. The condensation of things into synechdochic symbols allows maximisation of information networks that might connect discordant, far-away events into adjacencies. The surface is a new site for huge amounts of data to exist together. This is typical of aerial images: in the photographs of Gursky, in the paintings of Bruegel, in the scrolls and screens of East Asia. Steinberg considered the surface as a "dump" for the mind; [26] this undecorated consideration describes not a precious surface but one for free association — for dreaming, making, working over. *Woyi youzhi* (literally: 'roaming the mountains while lying down') is a Chinese phrase about landscape painting that translates poetically to 'dream journey'. [27] Ironically, the "dump" becomes the site of a flat dreamscape where discordant things might connect in a network.

OPERATIONS ON OTHER SURFACES

Operational processes on the surface come about from a regimented categorisation of elements as much as a peaceful contemplation of them. For Agnes Martin, famous for her mathematical, process-based grid-paintings of the 1960s, art was not about a dominance over multiplicity but an obedience to it: "I obey the voices in my mind — life is all about obedience." [28] The preparation processes for the grid paintings were recorded in notebooks, full of

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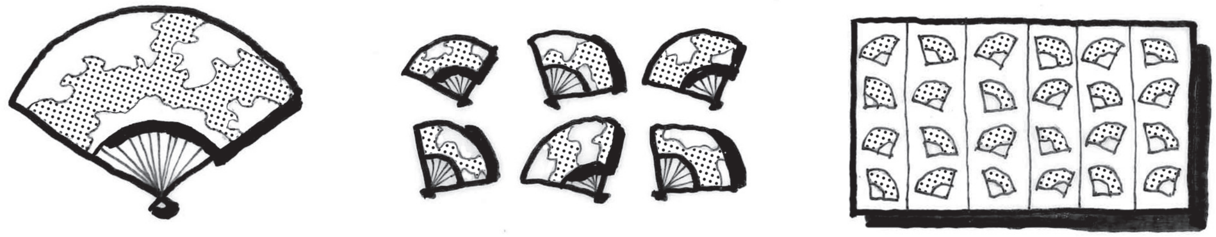
[24] Casey, 96.

[25] Michael Sullivan, *The Birth of Landscape Painting in China*, vol. 1 (Berkeley: University of California Press, 1962), 2.

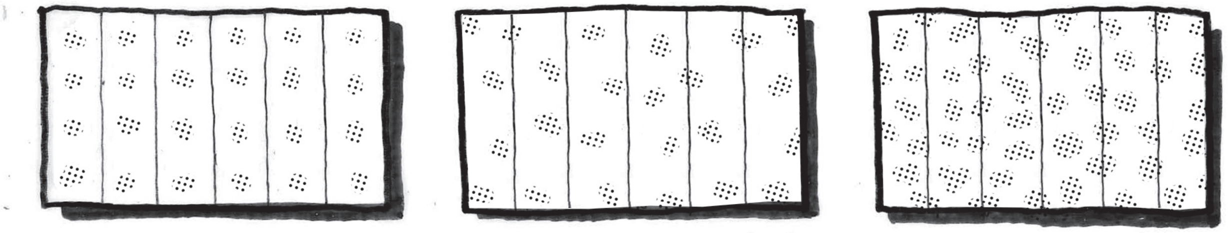
[26] Steinberg, 88.

[27] Valérie Malenfer Ortiz, *Dreaming the Southern Song Landscape: The Power of Illusion in Chinese Painting* (Leiden, Netherlands: Brill Academic Publishers, 1999), 6.

[28] Agnes Martin, quoted in *Agnes Martin: Paintings, Writings, Remembrances* (London: Phaidon Press Limited, 2012), 77.

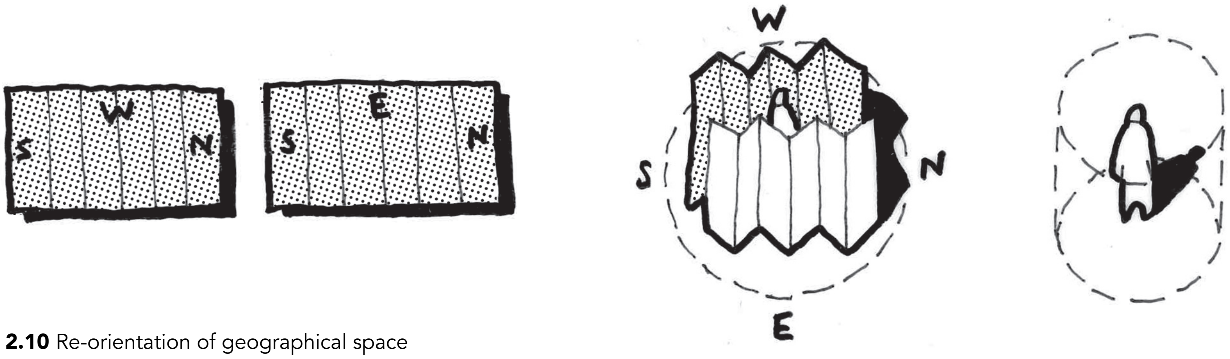


scene many scenes together now…



erase the lines shake it around multiply it

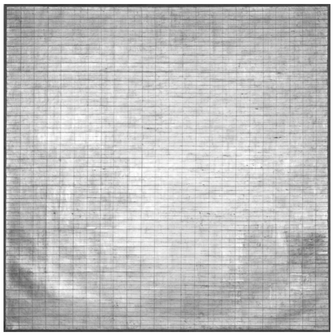
2.9 Bringing separate scenes together, from fans to screen



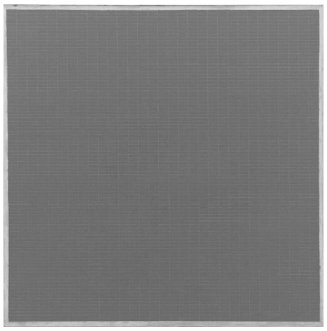
2.10 Re-orientation of geographical space

mathematical operations she calculated manually. Life was filtered by adding, subtracting, multiplying, and dividing: resulting in a grid structure she laid line by line over the painting. An unexpected calmness arises from the disciplined net that captures the whole canvas. So carefully drawn — yet visibly imperfect — the hand-drawn lines incessantly and completely cover the surface, each in a self-obsessive perfectionism that ignores every other line. But in unison the lines form a strong lattice that supports the painting, filling out and fitting in the six-foot square dimensions painstakingly and effortlessly at the same time.

Arne Glimcher, the founder of the Pace Gallery, was Martin's friend and dealer, and one of the few people who routinely visited the reclusive artist in her small home and studio in the New Mexico desert. After sending her a



2.11 Agnes Martin, *Friendship*



2.12 Agnes Martin, *Night Sea*

book on East Asian brush painting, he noticed it on her studio desk during his next visit. As they looked at a grid painting of hers, she pointed to one of the squares and said to him: "Picture yourself as a tiny man in a Japanese scroll landscape then get into this box here and look around the painting".[29] Several aspects of Martin's practice relate to Eastern traditions. At the core of Martin's practice was the desire to express the essence of things — an essence which was not visible, but known in the mind — "I paint about perfection that transcends what you see — the perfection that only exists in awareness".[30] The aspiration for this kind of spiritual transcendence can easily be compared to the ideals of Eastern religions. Throughout her career she also practiced an asceticism in relation to her painting format — the large square canvas, originally six by six feet, shrinking slightly to a five by five square in later years. The simplification of medium parallels the limited range of sizes a Chinese or Japanese artist would have used. Most of their painting was on screens, scrolls, or fans: variable in size, but not by much (with the exception of the handscroll). It is also difficult to avoid comparison of the artist's use of gold foil to that in Japanese works, where the use of the material is a typical identifier of the *yamato-e* genre (the first Japanese style of painting that thoroughly distinguished itself from Chinese painting). The most well-known usage is in the painting titled *Friendship* (1963), a work consisting of an entire plane of gold foil, finely incised with the grid **(figure 2.11)**. In the same year also came *Night Sea* **(figure 2.12)**, a painting that looks like a solid blue mass from afar. On closer inspection the grid effloresces again, this time weaved of the thinnest golden lines — a shimmering net of restraint over all the variations of blue underneath and self-restraint about her careful method. Abundantly applied as floating clouds in the *rakuchu rakugai-zu*, perhaps gold functions analogously in Martin's work — connecting and separating things, constructing new space. Martin draws the grid-lines that join and differentiate space — like a wall of a building, which itself can be thick or thin. Something on one side could be completely inappropriate on the other. In a series of lines, cutting through each other and implemented over the entire surface, a vast surface of variation arises, communicating the multiplicity and complexity of life itself, forming glowing networks of interrelations and oppositions that shine and fade as light moves over the picture, catching glimpses of metallic gold. These abstracted lines of indefinable colour — colour being a key element of painting — are opportunities for transformations, for operations on reality. A mysterious event takes place inside the wall.

The surface is a site for mental clarification, freedom of imagination, and individual subjectivity: not a place of objective truth, but of the fruition of imaginative processes. Elements can be extracted from a particular context, what architects would understand as a site, and placed into a new one. The French historian and philosopher Michel Foucault called this new surface the "operating table". To him it allows rationalisation; it is "a tabula that enables thought to operate upon the entities of our world, to put them in order, to divide them into classes, to group them according to names that designate their similarities and their differences”. [31] The art historian Rosalind Krauss spoke about this transformation too, which takes events out of their original context, resituating them within the lines of a table, a grid, or a diagram. [32] Are these mediating elements the thin lines of Martin’s grids? Do they expand into the thick clouds of Japanese paintings, separating and connecting distinct events; or do they shrink into the invisible seamwork of Gursky’s photocollages?

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[29] ibid., 93.

[30] ibid., 71.

The aerial image, in all its variations, is not a superficial picture that transposes a less nuanced version of reality. As critics like Michel de Certeau pointed out, the scopic desire existed for ages, before we could see it from aircrafts. [33] But they were not painted just because cameras did not exist yet. They were not painted in order to see objects from their tops; they were painted to see the world in a different way. The aerial picture represents, as it always did, the release from daily routines, from worn-out perspectives, from the image as the domestic window to the external world. It consistently delivers a ‘new’ perspective of space, seeming not to grow old no matter how much it is used. It is created with the desire to imagine things in a certain way: often in the most encompassing, yet most essential way. Imagination, synthesis, and emotions are more important than sight in the creation and the reception of these images. The author can edit the image to contain only necessary elements. This sheds a bit of light on Gursky’s photographs; when he says he is “interested in the ideal typical approximation of everyday phenomena — in creating the essence of reality” [34] we understand that “approximation” is essential, that editing is required. And Gursky’s overall, condensed view of the world (facilitated by the aerial viewpoint) is not only appropriate to describe civilisation in the contemporary age; it was just as useful to describe Kyoto in seventeenth century Japan — what most people today would consider an un-technologised, un-‘global’ society. By acknowledging its historical usage, it is clear that the aerial view functions in many ways beyond a visual perception. It is not simply a mirror suspended above us that depicts large-scale consumption and global communication systems of the present-day. The aerial image encourages and facilitates the transformation of space. It provides, and has always provided, a medium to reconstruct reality into the imaginary.

[31] Michel Foucault, *The Order of Things*, ed. R. D. Laing (New York: Pantheon Books, [1966] 1970), xix.

[32] Yve-Alain Bois and Rosalind Krauss, *Formless: A User’s Guide* (New York: Zone Books, 1997), 104.

[33] De Certeau, 92.

[34] Andreas Gursky, in Frank Nicolaus, “Andreas Gursky: Reporter des Weltgeistes,”, *Stern* 6 (26 Feb 2007), 25.

3 **USING THE SURFACE**

A MAQUETTE

The aerial picture signifies more than it literally depicts. In this way it can deal with the vast amounts of information inundating us on a daily basis. Functioning as a synecdoche for something bigger, it is capable of symbolising and of summarising a larger surface outside its frame and beyond its detail, but is itself a bordered image, a closed box that holds a finite amount of information. That information expands in the imagination. This is analogous to a magical satchel — a phenomenal item featured in many fictional narratives, from folk tales to video games: from Fortunatus's inexhaustible purse to infinitely spacious character inventories, from the Christian parable of the loaves and fishes to Mary Poppins' bag. It holds the possibility of infinite materialisations out of its confines, but is a small, portable object **(figure 3.1)**. Perhaps its reduced size and detail in comparison to its referent leaves room for mental projection past the picture. The image is a maquette, a diagram, generating the possibility of new mental constructions, new dreams, and new realities — unique to the subjectivities of every user.

Part of the pleasure of making and of studying a maquette is in its ability to substitute for reality. In 1679, *The Mustard Seed Garden Manual*, a tome for Chinese painting technique, described how the enjoyment of pictures might replace that of nature: "People nowadays enjoy looking at landscape paintings as much as the scenery itself". [1] In a more contemporary context, the American historian Rebecca Solnit wrote on the photography of Eadweard Muybridge: "one of the great enigmas of modern life [is] why the representation of a thing can fascinate those who would ignore the original". [2] Among Muybridge's most extraordinary works were elevated views — panoramas, captured in sequential photographs from the highest vantage point in San Francisco's downtown, made by precisely rotating the position of his camera to perfectly visualise all 360 degrees of the city **(figure 3.2)**. Muybridge's other serial photographs focus on changes over time, giving him

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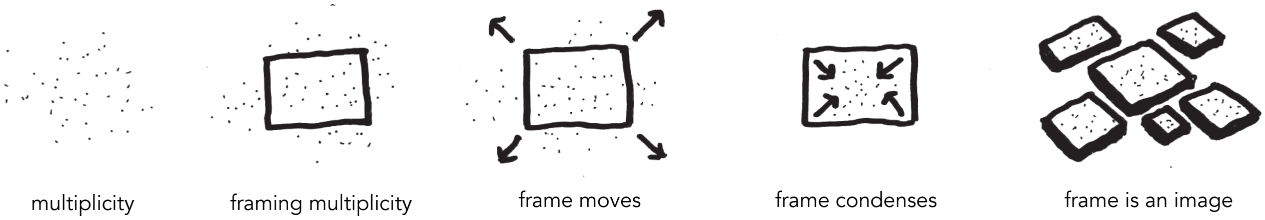
[1] Li Yu, *The Mustard Seed Garden Manual of Painting: A Facsimile of the 1887-1888 Shanghai Edition* (New Jersey: Princeton University Press, [1887-8] 2015), 11.

[2] Rebecca Solnit, *River of Shadows: Eadweard Muybridge and the Technological Wild West* (New York: Penguin Books, 2004), 156.



3.1 Agency of the aerial image

an essential role in the development of the moving image.

Capturing within a picture a vast mountain-range or a city-panorama over a duration of time provides a sense of control over uncontrollable environments. It gives the sensation that the world might be conquered by describing and picturing it, that all of reality's challenges and multiplicities can be managed if one can understand and remember through words, through pictures. Georges Perec's *An Attempt At Exhausting A Place* (1975) and Aby Warburg's *Mnemosyne Atlas* (begun in 1924) are a few well-known exercises — among of the innumerable examples throughout history — that take obsessive measures to try to adequately describe the complexity of the world. Despite intense detail and vast coverage, there remains still a desire for more. The fascination with never-ending collections characterised the Victorian era, out of which came the museum — a cultural phenomenon whose influence greatly permeated contemporary ways of making and viewing, in both art and science. The art historian Mario Praz used the Latin term *horror vacui* — meaning 'a fear of empty space' — to describe the Victorian propensity for clutter. [3] Today, museum collections grow larger and more inclusive of all mediums, reflecting a culture of consumption to such an extent that they become arguably like "the commercialized entertainment industry […] a kind of Disneyland for the better educated". [4] Jorge Luis Borges's stories communicate the fear of multitudes of stuff driving us mad — of our objects consuming us, instead of the opposite. The life-sized map, "a Map of the Empire whose size was that of the Empire, and which coincided point for point with it […] [is] Useless". The map is deliberately left to disintegrate. [5] While a 1:1 maquette of a small area might be useful, a scale of several countries renders it absurd. Likewise, the Aleph — Borges's conception of a single space holding the sight of everything in the universe [6] — seems to be a phenomenal source of information, but it is ultimately useless, too, in its density and vastness, destroying instead of helping its viewer. While museums, archives, and collections are great systems of political authority, "embody[ing] the power inherent in accumulation, collection and hoarding" [7] — they undermine their own function when they increase to a size beyond comprehension.

This issue is all too familiar in an age of image excess. The contemporary media landscape entails a large-scale digital diffusion of images. Every image gains a presence beyond itself when it is sent somewhere else, "compressed, reproduced, ripped, remixed, as well as copied and pasted into other channels of distribution". [8] Images are in high-resolution, too: big-data methods gather more detail than ever possible to imagine before, over more area. If we cannot comprehend the huge amount of things we collect, is there a use to that collection? Are all those things useless? Or do they form a black-box system which hides its inner-workings yet produces coherent outputs? Complex technology networks seem to work in this way; the total system might only be understood in a collective sense by the amassed specialists, each delegated to work on a tiny part of the whole.

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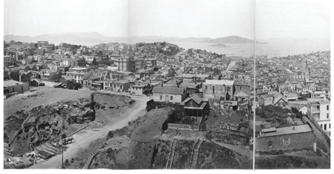
[3] William Lidwell, Kritina Holden, and Jill Butler, *Universal Principles of Design* (Beverly, Massachusetts: Rockport Publishers, Inc., 2010), 128.

[4] Boris Groys, "The Artist As An Exemplary Art Consumer," in *Filozofski vestnik XX* (2/1999 - X IV ICA), 92.

[5] Jorge Luis Borges, "Of Exactitude in Science," in *A Universal History of Infamy* (New York: Dutton, 1972), 141.

[6] Jorge Luis Borges, "The Aleph," in *The Aleph and Other Stories*, trans. Andrew Hurley (New York: Penguin Books, [1949] 1988), 274-88.

[7] Allan Sekula, "Reading An Archive," in *The Photography Reader*, ed. Liz Wells (London: Routledge, 2003), 446.



3.2 Eadweard Muybridge, Detail of *Panorama of San Francisco*

3.3 Jerry McMillan, Photograph of Ed Ruscha

As a diagram for imaginative expansion, the aerial image does not literally depict every multiplicity of its referent, and it doesn't need to. While it can signify the abundance of the world, it never becomes too huge; summarising instead, it depicts the most important things, leaving the rest to the imagination. Thus it caters to our desire to imagine multitudes, at the same time as it saves us from falling into that infinity. The aerial image is an object; while it can expand symbolically to signify more, it cannot expand past its edges in reality. It is limited by its own materiality.

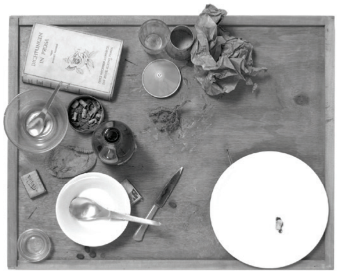
The aerial image appeals to our desire for manageable amounts of objects. With his popular small books, the American artist Ed Ruscha demonstrated the pleasure of making and owning relatively small groupings of things. *Twentysix Gasoline Stations* (1963), *Some Los Angeles Apartments* (1965), *Every Building on the Sunset Strip* (1966), *Thirtyfour Parking Lots in Los Angeles* (1967), and *Nine Swimming Pools and a Broken Glass* (1968) collect finite amounts of pictures within self-made books that mimic cheaply produced, mass-printed paperbacks. The works pack the artist's conception of Los Angeles into pocketable items **(figure 3.3)**. Ruscha could have easily found many more examples of gasoline stations, parking lots, or swimming pools, cataloguing them in an endless method like that of the German photographers Bernd and Hilla Becher who spent some forty years documenting industrial building typologies into matrices of photographs, but Ruscha's numbers were often the starting point of his books. In an interview about *Twentysix Gasoline Stations*, he said, "The title came before I even thought about the pictures…I merely wanted a cohesive thing". [9] A cohesive, small thing that both encompassed and stood for his understanding of a whole place.

Consider also the work of Daniel Spoerri, the Swiss Fluxus artist. In 1960, he began making his snare-pictures, a type of horizontal surface rotated to hang on the vertical gallery wall **(figure 3.4)**. This change in orientation draws a parallel to the work of the contemporaneous Abstract Expressionists in America; Spoerri's work ironically calls to mind the fabled heroism of artists like Jackson Pollock or Helen Frankenthaler, artists memorialised and monetarised by influential art critics for having bravely fought the traditional norms of art through the physical effort of their painting techniques upon prostrate canvases on the floor. Spoerri's works also transformed 'hard-worked' surfaces from horizontal to vertical. After a meal, the artist would fasten onto

[8] Hito Steyerl, "In Defense of the Poor Image", in *e-flux journal*, #10 (November 2009), 32.

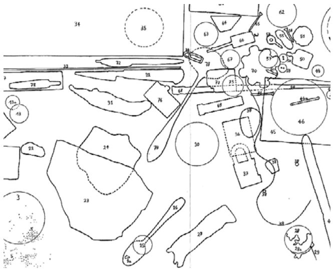
[9] Ed Ruscha, interview with John Coplans, "Concerning Various Small Fires: Ed Ruscha Discusses His Perplexing Publications," originally published in *Artforum* 5 (February 1965); republished in Ed Ruscha, *Leave Any Information at the Signal: Writings, Interviews, Bits, Pages*, ed. Alexandra Schwartz (Cambridge, Massachussets: MIT Press, 2002), 23.

the dining surface dirty cups, plates, leftover food, and cigarette butts as they were. Chopping off the legs of the table, he would then rotate the horizontal, domestic plane of eating to the vertical wall of the gallery to present the table as art, transforming the private into the public, the routine into event, the experiential into the spectacular. This orientation of the meal solidifies the view of the table (already something worked upon and looked on from above) as an unmistakably top-down one; it is flattened against the wall and conceived primarily as a planometric on the wall, not a sculpture in space. And while the typical dining table is thoroughly used and experienced, Spoerri's mounted meal artefacts allow only visual study. The positioning calls to mind modes of surveillance rather than habits of domesticity.



3.4 Daniel Spoerri, *Poèmes en prose*

Spoerri's top-view works are souvenirs of events, as well as catalysts for imagination. This is never clearer than in his book *An Anecdoted Topography of Chance*. Essentially a diagram of one of his tables, it consists of an outlined plan of the objects on a table in his room at the Hotel Carcassone in Paris, recorded at exactly 15:47 on 17 October 1961 **(figure 3.5)**. This map is accompanied by an item-by-item textual account, describing memories and associations evoked by every object. The first version was a small pamphlet, an advertisement catalogue for one of the artist's snare-picture exhibitions in 1962. Subsequent editions were published as books in 1966 and 1995. The editions expanded as Spoerri and his fellow Fluxus artists added annotations to the objects, and annotations to the annotations. The mere outlines of the objects generated texts and illustrations. Thus, each item was essentially a tool for remembering and for imagining — more mnemonic apparatus than materially valuable object. Another interesting fact about the book is its lack of corresponding snare-picture. Unlike his other works, which preserve a passing moment by gluing down the objects to a table — preserving real artefacts, real traces of the event — the moment pictured by *An Anecdoted Topography* does not exist anymore in its original form. The English painter Richard Hamilton explained the narrative opportunity outlined by the book: "[Spoerri's book] is a maquette for a realisation of the dream that human intelligence might take any fragment of the world and reconstruct the universe from the evidence it provides".[10] This fragment is barely a fragment; Spoerri's plan map is only a skeletal diagram. The anecdotes formed out of that drawing, filling out expanded editions to the original pamphlet, prove the possibility of not just a grand reconstruction, but an entirely new construction out of a delimited object.



3.5 Daniel Spoerri, Detail of map in *An Anecdoted Topography of Chance*

EXCLUSIVITY

It once required time, bravery, resources, and skill to create aerial pictures — so, in an age where it is effortless and common to see the world this way, these pictures may represent the culmination of those desires. They once posed a significant challenge to the image-maker, challenging their bravery and their ingenuity. Consider the years of aerial photography before airplanes, helicopters, or satellites — when the task was dependent on the stability of a basket suspending a person from a balloon filled with highly-explosive gas.

[10] Richard Hamilton, in *An Anecdoted Topography of Chance*, ed. Alastair Brotchie and Malcolm Green (London: Atlas Press, [1962] 2016), back cover.

3.6 George R. Lawrence, Detail of *San Francisco in Ruins*

After an accident when his basket was disconnected from the bag, sending him falling two hundred feet, the panoramic photographer George Lawrence constructed his 'Captive Airship'. Essentially an early drone, it had no remote steering controls but at least allowed him to trigger his camera from the safety of the ground, via battery and solenoid. The huge, wind-powered apparatus held his fifty-pound panoramic camera, also of his own construction, within a system of seventeen kites stabilised by three booms, each suspending a long silk cord with a lead weight at its end. With this feat of engineering he captured his famous photograph of San Francisco from the sky after the earthquake of 1906 **(figure 3.6)**.

Before the challenges posed by aerial photography, the elevated image presented other difficulties. To make it required time and skill. Correctly painting a Chinese landscape required that the artist was not only highly gifted and practiced, but had spent sufficient time wandering and dwelling high in the mountains. The painter needed to have been immersed in the landscape in order to afterward paint its essence without direct visual reference, from an imagined view from above. In Chinese, landscape painting is called *shanshui*, literally meaning 'mountain-water'. It was expected that artists had intimately and spatially experienced those phenomena in order to fully internalise them. The endeavour of becoming a respected painter of the genre was exclusive to the literati who had the propensity for writing extensive philosophical reflections and the means to travel for long meditative retreats.

Aerial pictures have always been expensive to make. Modern technological improvements have not alleviated the costs. The Canadian photographer Edward Burtynsky spends huge amounts of money capturing images from the air, either from drones or helicopters. Though he sells prints for tens of thousands of dollars and raises millions for his films, he must plan his flights carefully against lighting and visibility conditions; for the helicopter alone, every second in the air can cost two dollars. [11]

MASS AVAILABILITY

By simply seeing Burtynsky's images, we do not need to go up in the air. Similarly, we do not need to go into the mountains if paintings transfer all of nature's recharging aspects to us. [12] Today it is unnecessary to reach high altitudes to see the world from above. We can usually find what we are looking for from the comfort of our seats; it is easy to find high quality aerial pictures in magazines, books, postcards, and on the web. Satellite maps reduce the sublime scale of the landscape into the individual scale of the computers and cell phones. DigitalGlobe, the main provider of Google Earth's satellite imagery, makes these views openly accessible. Auxiliary mapping platforms invite the customisation of those aerial images for commercial use. A huge amount of information is at our disposal; shops, bars, restaurants, and postal codes are catalogued and geospatialised into codes of referable points. The everyday person can make their own aerial photographs and videos, too: affordable UAVs (unmanned air vehicles) and 'selfie drones' (remote-controlled by the user's cellphone) allow the leisurely, even banal use of long culminations of aerial technologies. And buying a drone is not even necessary to become an aerial image-maker — by simply using an image from DigitalGlobe, the viewer becomes the D.I.Y. artist in the same impulse of appropriation (what the art historian Hal Foster calls an "archival impulse" [13]) definitive of so many modern art processes, from Conceptual Art to Pop Art to Assemblage Art. Copying constructs new narrative — new work — by the re-use of pictures in different contexts, under different authorship. The low amount of effort and time required to find and use digital images expands appropriation beyond the realm of art; anybody can participate in this non-exclusive activity. Many contemporary artists highlight the mass practice of digital browsing, taking screenshots or photographs of their monitors while panning Google Streetview or Google Earth. Consider Clement Valla's *Postcards From Google Earth* (2010-ongoing) **(figure 3.7, 3.8)**. Valla's use of satellite views on postcards relates his own practice of appropriation to reproduction for large audiences: postcards are a classic emblem of mass market image consumption.

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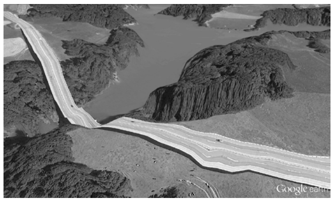
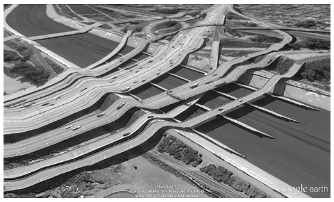
[11] Raffi Khatchadourian, "The Long View: Edward Burtynsky's Quest to Photograph a Changing Planet," in *The New Yorker*, 19 and 26 December 2016, accessed 24 June 2017, http://www.newyorker.com/magazine/2016/12/19/edward-burtynskys-epic-landscapes.

[12] The transference of the landscape's renewing energies through painting is discussed in chapter 2.



3.7 Clement Valla, *switzerland_3*



3.8 Clement Valla, *la_3*

Probably not coincidentally, traditional postcards often feature aerial pictures. Postcards from Toronto **(figures 3.9, 3.10)** usually picture the city with aerial images or grounded panoramas — both distanced viewpoints depicting the city as a whole. Since the development of the downtown core created a distinct skyline, wide photographic panoramas from the ground-level (unobstructed from Toronto Island) became more common. But in postcards from the early twentieth century, aerial views are the convention, either in photographs or illustrated bird's-eye views. [14] In the 1970s and beyond, top-views of the CN Tower during and after its construction emphasise the desire to look down and around at the city. The tower's glass-walled lifts make the trip to the top a viewing experience itself. Then, various observation decks provide a hierarchy of viewing opportunities. At the top, the rotating restaurant provides a panoramic aerial experience, completing three-hundred-sixty degrees every seventy-two minutes — the approximate time spent eating a meal. The common postcard view of the CN tower is a picture of a viewing apparatus whose primary function is observation deck, and secondary function is its image as an observation deck.

The continued production of postcards to satisfy the demand for aerial images does not diminish the appeal of the viewpoint. It only proves its appeal. Postcards are only one example of an aerial viewpoint used repetitively for a mass public. Mainstream films and illustrated children's books use it, too. These views repeatedly cater to the demand for aerial images and, on the other hand, form expectations of pleasure through habitual encounter. The top-views in *wimmelbooks* like *Where's Waldo* **(figure 3.11)** function as a viewpoint to teach children how to deal with the variegated disorder of the outside world, [15] but they also reveal an aesthetic attractiveness that demands the attention of even cognitively developing audiences.

INDIVIDUALISED RELATIONSHIPS

Aerial images condense the world, remaking it into ownable referents. They are synoptic reminders of the world. And as images, they are highly

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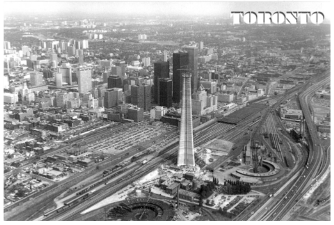
[13] Hal Foster, "An Archival Impulse", in *October*, Issue 110 (Fall 2004), 3-22.

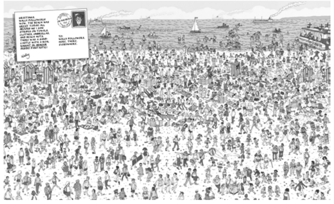
[14] An extensive collection illustrating this trend in Toronto's postcard history is available on the blog: https://chuckmantorontonostalgia.wordpress.com/.

[15] Remi Cornelia, "Reading As Playing: The Cognitive Challenge of the Wimmelbook," in *Emergent Literacy: Children's Books from 0 to 3*, ed. Bettina Kümmerling-Meibauer (Amsterdam: John Benjamins, 2010), 122.

3.9 Photographer unknown, Postcard with caption: "*At Bay Street looking west on Queen Street West. Toronto Ontario*"



3.10 Photographer unknown, Postcard with caption: "*Air-view of Toronto during construction of the CN Tower*"



3.11 Martin Handford, "On the Beach" from *Where's Waldo*

manipulatable. In a digital age, they are copied, re-oriented, edited, used, and shared — in other words, completely objectified. They ask to be rearranged in the same way that objects might be arrayed on the table-top surface. Steinberg's proposition of the flatbed picture plane, then, doubles on itself as the picture is reproduced: "The picture's 'flatness' was to be no more of a problem than the flatness of a disordered desk or an unswept floor". [16] We can imagine aerial pictures — which arrange objects within their surfaces — as surfaces to spread over a table. The picture is a mnemonic item that is easily reproducible due to its flat nature, and greatly reproduced because of its appeal.

Aerial pictures have often been made into souvenirs: postcards, bird's-eye views of cities on breakfast placemats for children, Disneyland map-guides **(figure 3.12)**, and even Hermann Bollmann's map of Manhattan for the New York World's Fair in 1964 — a feat of axonometric cartography, mass-produced and sold at kiosks as a guide to the sights, hotels, and restaurants of the city **(figure 3.13)**. The aerial souvenir adds a narrative beyond the material, visible condition. The objectification of the aerial picture results in the layering of secondary narratives. The art historian Susan Stewart writes on souvenirs:

> [We need them for] events whose materiality has escaped us, events that thereby only exist through the invention of narrative. Through narrative the souvenir substitutes a context of perpetual consumption for its context of origin. It represents not the lived experience of its maker but the 'second hand' experience of its possessor/owner. [17]

Additionally, she explains that its difference from the real place gives it power:

> It must remain impoverished and partial so that it can be supplemented by a narrative discourse, a narrative discourse which articulates the play of desire […] [it is] an allusion and not a model; it comes after the fact and remains both partial to and more expansive than the fact. It will not function without the supplementary narrative discourse that both attaches it to its origins and creates a myth with regard to those origins. [18]

It becomes significant to the individual only through the additional narratives of the sender and the receiver. As a result, the significance of the original author diminishes. (The anonymity accompanying so many aerial images seems to perpetuate the myth of their neutrality, unmediated by an artist's hand; but this anonymity may be more related to the image's successive, subjective narratives than any inherent objectivity. [19])

The souvenir image is easily reoriented according to the individual's needs. The aerial postcard is a trace of place taken out of its original context, written over by its sender who captions it, then written over again by its receiver, who forms additional narrative by fastening it to the fridge with a magnet, propping it up on the bookshelf, adhering it with putty that will one day leave

[16] Leo Steinberg, "Other Criteria," in *Confrontations With Twentieth-Century Art* (New York: Oxford University Press, 1972), 88.

[17] Susan Stewart, *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection* (Durham and London: Duke University Press, 1993), 135.

[18] ibid., 158.

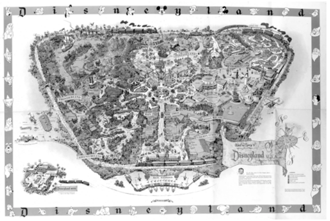
[19] For more on the image as objective or subjective representation, see Lorraine Dalston and Peter Galison, "The Image of Objectivity," in *Representations*, No. 40, Special Issue: Seeing Science (Autumn 1992), 81-128.

a stain on the wall, or putting it into a box with the other postcards never to be seen again. The aerial postcard becomes a domestic object, a display of an external place internalised, then completely recontextualised. Ruscha was fascinated by the transformation of popular, aesthetic objects into things of daily functionality: "After a book leaves here, it's for whatever anyone wants to use it for". [20] In an interview in 1972, he described a daydream he had about "the Information Man": someone who would tell him the whereabouts of his books and the surprising functions they had taken on. This anecdote provides an interesting framework for considering the aerial image as both a useful and aesthetic object:

> Of all the books […] that are out in the public, only 171 are placed face up with nothing covering them; 2026 are in vertical positions in libraries, and 2715 are under books in stacks […] only thirty-two have been used in a directly functional manner. Thirteen of these have been used as weights for paper or other small things, seven have been used as swatters to kill small insects such as flies and mosquitoes, two were used as a device to nudge open a door, six have been used to transport foods like peanuts to a coffee table, and four have been used to nudge wall pictures to their correct levels. [21]

The non-special treatment of these works facilitates a relationship between the individual body and the material of the image. It also creates spatial relationships to other items and furniture in one's house — the "coffee table", the "door", "peanuts", "flies", "paper".

Aerial images are often subject to manipulation, calling into question the idea of the untouchable work of art protected behind glass and laser-sensors in national museums. It was historically common that Chinese and Japanese paintings — today preserved in those secure environments — were remounted, from oval fan to folding-screen, wall-screen to handscroll, or folding fan to hanging screen, to name a few combinations (**figure 3.14** is an example of a remounted work: an album leaf to a hanging scroll). [22] These urban and landscape paintings are oblique aerial views. According to the preferences of the owner, the paintings would be remounted on completely different mediums. (In the West, this would surely constitute a redefinition of the work itself.) It was common for an owner of many fans, wanting to view the beauty of all of their pictures on a regular basis, to hire an artist who would mount them together onto a wind-screen, for example, or an indoor screen to receive guests into the household. It was irrelevant whether the remounting artist had painted that series of fans — in fact, the fans probably would have been made by several different artists already. Another common remounting process was from screen to scroll, promising the elongated life of a safely rolled-up painting — no longer subject to dust, sun, or wear-and-tear of movement across different rooms of a household or palace. It was precisely because these aerial depictions of cities, landscapes, and seasonal events were so lovely to behold that their viewers manipulated them in attempts to extend their usage and lifespan.



3.12 Sam McKim, *Walt Disney's Magic Kingdom: Disneyland USA*

3.13 Hermann Bollmann, *New York (City) Picture Map*

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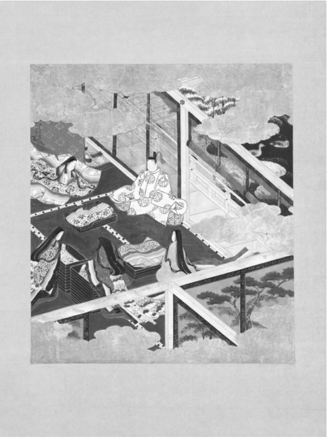
[20] Ed Ruscha, "My Books End Up In The Trash: Interview by A.D. Coleman," In *Leave Any Information at the Signal: Writings, Interviews, Bits, Pages* (Cambridge, Massachusetts: The MIT Press, [1972] 2002), 46.

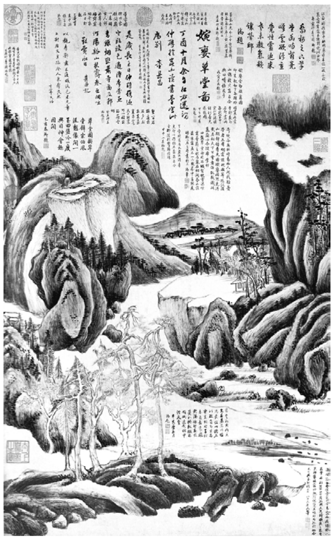
[21] ibid., 46-7.

[22] A study on remounting can be found in Robert Hans van Gulik's *Chinese Pictorial Art as Viewed by the Connoisseur: Notes on the Means and Methods of Traditional Chinese Connoisseurship of Pictorial Art, Based Upon a Study of the Art of Mounting Scrolls in China and Japan* (Rome: SMC Publishing Incorporated, 1958), 159-61.

[23] For an analysis of screens with an emphasis on their spatial implications, see Wu Hung, "The Painted Screen," in *Critical Inquiry*, vol. 23, no. 1 (Autumn 1996): 37-79.



3.14 Circle of Tosa Mitsuyoshi, *Scene from "The Jeweled Chaplet" from The Tale of Genji*



3.15 Dong Qichang, *Wanluan Thatched Hall*

Changeable mountings contributed to customisable relationships between the image and the viewer as well as between the image, the viewer, and the contextual space around both. The screen — even in its simplest, single panel format, supported by legs on either side — makes a double-sided wall, creating secondary spaces within rooms to allow hierarchies of public and private. [23] The long handscroll, however, provides the most individually controllable experience. It is designed to be viewed by one person at a time, in both their hands. In shoulder-width portions, the viewer controls the speed with which they unroll the next part of the story and roll up the previous, moving right-to-left in anticipation of broad landscapes. The vastness of these landscapes is possible because of their compression. The scroll is a parallel for both the cinematic pan and for Ruscha's architecturally inventive work, *Every Building on the Sunset Strip*, which internalises and reorients space by miniaturising the Strip onto a literal strip of paper. (The self-made accordion-book translated Ruscha's understanding of the city as a series of façades, or ribbon-like surfaces, as an actual ribbon. [24])

The practice of remounting Chinese paintings into a preferred viewing context indicates historically individualised relationships with aerial pictures. As do the red square seals on paintings, which were not the signature of the artist, but the marks of the image's owners. High-value paintings have their history written over them in numerous poetic annotations and seals along their edges, sometimes even in their middle, added over time **(figure 3.15)**. The addition of the owner's seal or personal inscription was a sign of appreciation of the work. If they happened to come from highly respected collectors, annotations and seals would contribute a substantial increase to the value of the work.

Control over the how such popular and reproducible objects are used is often lost. The issues of the original versus the copy, the exclusive versus the multiple — with which Conceptual artists like Duchamp, Ruscha, and Spoerri were concerned — become even more relevant in a digital era, addressed in the contemporary work of post-internet artists like Valla. Today, digital source imagery is not only available to artists and professionals, but the general public. Appropriation becomes an everyday practice that actually quantifies the influence of a work. Within a massive, growing landfill of images on the web, the number of views an image has gained and the number re-shares it has prompted indicates its power. Popular images are those that communicate immediately, impacting the viewer in ways that differentiate them from the huge masses of competing pictures. The aura around an image, once considered by Walter Benjamin to be threatened by modern technologies of reproduction, is today constructed by its life post-creation, in how many individual relationships it forms. Every use or view of an image represents a personal relationship to it. Mass reproduction only points to this accumulated usefulness.

The popularity of the aerial image proves that it is truly a depiction that satisfies our desire to look at the world a certain way. The aerial image, especially the multiply used one, which carries a palimpsest of narratives, represents an image of the world completely idealised into a picture: “removed from the domain of struggle into the domestic sphere of the individual”. [25] With loss of original ownership comes the opportunity for new authors, new (mis)translations, and new narratives. We try to control the world by imaging it, but instead of controlling the reality of places, we create alternate realities.

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[24] Ruscha understood Los Angeles as a series of façade surfaces: "It's all facades here — that's what intrigues me about the whole city of Los Angeles [...] Streets are like ribbons". See Gary Conklin's film *LA Suggested by the art of Ed Ruscha*, of which a transcription can be found in *Ed Ruscha, Leave Any Information At The Signal: Writings, Interviews, Bits, Pages*, ed. Alexandra Schwartz (Cambridge: MIT Press, 2002), 224.

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[25] Stewart, 145.

4 **SURFACES FOR THE COFFEE-TABLE**

The following is a collection of aerial pictures. Most of them I have discussed or mentioned in the previous essays. Together they form a picture-book, a curated collection of aesthetically interesting surfaces. Aerial images, which already edit the outside world into their frame, are edited into this book; as pictures curated in a gallery are curated again into an exhibition catalogue.

The resituation of these aerial images from their original context into this book can be compared to the transformation of images from an exhibition to a catalogue. Formal and thematic relationships that existed between viewers, pictures, and spaces are re-configured under a different map of relations in the book. Scale is manipulated; linear rationalisation dominates. The book manipulates pictures until they are suitable subjects for the domestic coffee-table. In fact, the tasteful 'coffee-table' book is a common fate of the exhibition catalogue. Often a *catalogue raisonné* — an image-based accumulation of an artist's body of work with textual commentary — it is a valuable tool to study pictures, facts, and essays; but it is commonly expensive and unavailable for digital reference, making it a symbol of connaissance, a display of affluence — proof of its owner's status as a well-off and a well-read person.

Able to depict massive amounts of information and to signify even more, the aerial picture is analogous to the curation of this collection, which requires the condensation of a long history of aerial images into a short picture-book. I skimmed and studied many images before choosing these. The ambition is to participate in an activity of subjective selection parallel to aerial image-making. (Aerial images carefully curate which elements to depict.) The curation of this series of images negates the objectivity often associated with the aerial viewpoint.

The curation also mimics the practices of selective viewing the aerial image and digital image discourse promote. Aerial pictures often encompass such massive quantities of information that we must mentally edit out the superfluous and save fragments almost at random. This is parallel to the selective routines required of any contemporary disciplines or leisurely pursuits involving pictures. Today, vast amounts of visual material are available to professionals and to the public. Information is presented in matrices of pictures, infinite scrolls. (To digitally scroll, with a computer mouse, is linguistically derived from an older medium of communication, the paper scroll.) We must choose what to look at.

As with the selection, the order of the pictures was subjective. Ed Ruscha was a famous avoider of clear explanations about his work, but he did say the sequences in his books were important: "…the pictures have to be in the right sequence, one without a mood taking over". [1] He thought the creation of a mood would work against his goal to be an objective data-collector (comparing himself to a machine, and also to an architect — someone who, in stereotypical perception of the profession, observes with the superior knowledge and objective clarity of an outsider). Sequence is important to me too, but I would never claim objectivity. The reader would present the same pictures in a different order. Every order would bring something else to attention, draw an alternate story. The reader should also remember that each of these enticing surfaces communicates its own particular mood about the world.

I have arrayed these pictures, each a maquette for imagining the world, as visual prompts for the mind. Architecture students often make visual collages — inspiration boards — to map out ambitions and precedents for their projects. This habit continues into professional practice, visually communicating concepts to clients. The accrual of images — of existing buildings or temporary film sets, of visualised emotions or imagined utopias — is core to the daily thought processes of an architect. Diagrams for new architecture are constructed with the help of these images, which allow us to visualise so many buildings we have never experienced and so many places that do not exist. Looking at pictures is an act of projection in every sense. Sometimes, the spaces in between and overtop of the images — not the images themselves — are the places allowing that freedom. Thus, a large quantity of visual material does not result in a thorough comprehension of the subject. Perhaps the "most important things want to remain invisible" in an era of unprecedented surveillance and image-appropriation. [2] As a curator of these copies, I wish to have a significant impact on how the viewer will understand them — having copied, resized, and placed them in a specific order. I have talked about them in their own respects, but in placing them together in a structure of pictures, I have constructed a new narrative existing in the blank spaces.

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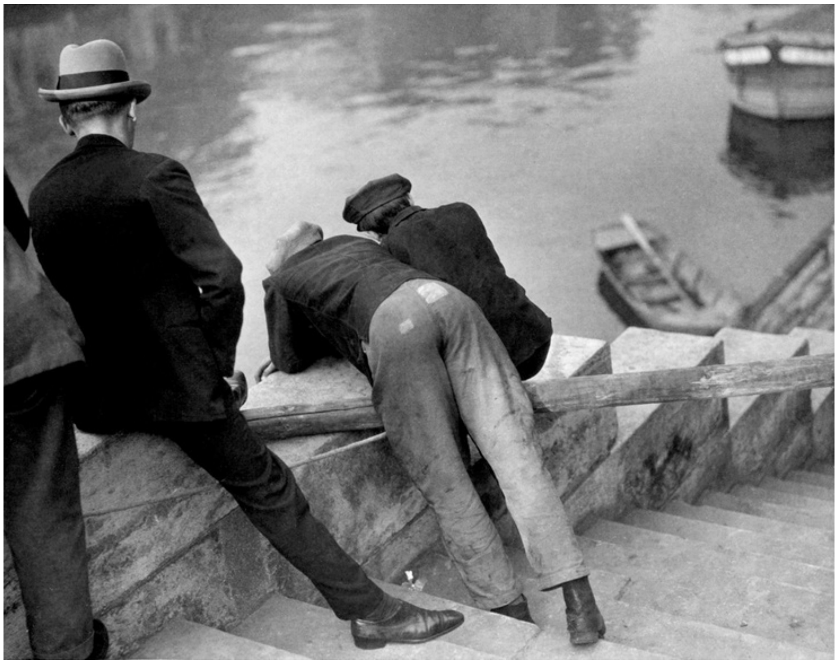
[1] Ed Ruscha, in Alexandra Schwartz, *Ed Ruscha's Los Angeles* (Cambridge: The MIT Press, 2010), 25.

[2] Hito Steyerl, *How Not To Be Seen: A Fucking Didactic Educational.MOV*, HD video file, single screen (2013), 3:07.



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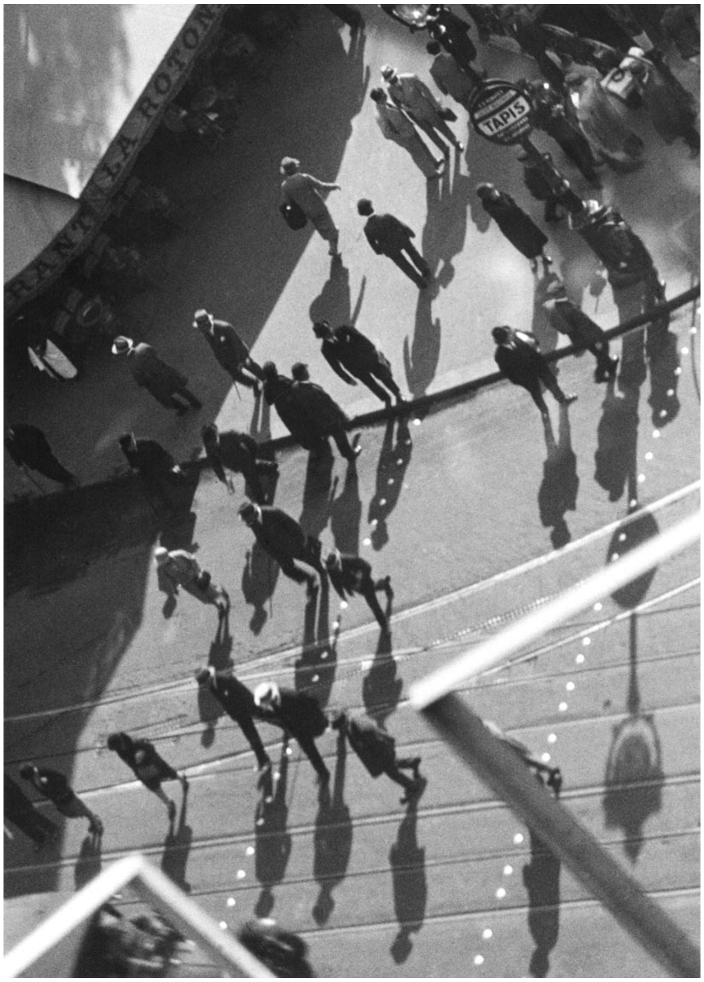
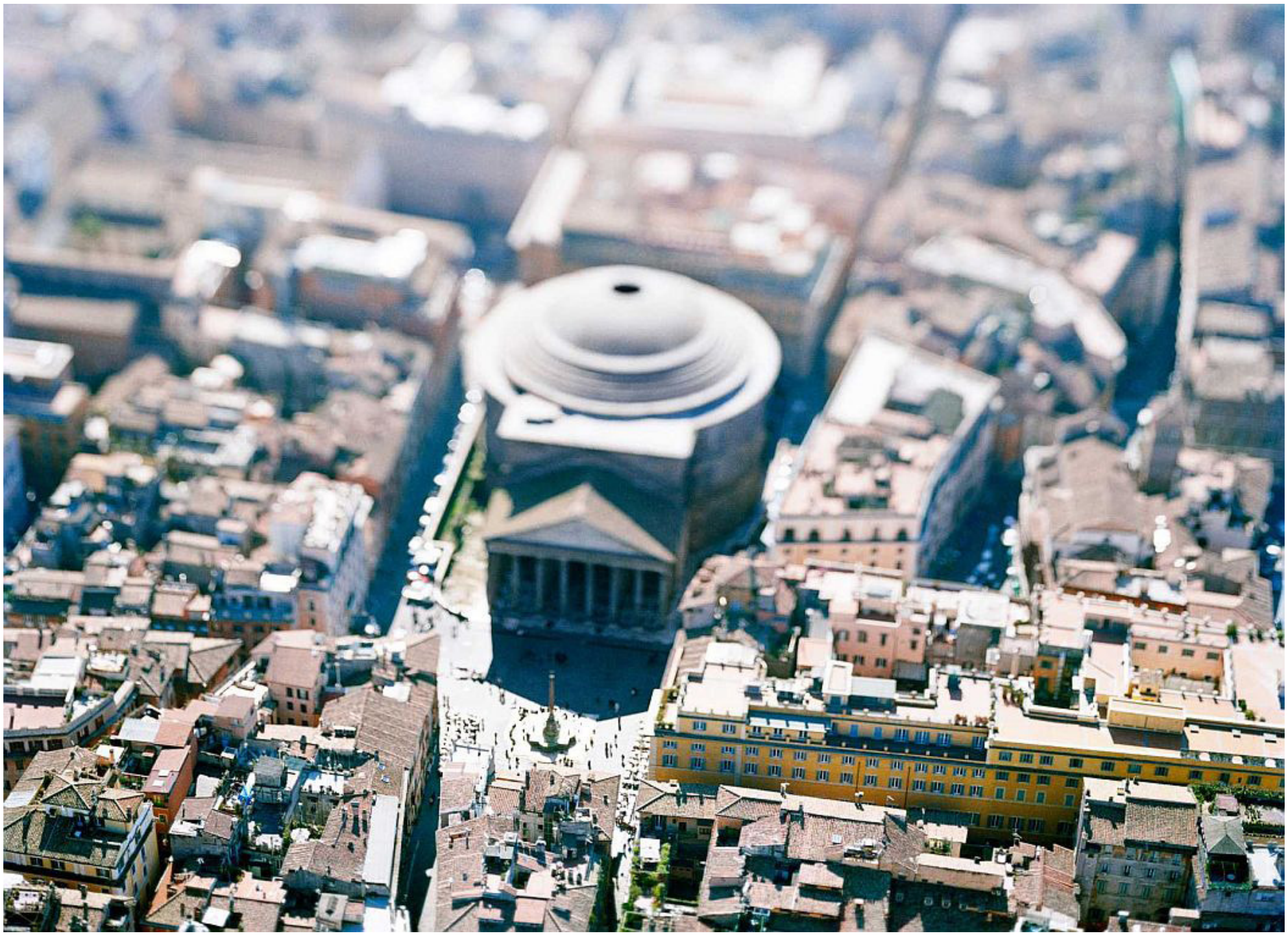
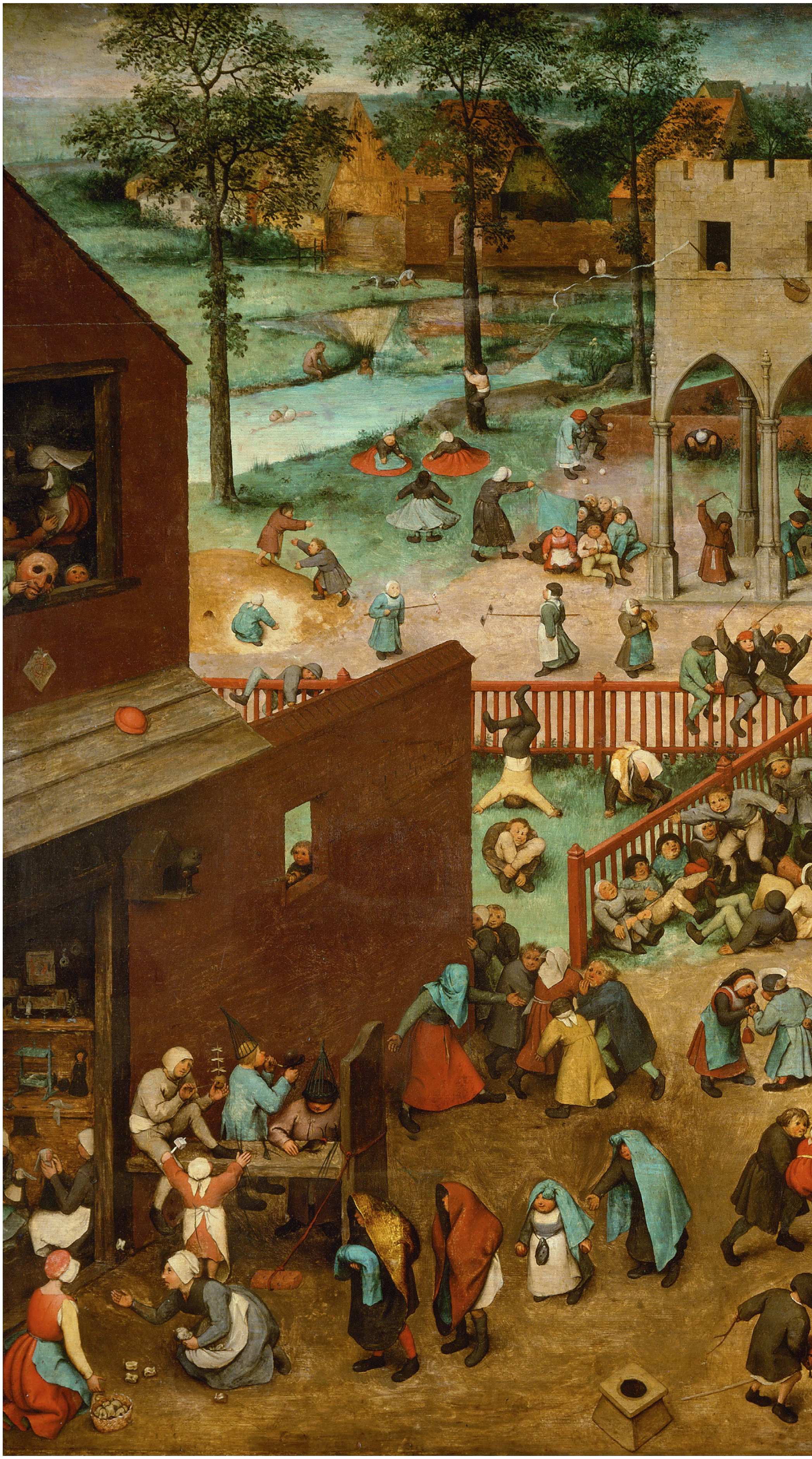

RANT LA ROTON
TAPIS

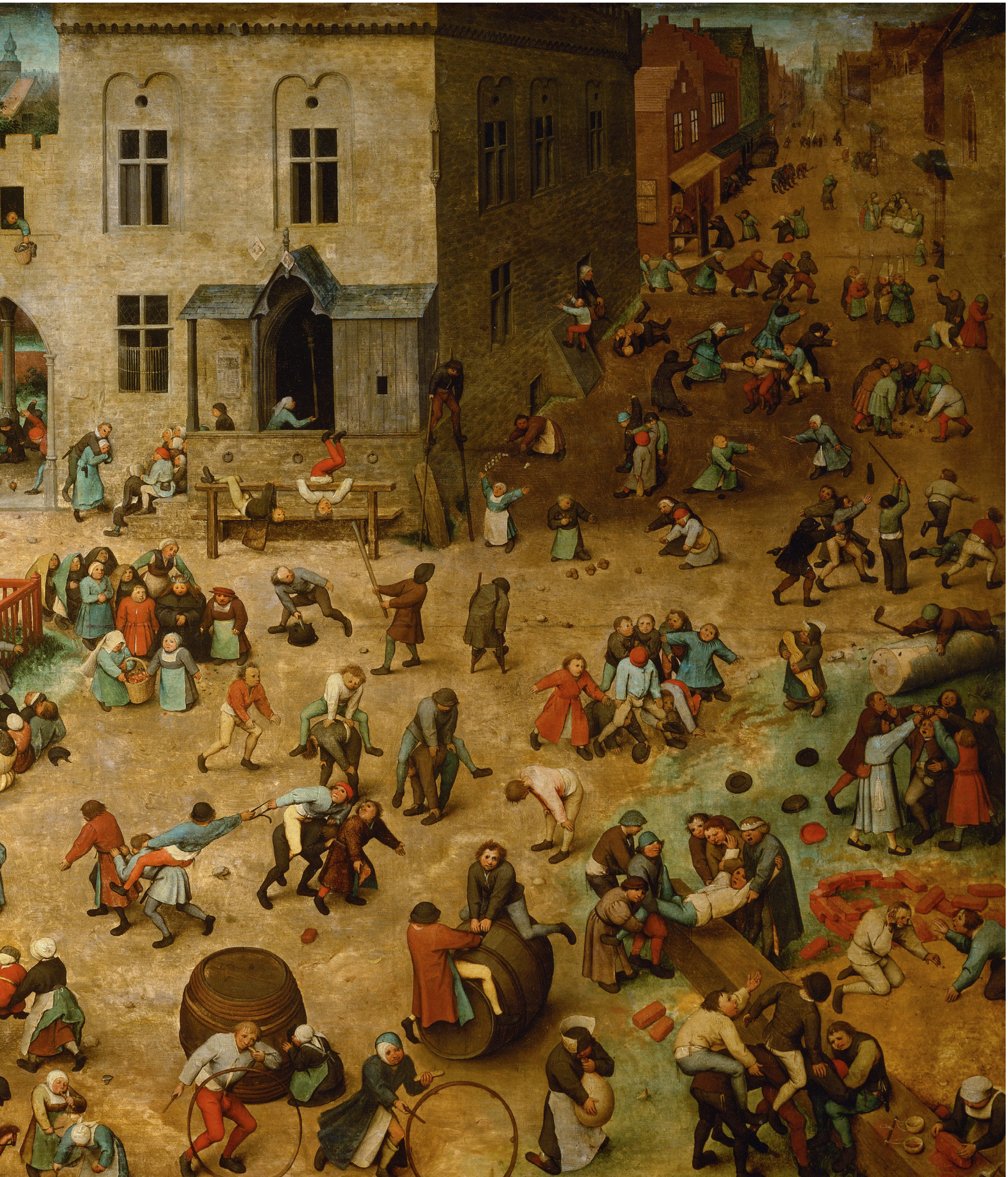
1.15

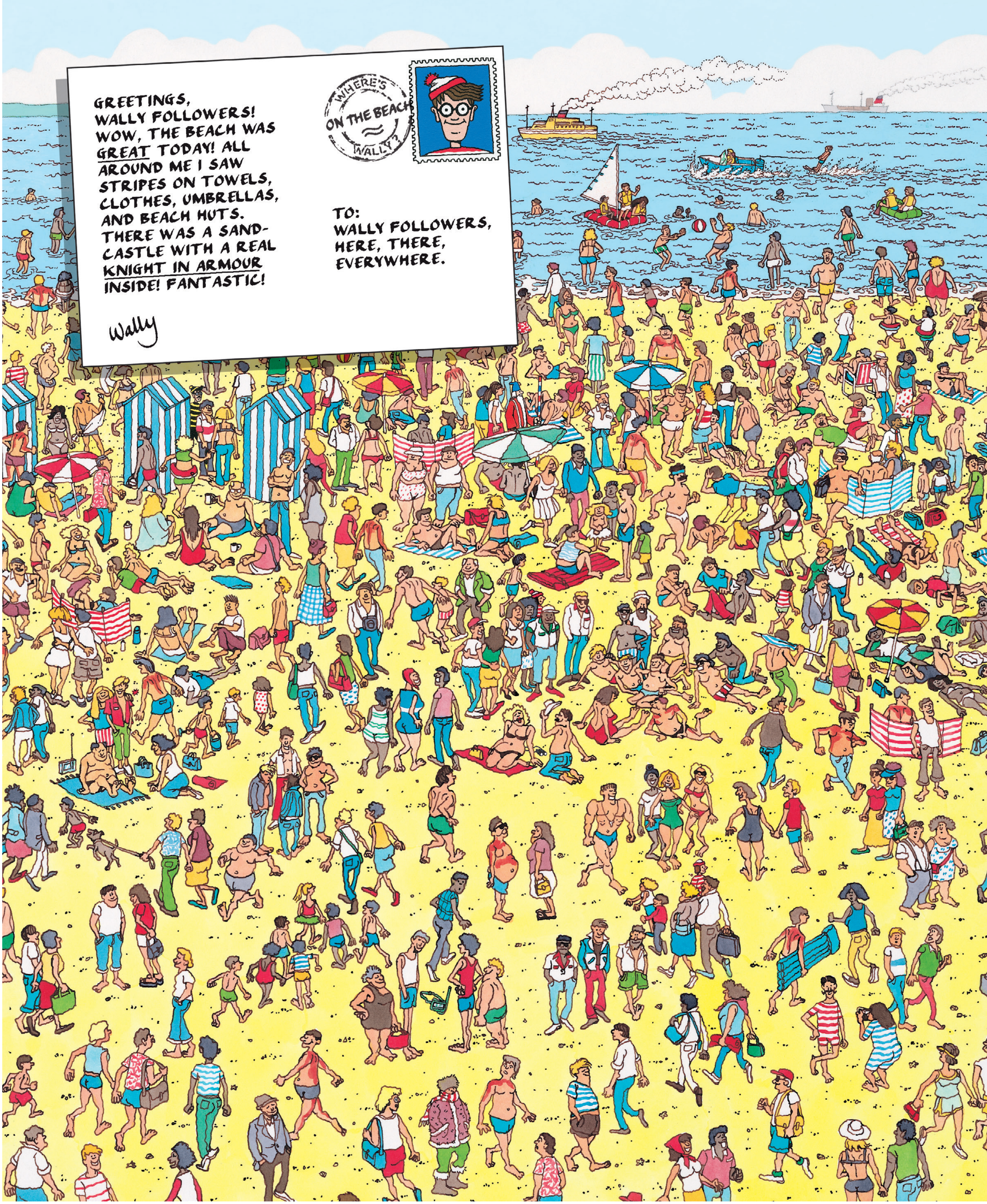


1.8

1.9



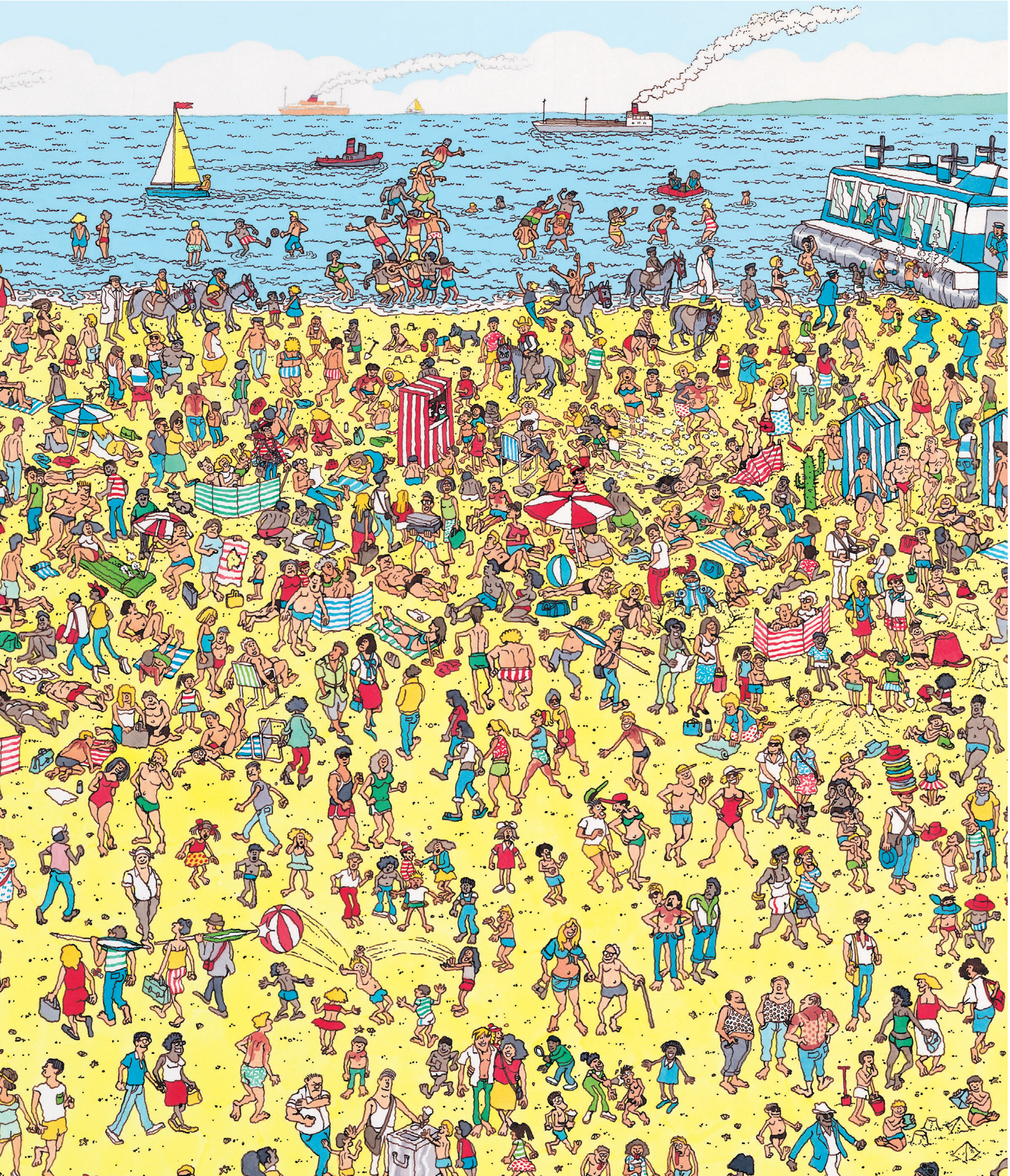


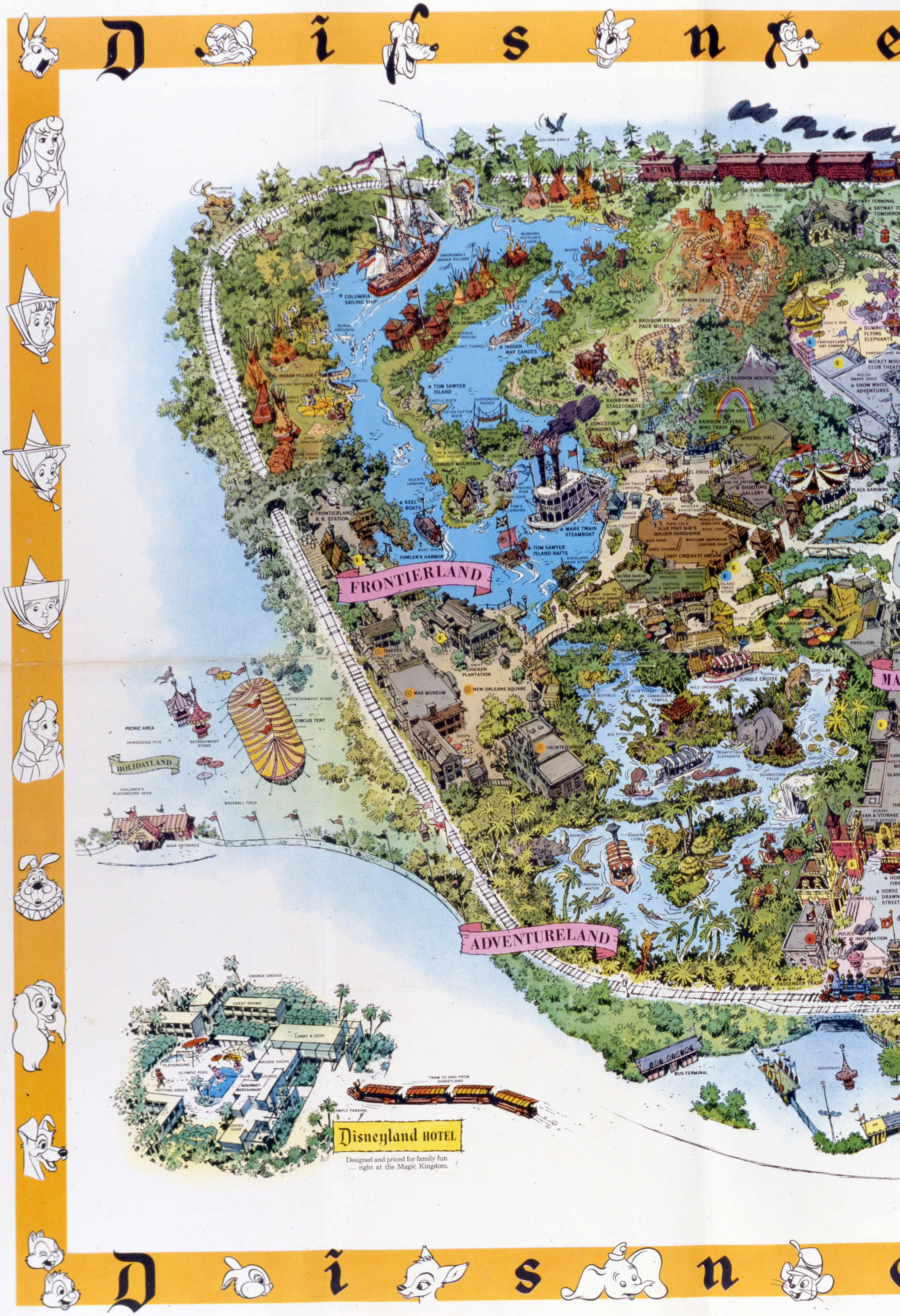


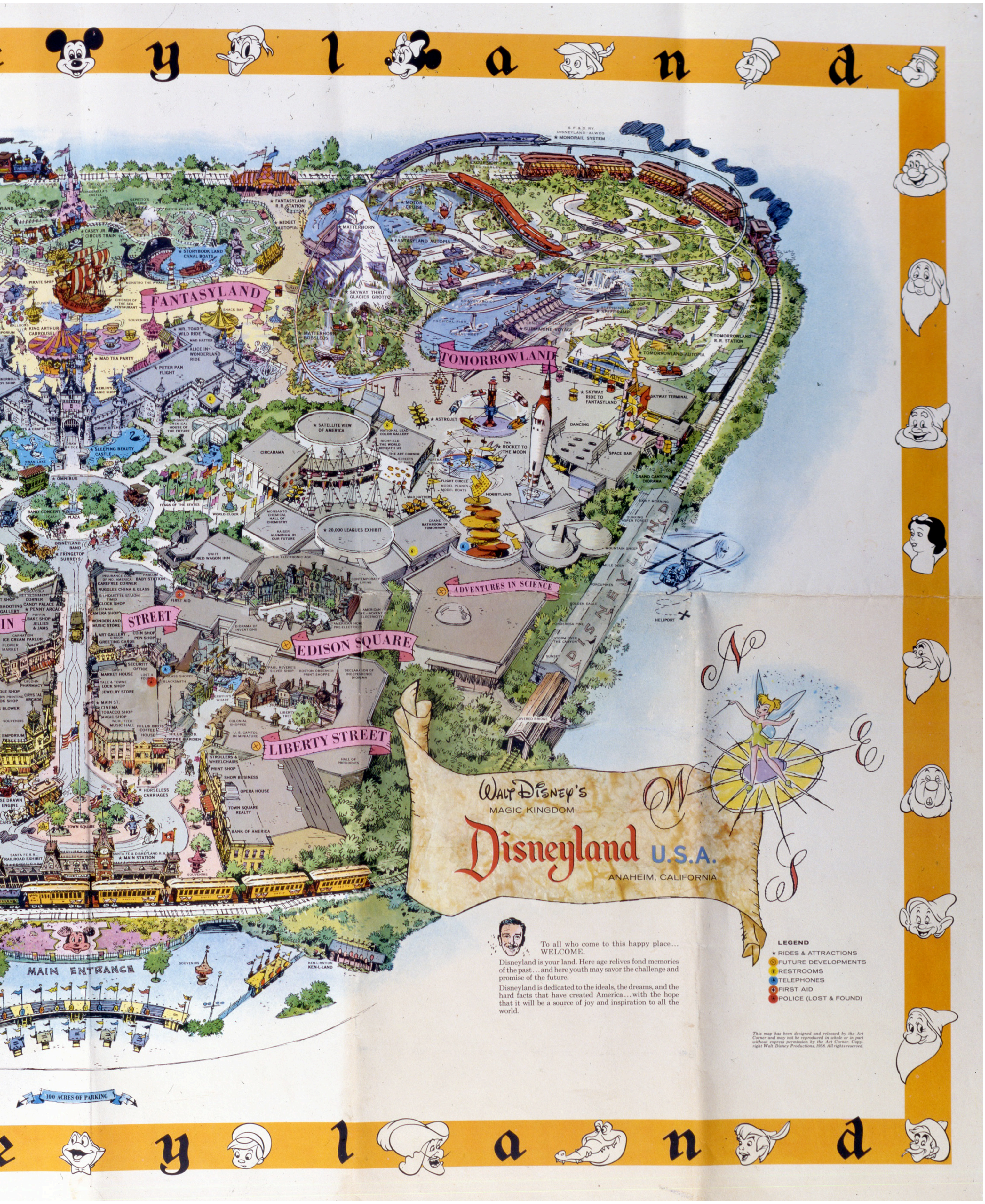
GREETINGS,
WALLY FOLLOWERS!
WOW, THE BEACH WAS
GREAT TODAY! ALL
AROUND ME I SAW
STRIPES ON TOWELS,
CLOTHES, UMBRELLAS,
AND BEACH HUTS.
THERE WAS A SAND-
CASTLE WITH A REAL
KNIGHT IN ARMOUR
INSIDE! FANTASTIC!

Wally

TO:
WALLY FOLLOWERS,
HERE, THERE,
EVERYWHERE.




Disney
Disney
GOLDEN EAGLE
MOUNTAIN LION
FRIENDLY INDIANS
BURNING SETTLER'S CABIN
MOOSE
UNFRIENDLY INDIAN VILLAGE
★ COLUMBIA SAILING SHIP
BEARS
DEER
FORT WILDERNESS
BURIAL GROUNDS
STOCKADE GUARDHOUSE
SECRET TUNNEL
★ INDIAN WAR CANOES
INDIAN VILLAGE
DANCING NATIVES
WAR CANOES
DANCE CIRCLE
★ TOM SAWYER ISLAND
CASTLE ROCK
SUSPENSION BRIDGE
CAVES
TEETER-TOTTER ROCK
SMUGGLER'S COVE
SAND PAINTING
LONG HOUSE (JUICE BAR)
TOM & HUCK'S TREE HOUSE
INJUN JOE'S CAVE
LOOKOUT MOUNTAIN
HUCK'S LANDING
FISHING PIER
CATFISH COVE
TOM'S LANDING
OLD MILL
★ KEEL BOATS
★ FRONTIERLAND R. R. STATION
BOAT DOCK
FOWLER'S HARBOR
★ MARK TWAIN STEAMBOAT
★ TOM SAWYER ISLAND RAFTS
DIXIELAND BAND STAND
FRONTIERLAND
★ FREIGHT TRAIN
C. K. HOLLIDAY
BUBBLING POTS
SKYWAY TERMINAL
NATURAL BRIDGE
BALANCING ROCKS
RAINBOW DESERT
SAGUARO CACTI
★ RAINBOW BRIDGE PACK MULES
SNACK BAR
★ DUMBO FLYING ELEPHANTS
FANTASYLAND ART CORNER
RAINBOW MOUNTAIN
WELCH GRAPE JUICE
★ SNOW WHITE ADVENTURES
ROCKY GORGE
★ RAINBOW MT. STAGECOACHES
RAINBOW CAVERNS
★ RAINBOW CAVERNS MINE TRAIN
CONESTOGA WAGONS
MINERAL HALL
GEM ROCKS
MEXICAN IMPORTS
EL ZOCOLO
MARK TWAIN LANDING
FRITOS CASA DE FRITOS
★ SHOOTING GALLERY
TRADING POST
PLAZA GARDENS
MEXICAN MUSIC
MEXICAN BANDSTAND
DANCE FLOOR
GUN FIGHT
PEPSI COLA
PENDLETON WOOLENS
SLUE FOOT SUE'S GOLDEN HORSESHOE
BONE CRAFT
GUN SHOP
WESTERN EMPORIUM LEATHER SHOP
OAKS TAVERN
DAVY CROCKETT ARCADE
SILVER BANJO BARBECUE
GUATEMALAN WEAVERS
ORIENTAL IMPORTS
TROPICAL IMPORTS
CHINESE GIFTS
SALOON & CANTINA
ISLAND TRADE STORE
AUNT JEMINA PANCAKE HOUSE
HAWAIIAN SHOP
BAZAAR
CURIO HUT
HAWAIIAN MUSIC
PAVILLION
BOAT LANDING
SUSPENSION BRIDGE
GORILLAS
★ JUNGLE CRUISE
WILD ORCHIDS
WATER BUFFALO
RAIN FOREST
CAMBODIAN TEMPLE
THIEVES' MARKET
SWIFT CHICKEN PLANTATION
WAX MUSEUM
NEW ORLEANS SQUARE
ENTERTAINMENT STAGE
CIRCUS TENT
PICNIC AREA
HORSESHOE PITS
REFRESHMENT STAND
HOLIDAYLAND
CHILDREN'S PLAYGROUND AREA
BASEBALL FIELD
MAIN ENTRANCE
SHOPS
HAUNTED HOUSE
BIG PYTHON
TRUMPETING ELEPHANTS
RAPIDS
SCHWEITZER FALLS
HIPPO POOL
BEKINS VAN & STORAGE LOCKER SERVICE
HEAD HUNTERS
RHINOS
ROARING LIONS
FIRE STATION
CROCODILE WATER
TOWN HALL
POLICE
INFORMATION
SOUVENIRS
ADVENTURELAND
★ PASSENGER TRAIN
E. P. RIPLEY
ORANGE GROVES
GUEST ROOMS
LOBBY & DESK
PLAYGROUND
ARCADE SHOPS
OLYMPIC POOL
CORAL CLUB
LOUNGE
GOURMET RESTAURANT
PUTTING GREEN
COFFEE SHOP
AMPLE PARKING
TRAM TO AND FROM DISNEYLAND
BUS TERMINAL
SOUVENIRS
Disneyland HOTEL
Designed and priced for family fun
... right at the Magic Kingdom.


FANTASYLAND
TOMORROWLAND
STREET
EDISON SQUARE
LIBERTY STREET
ADVENTURES IN SCIENCE
MAIN ENTRANCE
100 ACRES OF PARKING
MATTERHORN
MATTERHORN BOBSLEDS
SKYWAY THRU GLACIER GROTTO
MOTOR BOAT CRUISE
FANTASYLAND AUTOPIA
SUBMARINE VOYAGE
TOMORROWLAND AUTOPIA
TOMORROWLAND R.R. STATION
MONORAIL SYSTEM
EXCURSION TRAIN
SKYWAY RIDE TO FANTASYLAND
SKYWAY TERMINAL
ASTROJET
TWA ROCKET TO THE MOON
SATELLITE VIEW OF AMERICA
CIRCARAMA
20,000 LEAGUES EXHIBIT
HOBBYLAND
DANCING
SPACE BAR
GRAND CANYON DIORAMA
STORYBOOK LAND CANAL BOATS
CASEY JR. CIRCUS TRAIN
PIRATE SHIP
MONSTRO THE WHALE
CHICKEN OF THE SEA RESTAURANT
KING ARTHUR CARROUSEL
MR. TOAD'S WILD RIDE
ALICE IN WONDERLAND RIDE
MAD TEA PARTY
PETER PAN FLIGHT
MIDGET AUTOPIA
FANTASYLAND R.R. STATION
SLEEPING BEAUTY CASTLE
OMNIBUS
PLAZA
BAND CONCERT
RED WAGON INN
FIRST AID
PENNY ARCADE
MAIN ST. CINEMA
HORSELESS CARRIAGES
TOWN SQUARE
OPERA HOUSE
BANK OF AMERICA
TOWN SQUARE REALTY
MAIN STATION
SANTA FE R.R. RAILROAD EXHIBIT
KEN-L-LAND
HELIPORT
COVERED BRIDGE
DISNEYLAND
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WALT DISNEY'S
MAGIC KINGDOM
Disneyland U.S.A.
ANAHEIM, CALIFORNIA
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To all who come to this happy place... WELCOME.

Disneyland is your land. Here age relives fond memories of the past... and here youth may savor the challenge and promise of the future.

Disneyland is dedicated to the ideals, the dreams, and the hard facts that have created America... with the hope that it will be a source of joy and inspiration to all the world.

LEGEND

- ★ RIDES & ATTRACTIONS
- ⊗ FUTURE DEVELOPMENTS
- ● RESTROOMS
- ● TELEPHONES
- ⊕ FIRST AID
- ● POLICE (LOST & FOUND)

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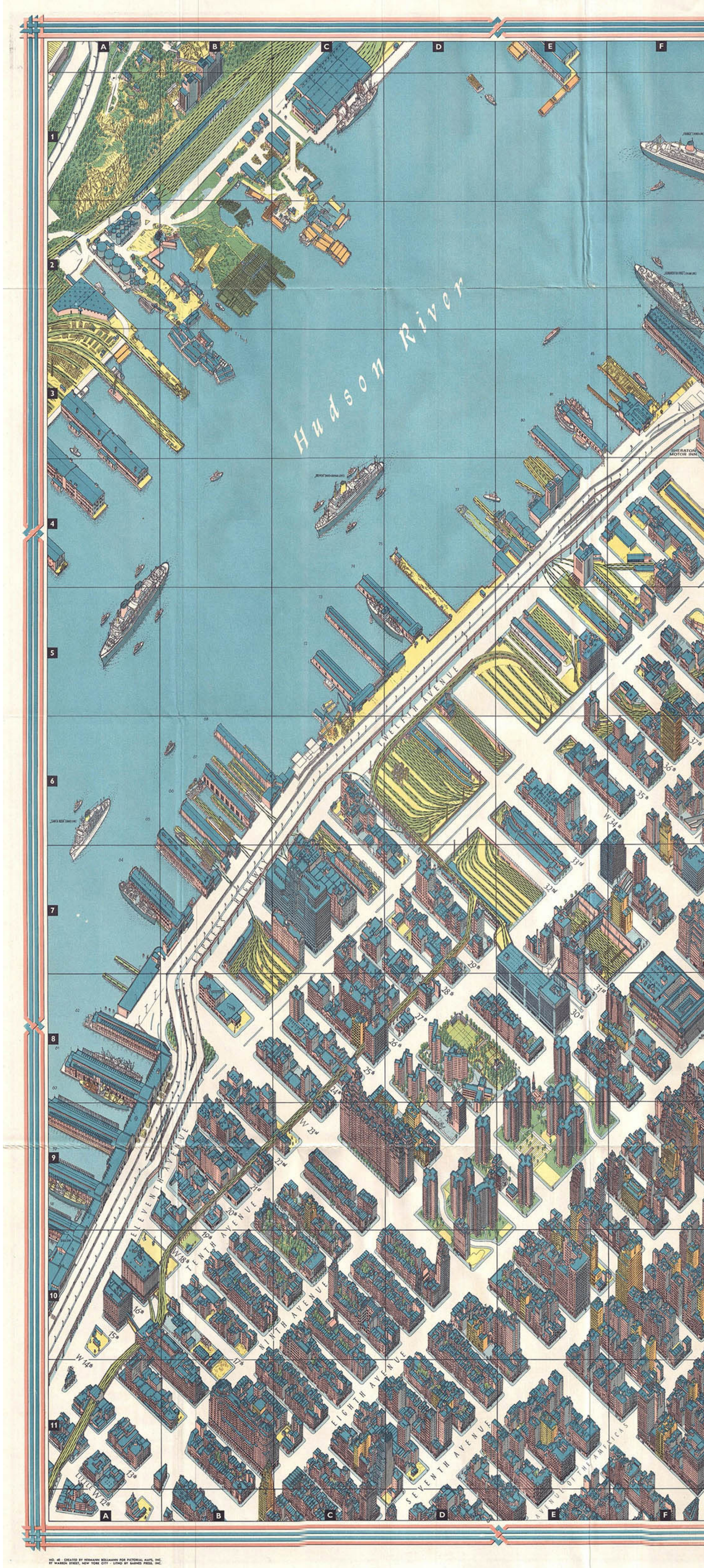
3.12



A
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Hudson River
SHERATON MOTOR INN
TWELFTH AVENUE
ELEVENTH AVENUE
TENTH AVENUE
NINTH AVENUE
EIGHTH AVENUE
SEVENTH AVENUE
AVENUE OF THE AMERICAS
W 34th
W 23rd
W 14th
W 12th

NO. 40 - CREATED BY HERMANN BOLLMANN FOR PICTORIAL MAPS, INC.
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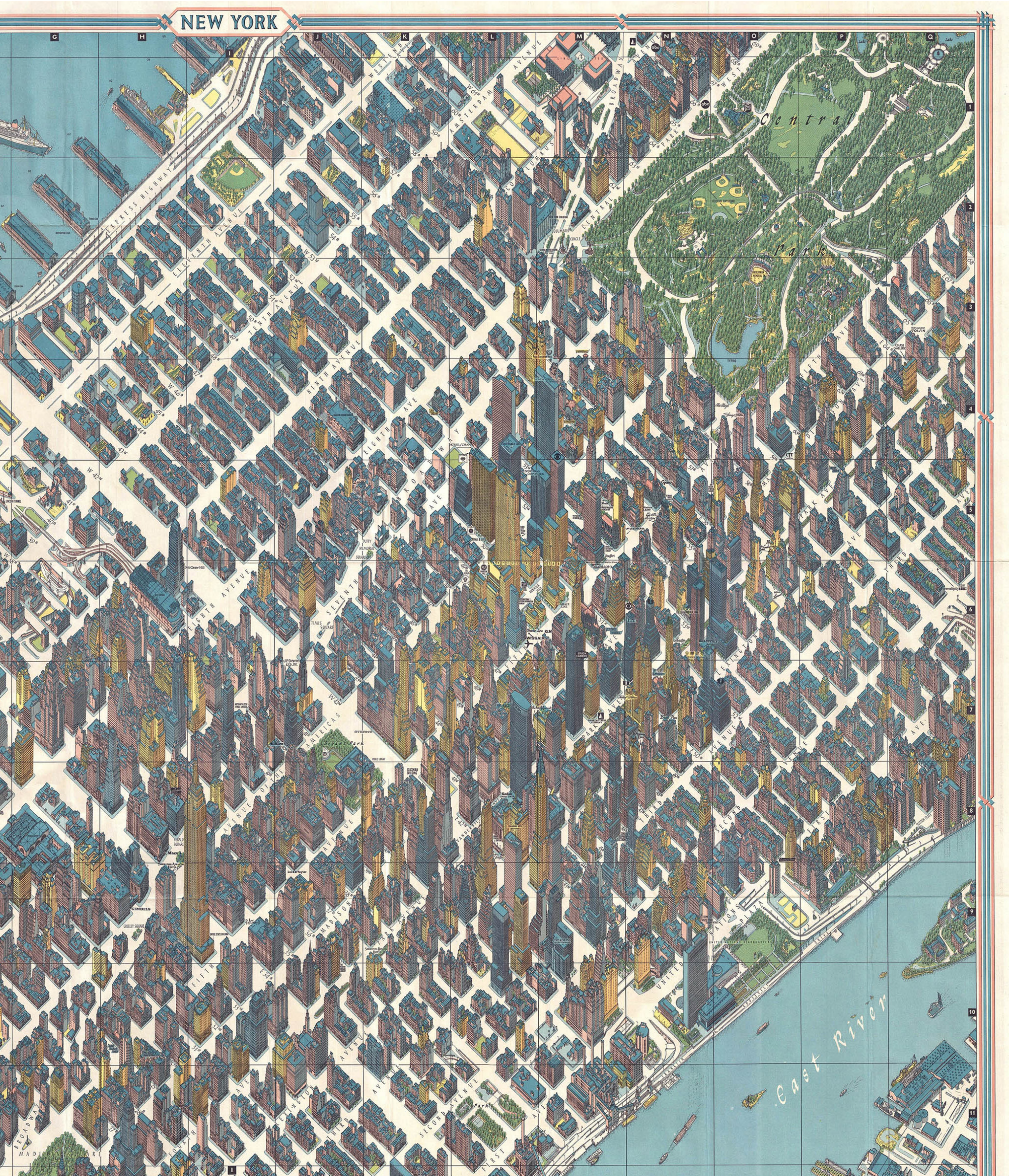
NEW YORK
Central Park
East River
Express Highway
Eleventh Avenue
Tenth Avenue
Ninth Avenue
Eighth Avenue
Seventh Avenue
Broadway
Amsterdam
Columbus Circle
Central Park West
Times Square
Avenue of the Americas
Bryant Park
Fifth Avenue
Madison Avenue
Park Ave
Lexington Ave
Third Ave
Second Avenue
First Ave
United Nations Plaza
Herald Square
Greeley Square
Macy's
Gimbels
Lord & Taylor
McGraw Hill
The Pond
Lincoln Tunnel
SCALE: THE DISTANCE BETWEEN THE QUADRANT LINES IS 1,000 FT IN EITHER DIRECTION
NEW YORK PICTURE MAP COPYRIGHT PICTORIAL MAPS, INC.
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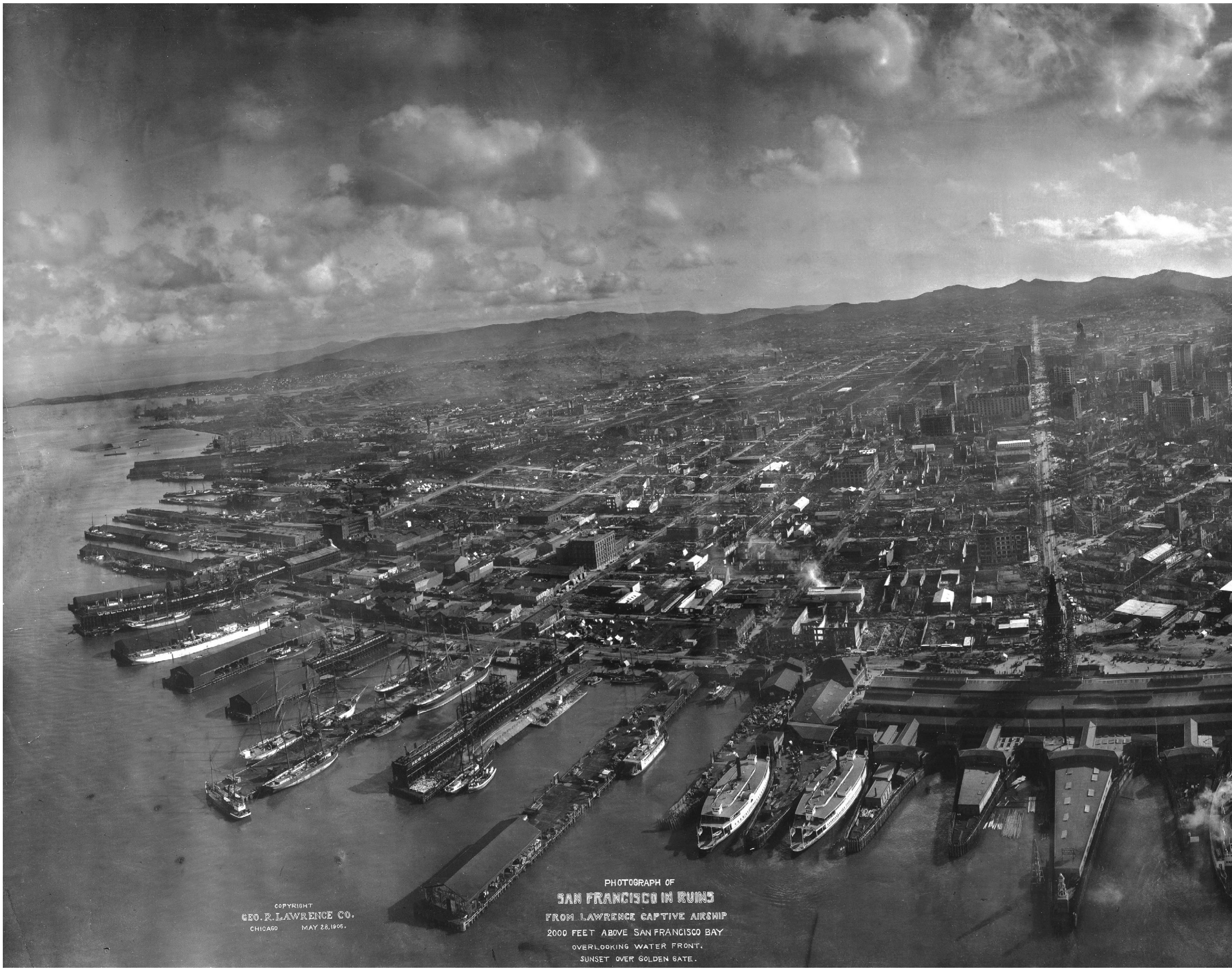
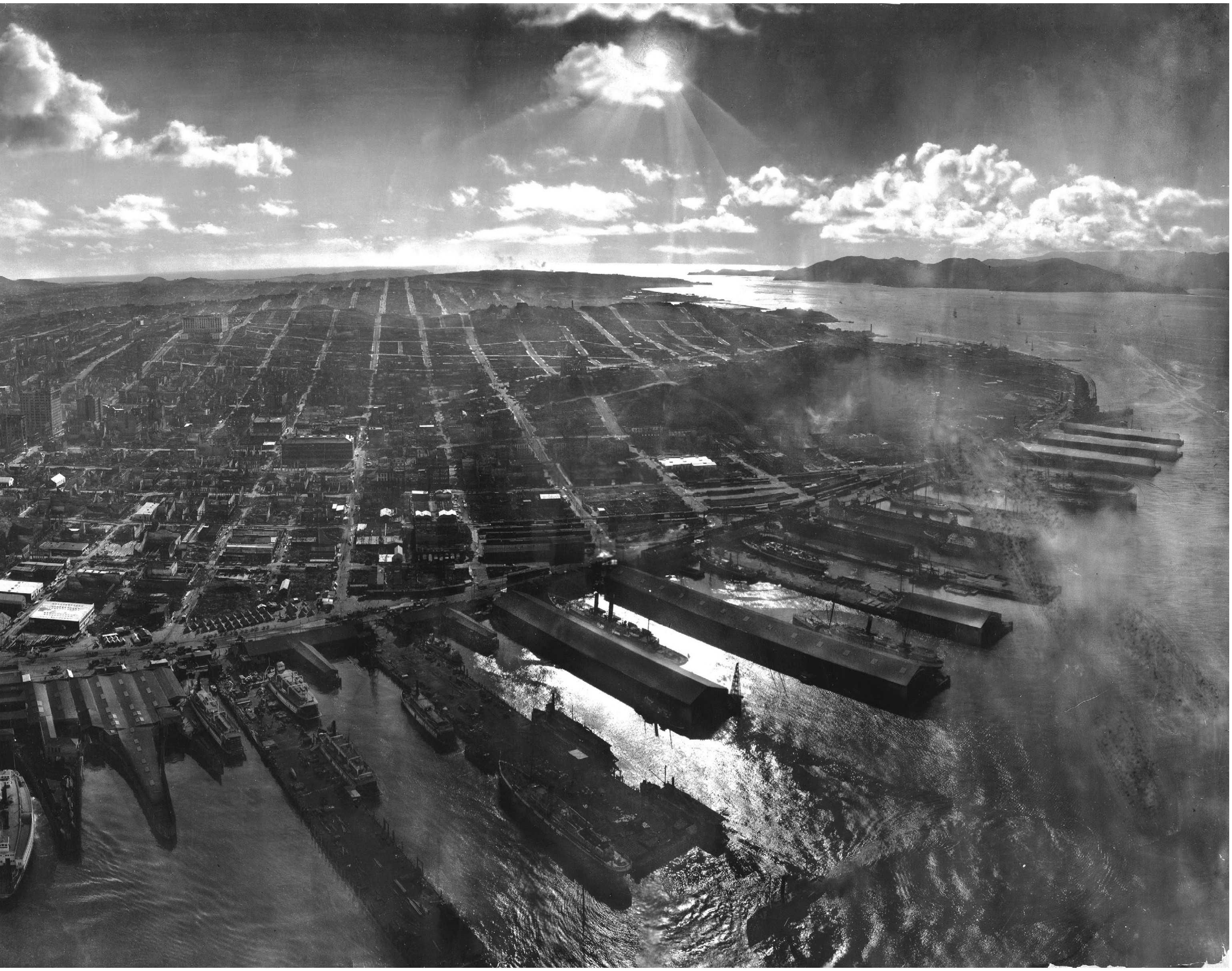


PHOTOGRAPH OF
SAN FRANCISCO IN RUINS
FROM LAWRENCE CAPTIVE AIRSHIP
2000 FEET ABOVE SAN FRANCISCO BAY
OVERLOOKING WATER FRONT.
SUNSET OVER GOLDEN GATE.

COPYRIGHT
GEO. R. LAWRENCE CO.
CHICAGO MAY 28, 1906.



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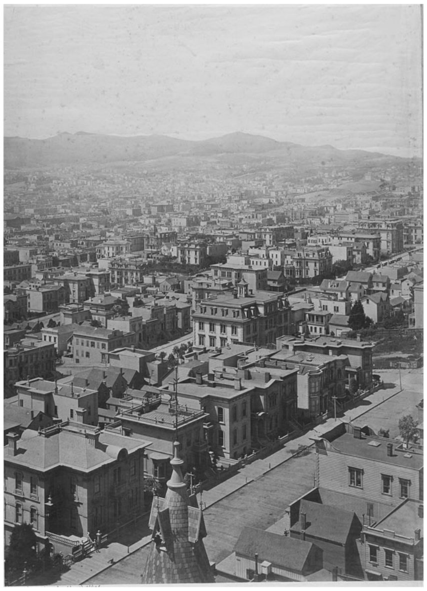
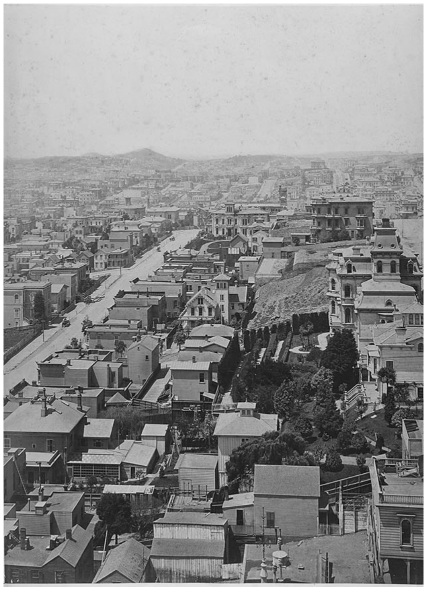
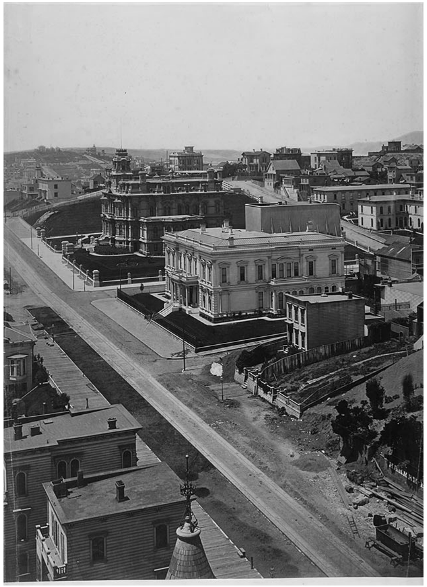

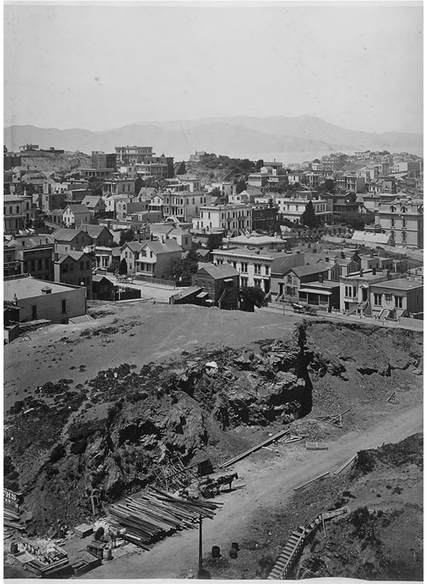

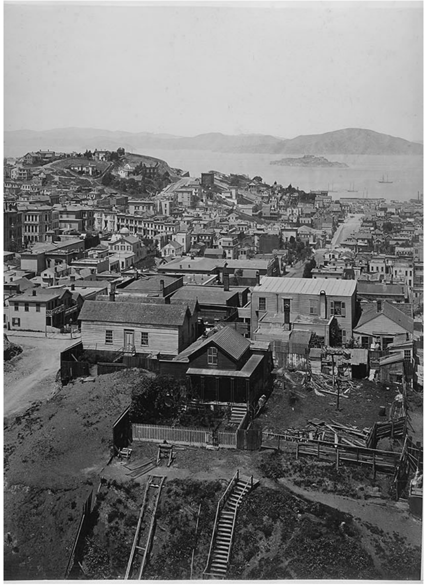

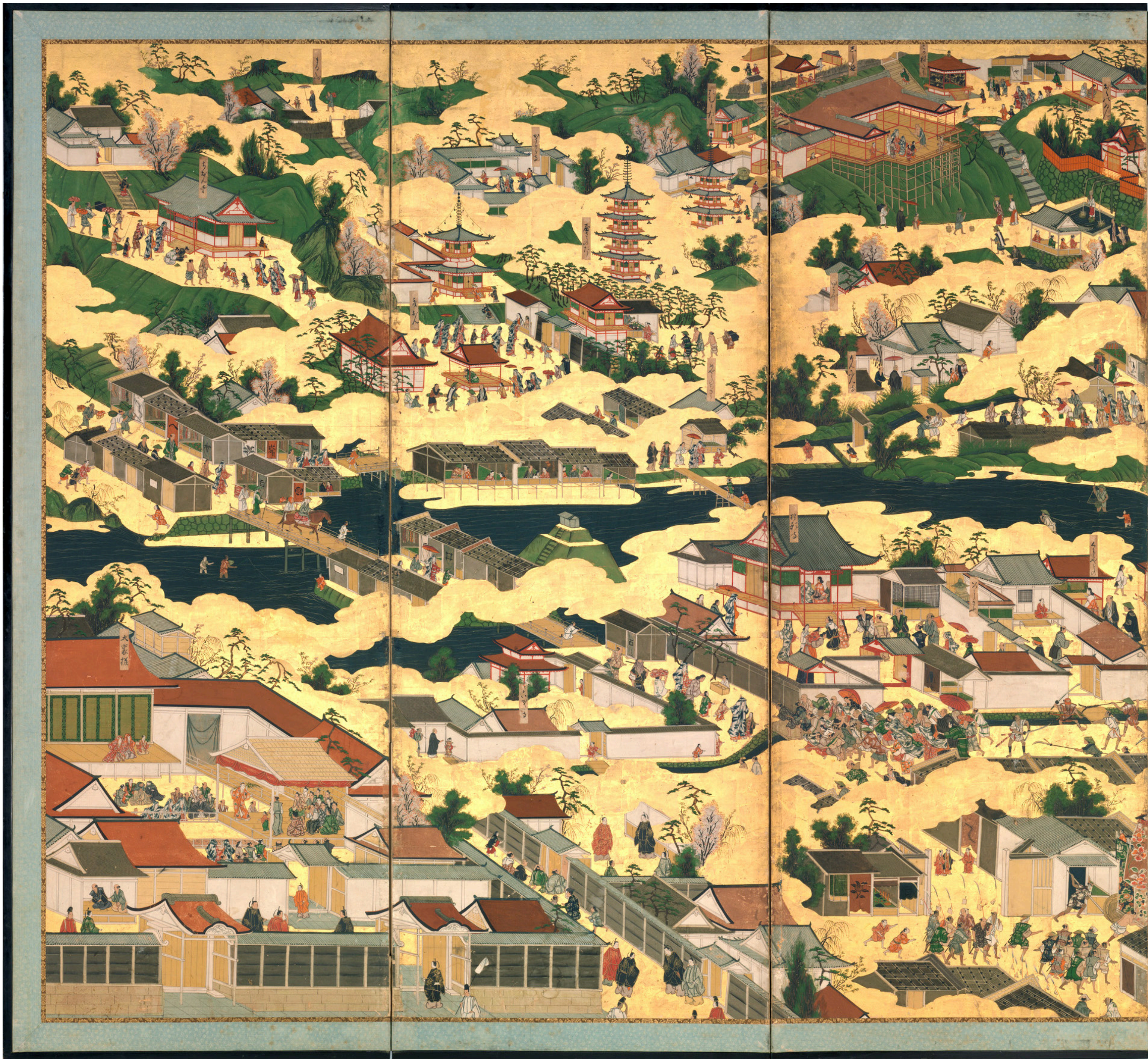

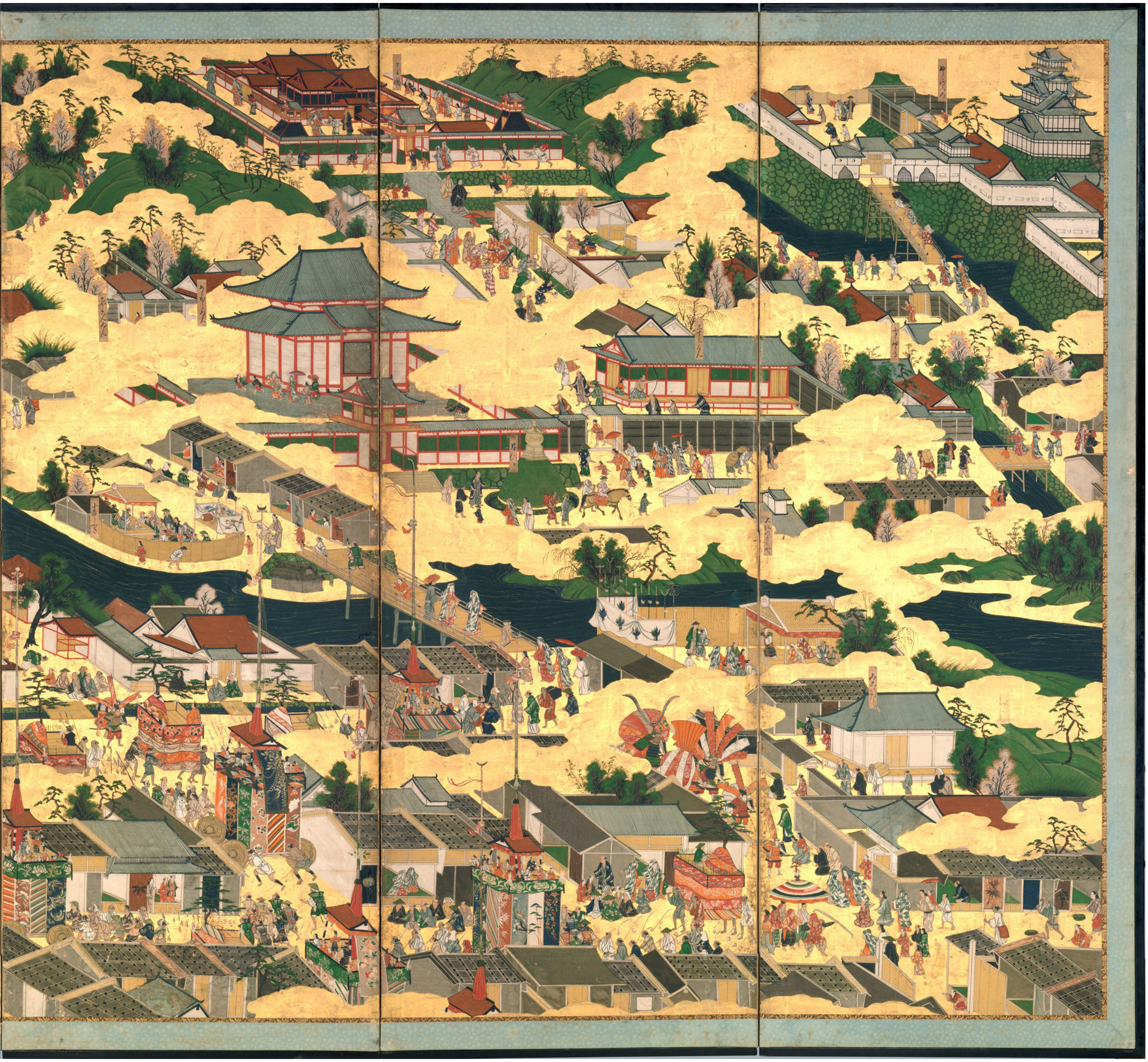

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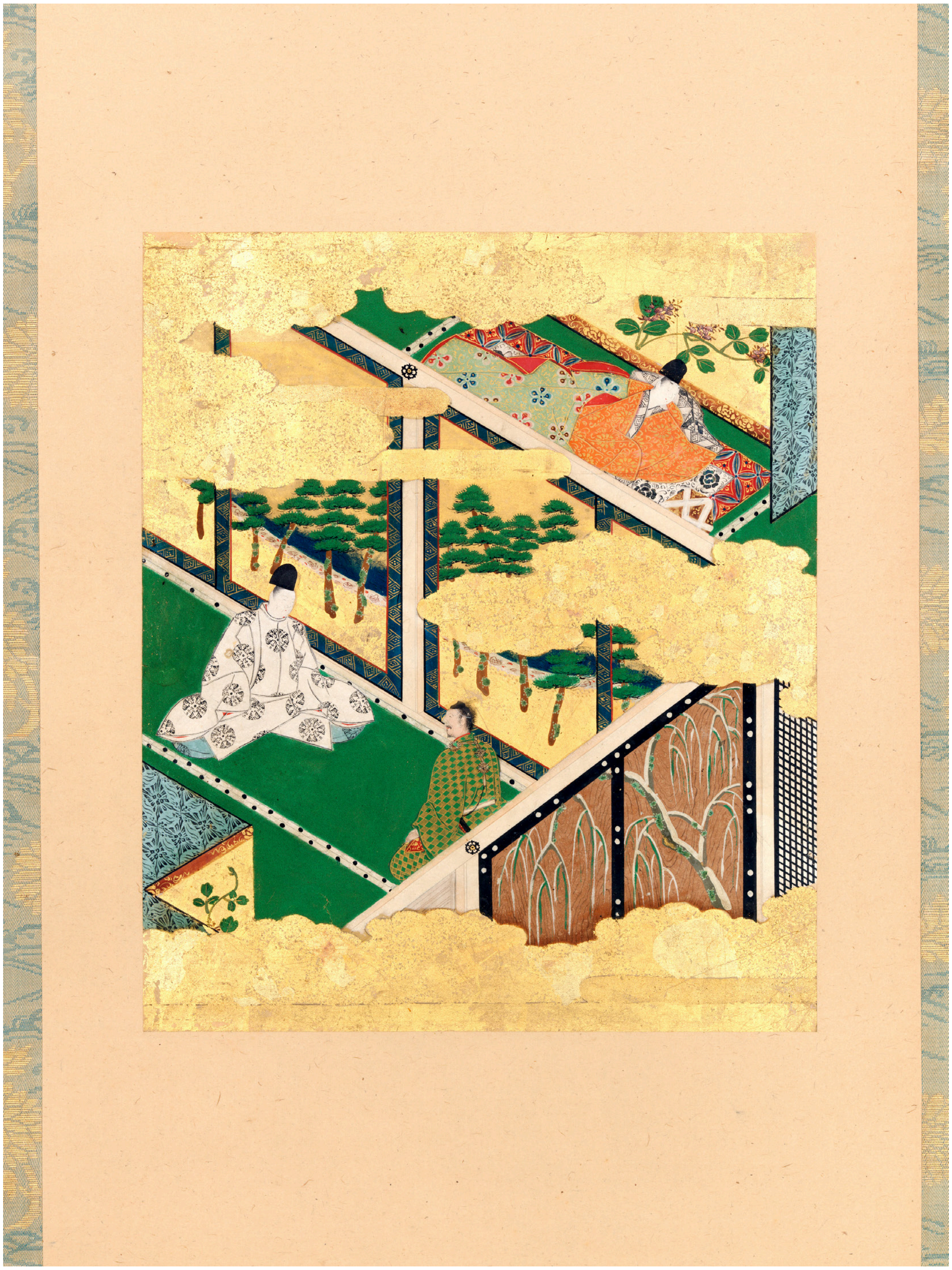

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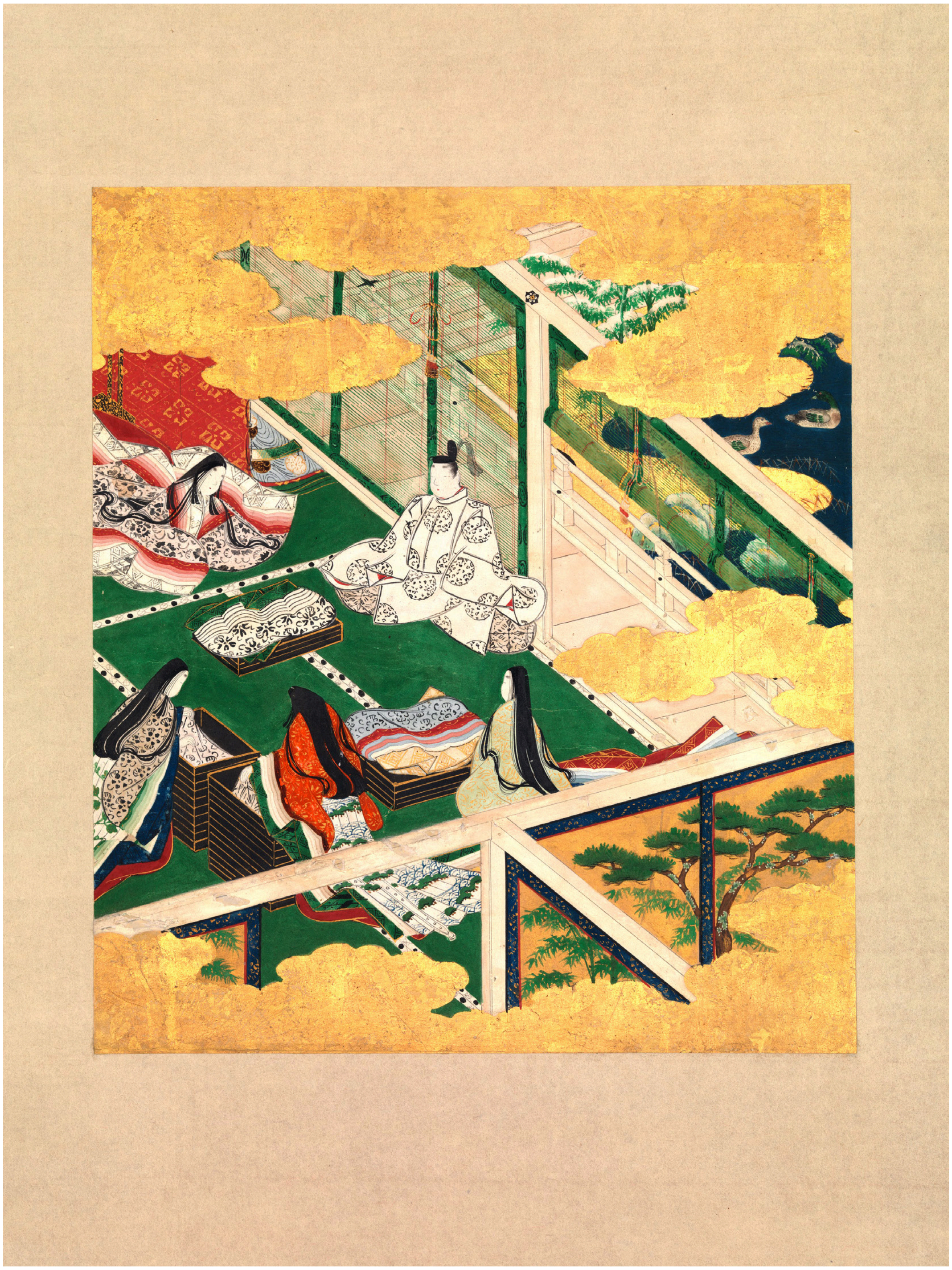

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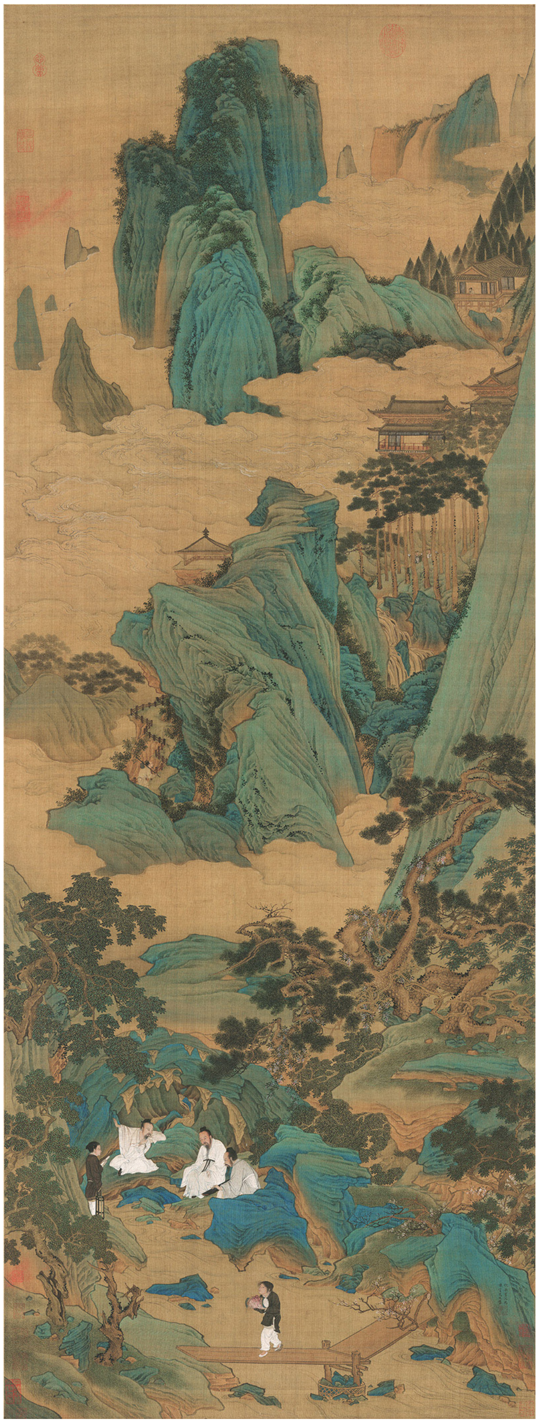
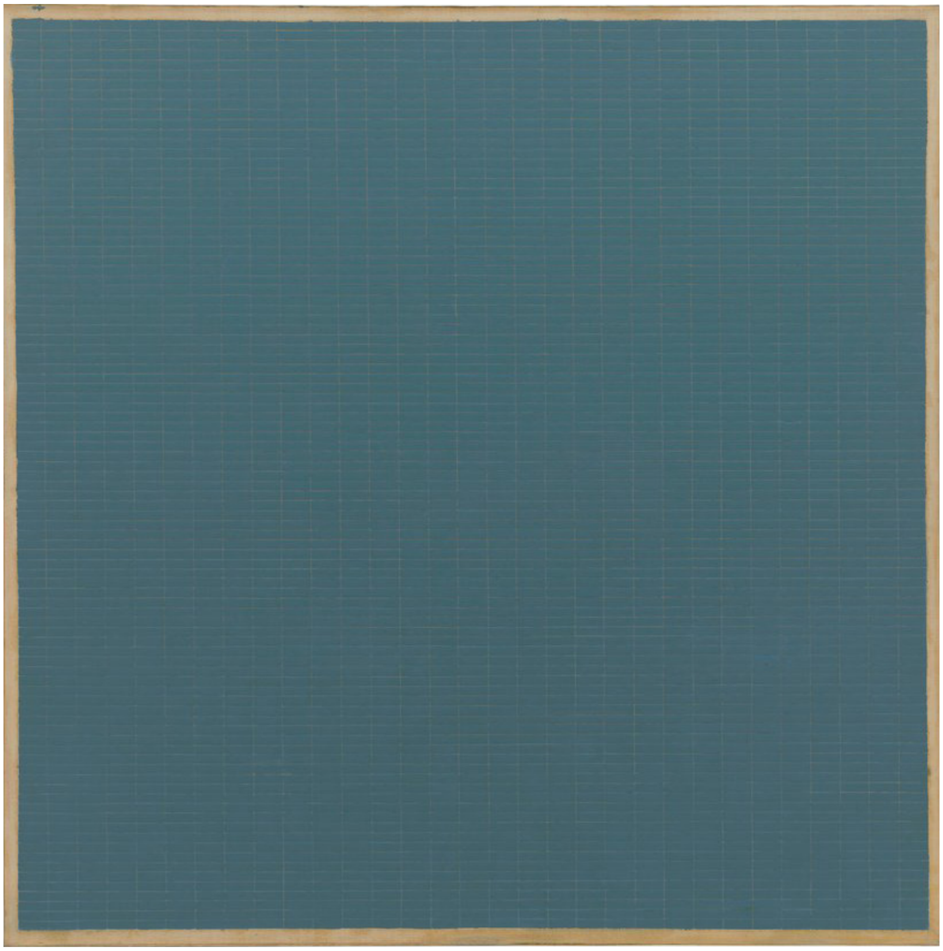


4.1

1.1



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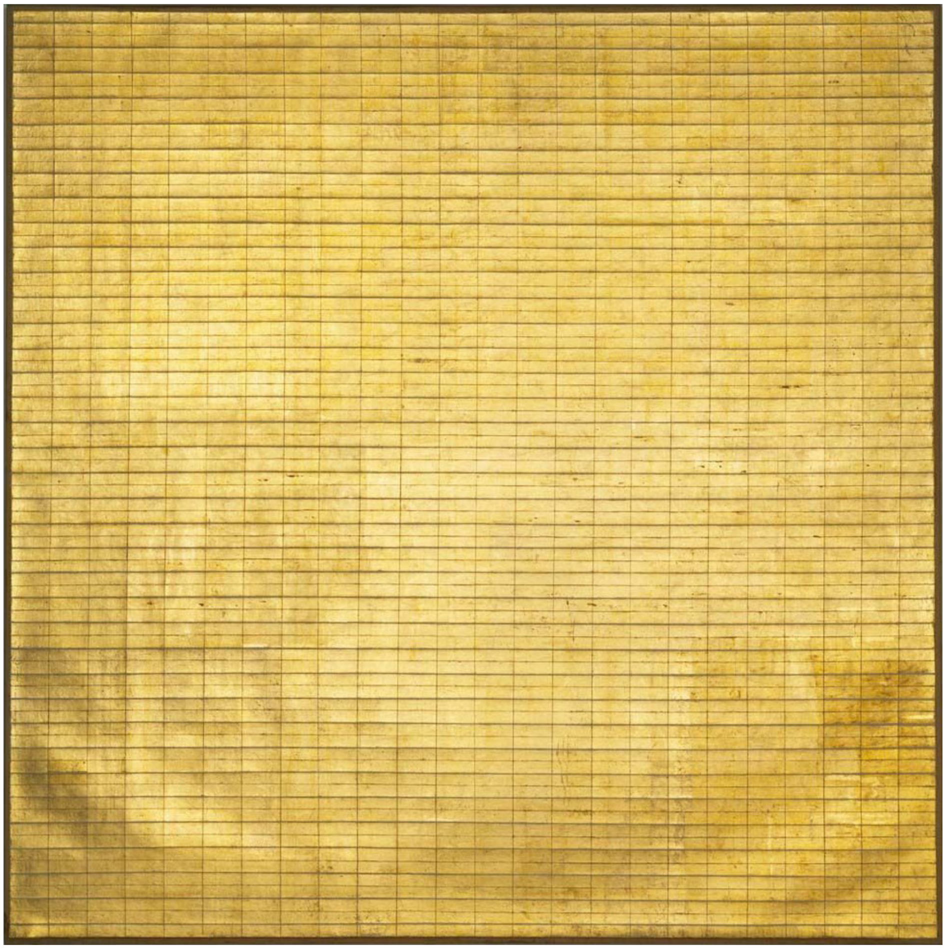

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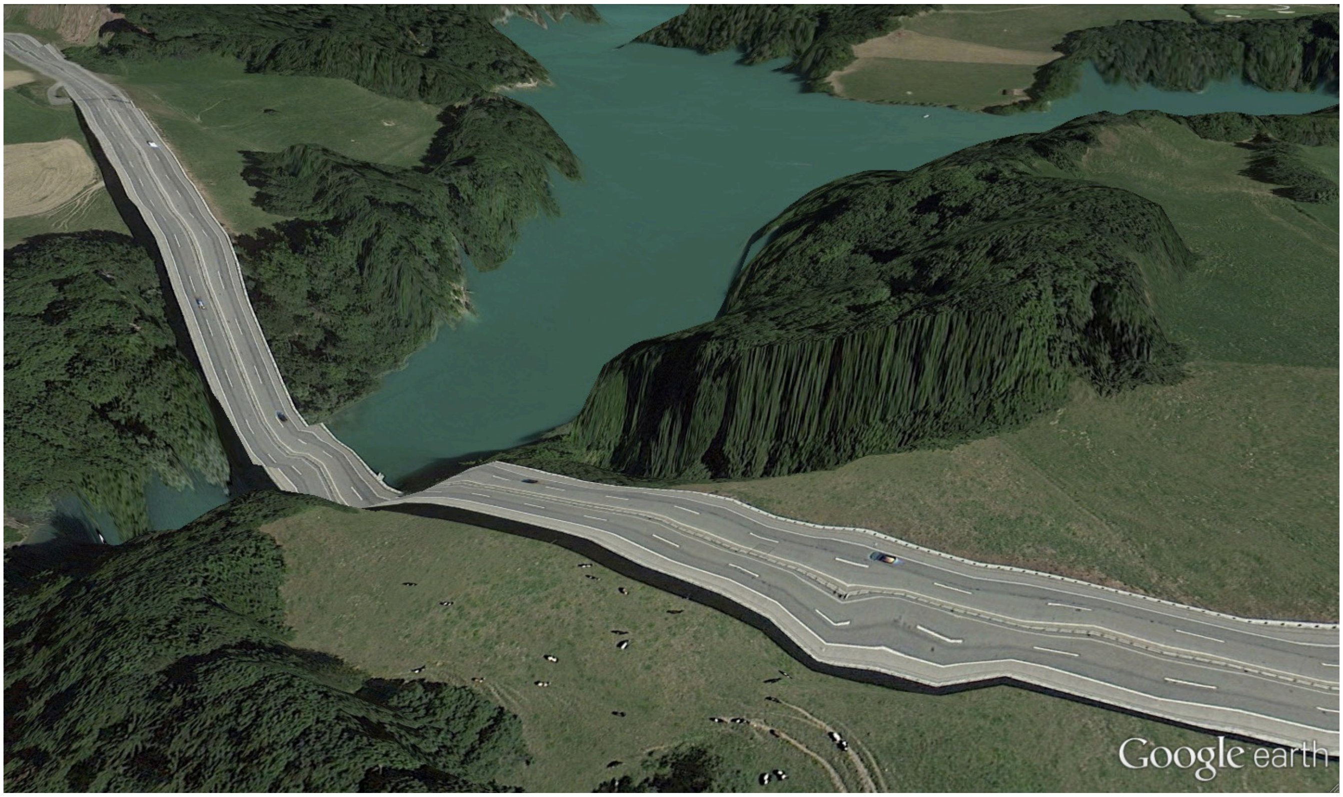
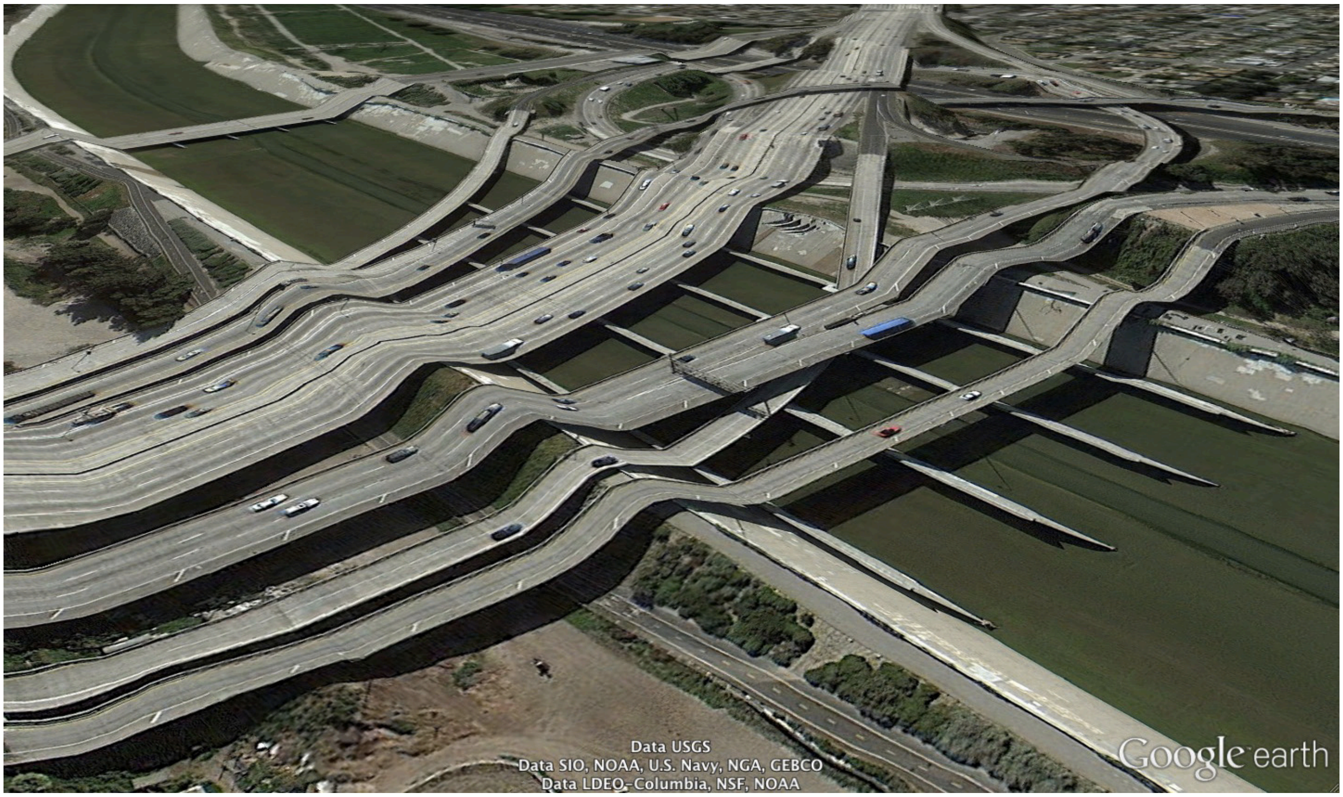
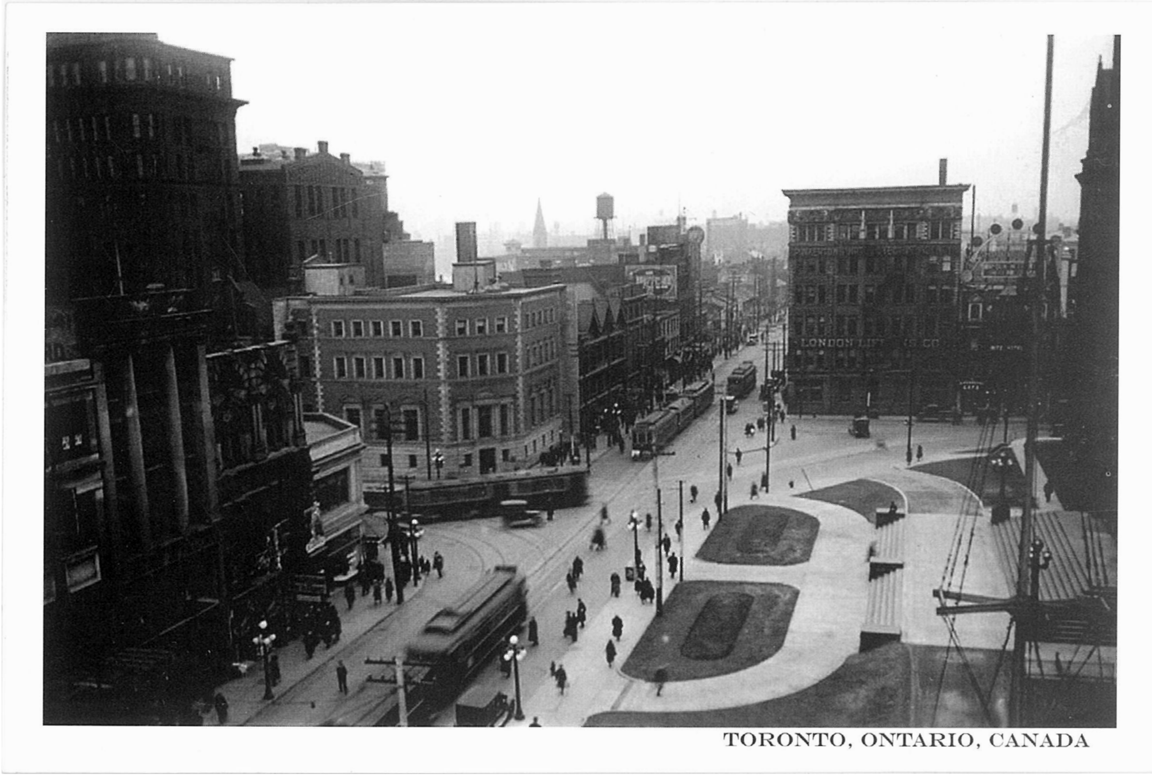

Google earth

3.7

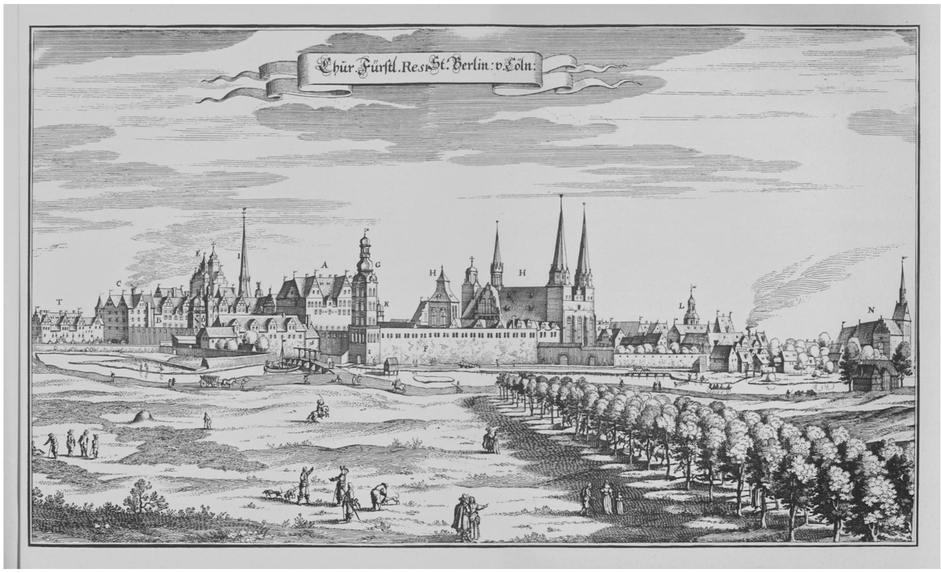

Data USGS
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Data LDEO-Columbia, NSF, NOAA
Google earth

3.8

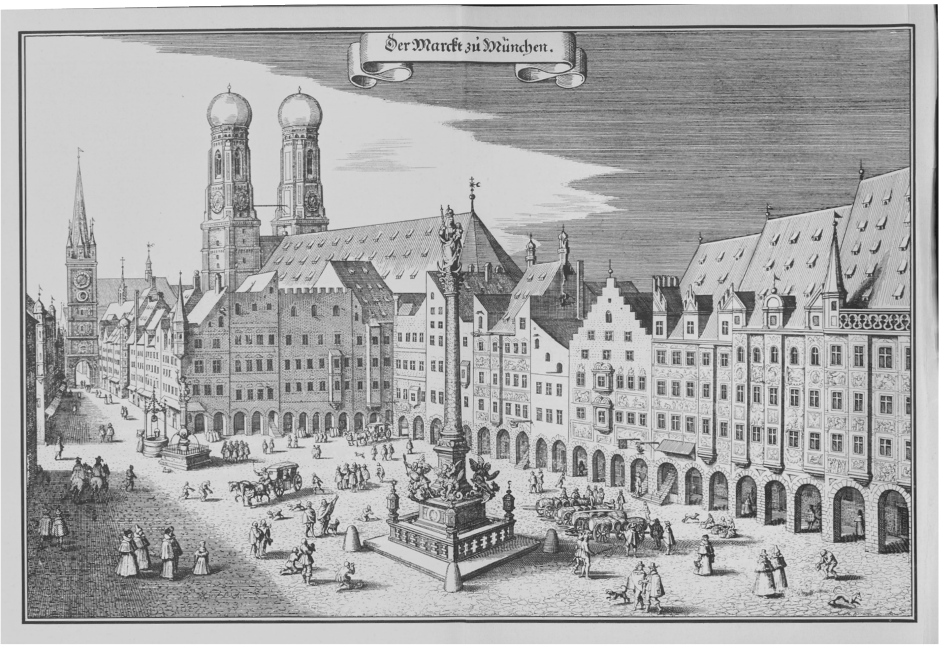

TORONTO, ONTARIO, CANADA

3.9

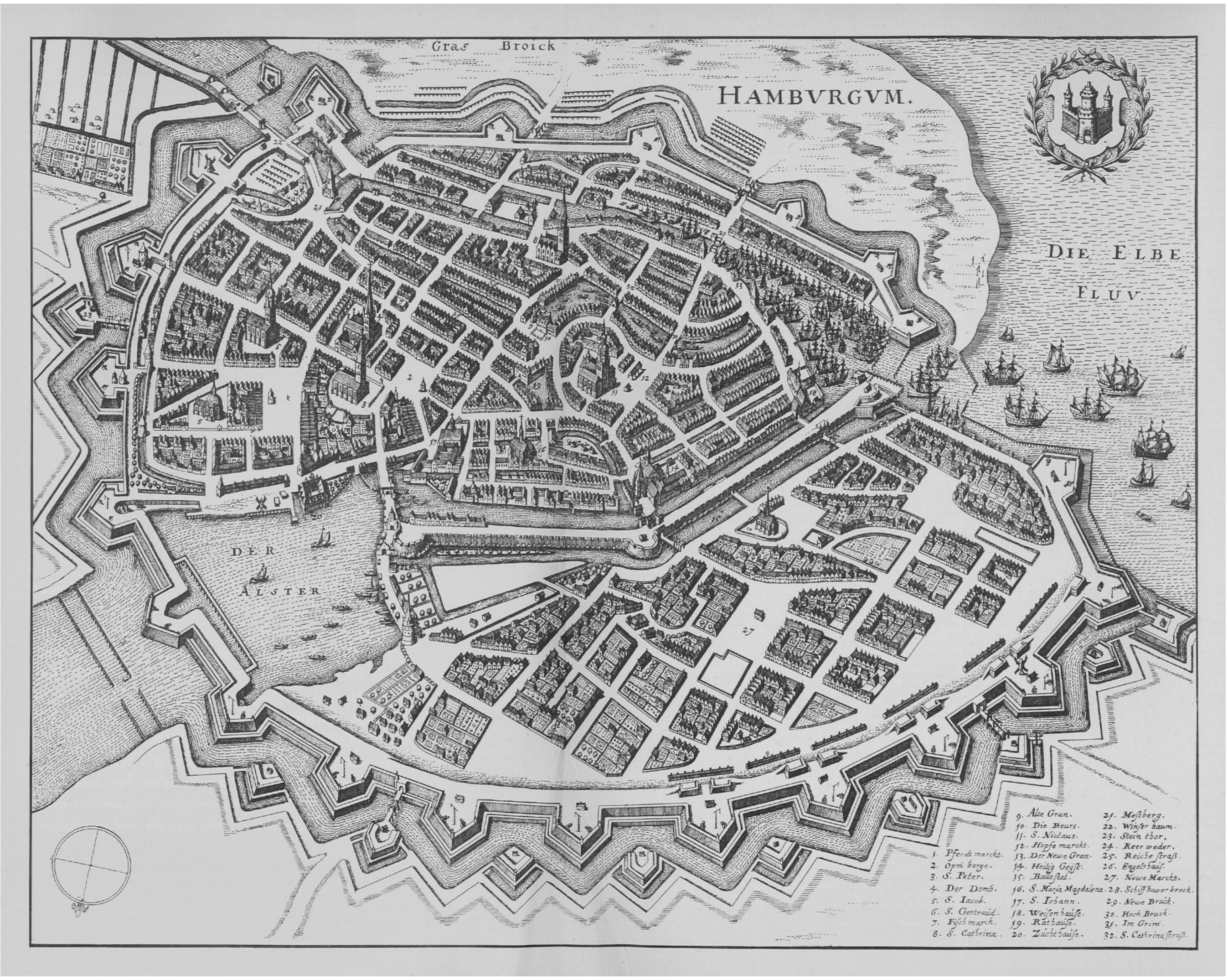
3.10


Chur. Fürſtl. Resi St: Berlin: v. Cöln:

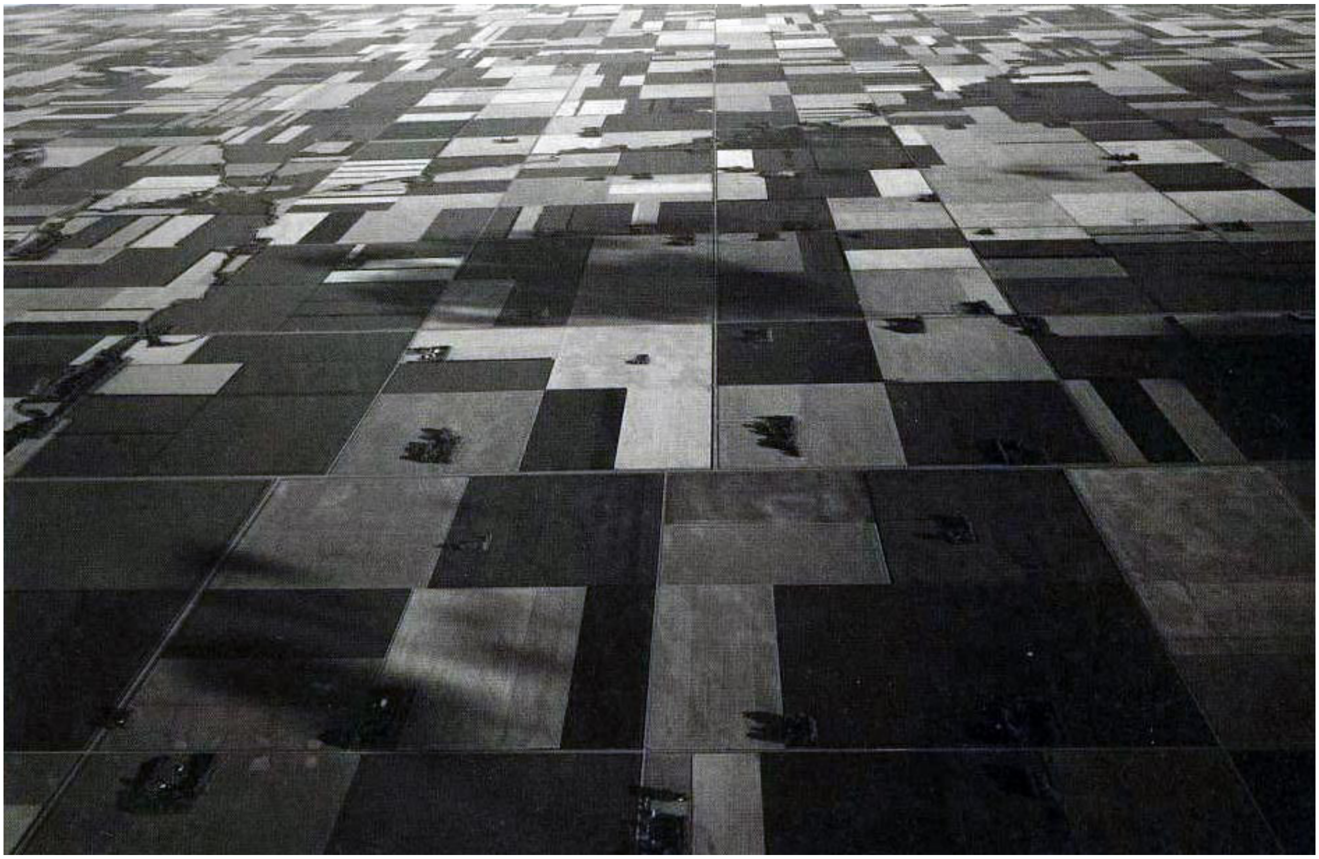
1.3


Der Marckt zu München.

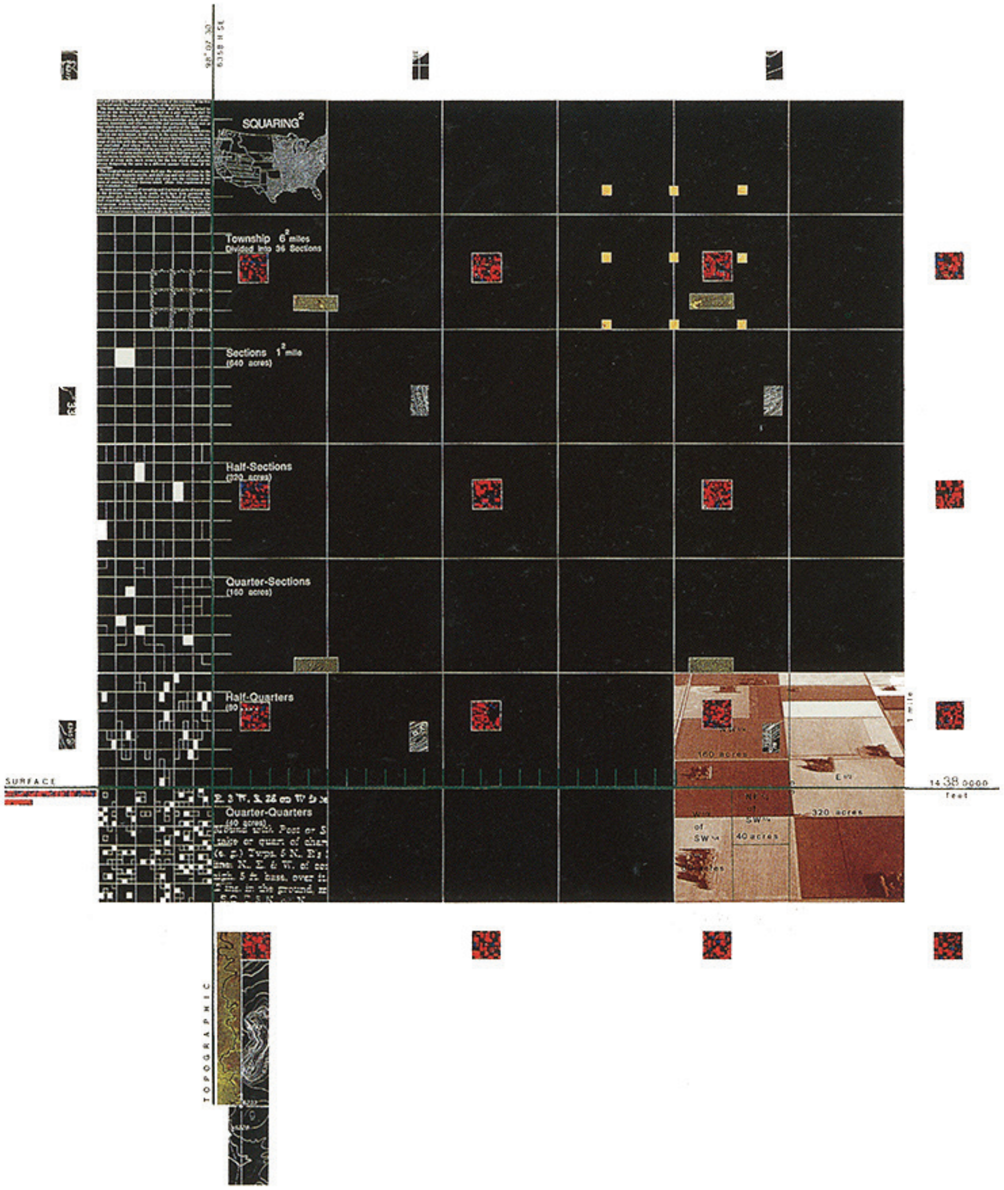
1.5


Gras Broick
HAMBVRGVM.
DIE ELBE FLUV.
DER ALSTER
1. Pferdt marckt.
2. Opm berge.
3. S. Peter.
4. Der Domb.
5. S. Iacob.
6. S. Gertraud.
7. Fiſchmarck.
8. S. Cathrina.
9. Alte Gran.
10. Die Beurs.
11. S. Niclaus.
12. Hopfe marckt.
13. Der Newe Gran.
14. Heilig Geÿſt.
15. Bulleſtal.
16. S. Maria Magdalena.
17. S. Iohann.
18. Weiſenhauſe.
19. Rathauſe.
20. Zuchthauſe.
21. Meſtberg.
22. Winſer baum.
23. Stein thor.
24. Keer weder.
25. Reiche ſtraß.
26. Engelshauſ.
27. Newe Marckt.
28. Schiff bawer broek.
29. Newe Brück.
30. Hoch Bruck.
31. Im Grim.
32. S. Cathrinaſtraß.

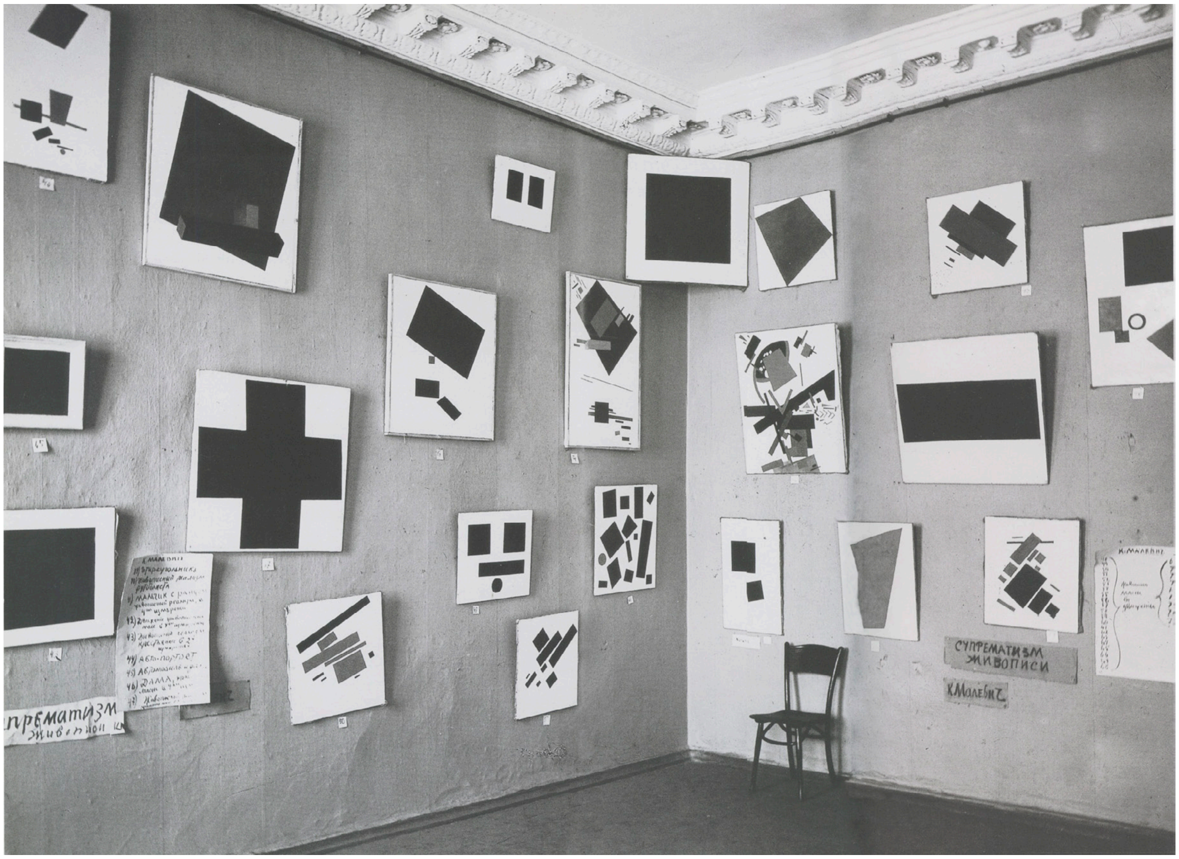
1.4



0.1

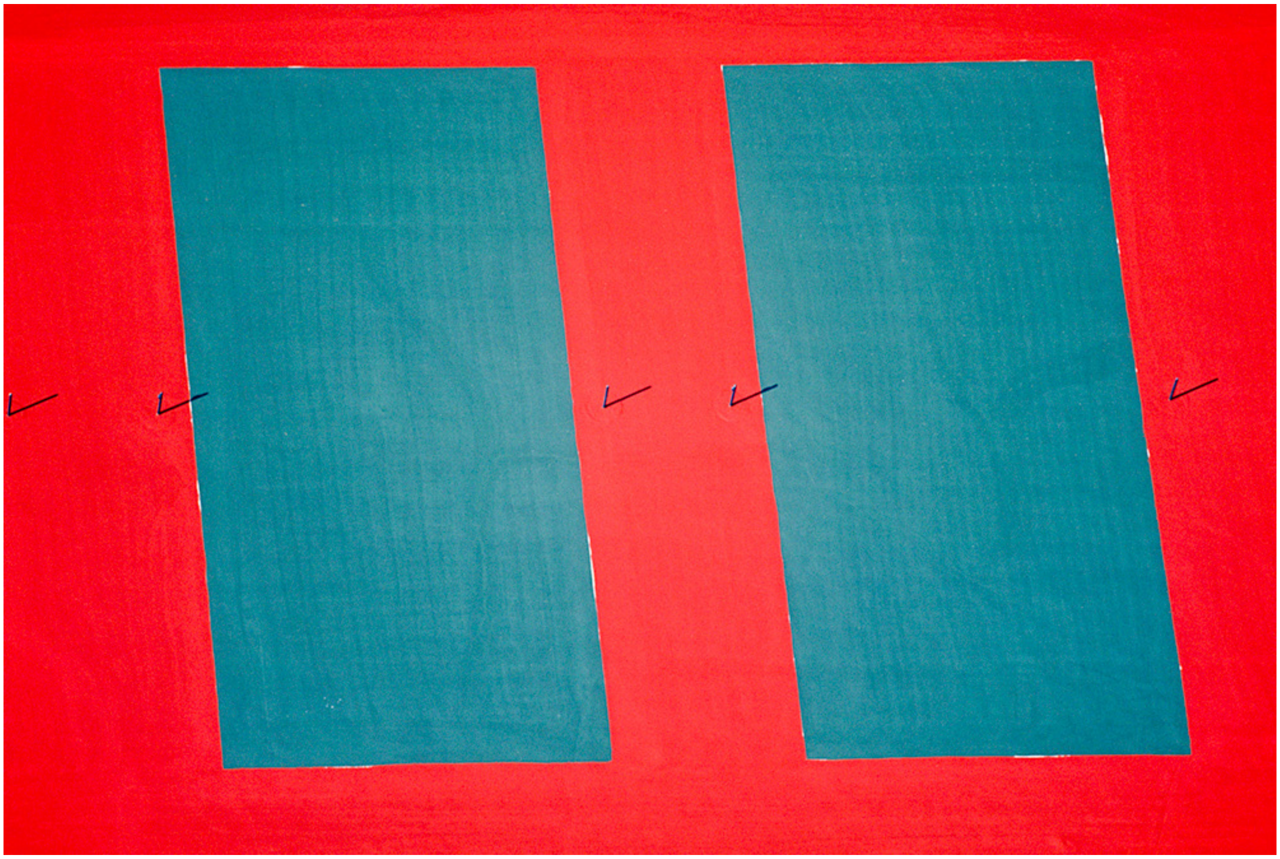

98° 20' 30"
SQUARING²
Township 6² miles
Divided into 36 Sections
Sections 1² mile
(640 acres)
Half-Sections
(320 acres)
Quarter-Sections
(160 acres)
Half-Quarters
Quarter-Quarters
(40 acres)
160 acres
320 acres
40 acres
1 mile
SURFACE
14 38.0000
feet
TOPOGRAPHIC

0.2


СУПРЕМАТИЗМ
ЖИВОПИСИ
К.Малевич

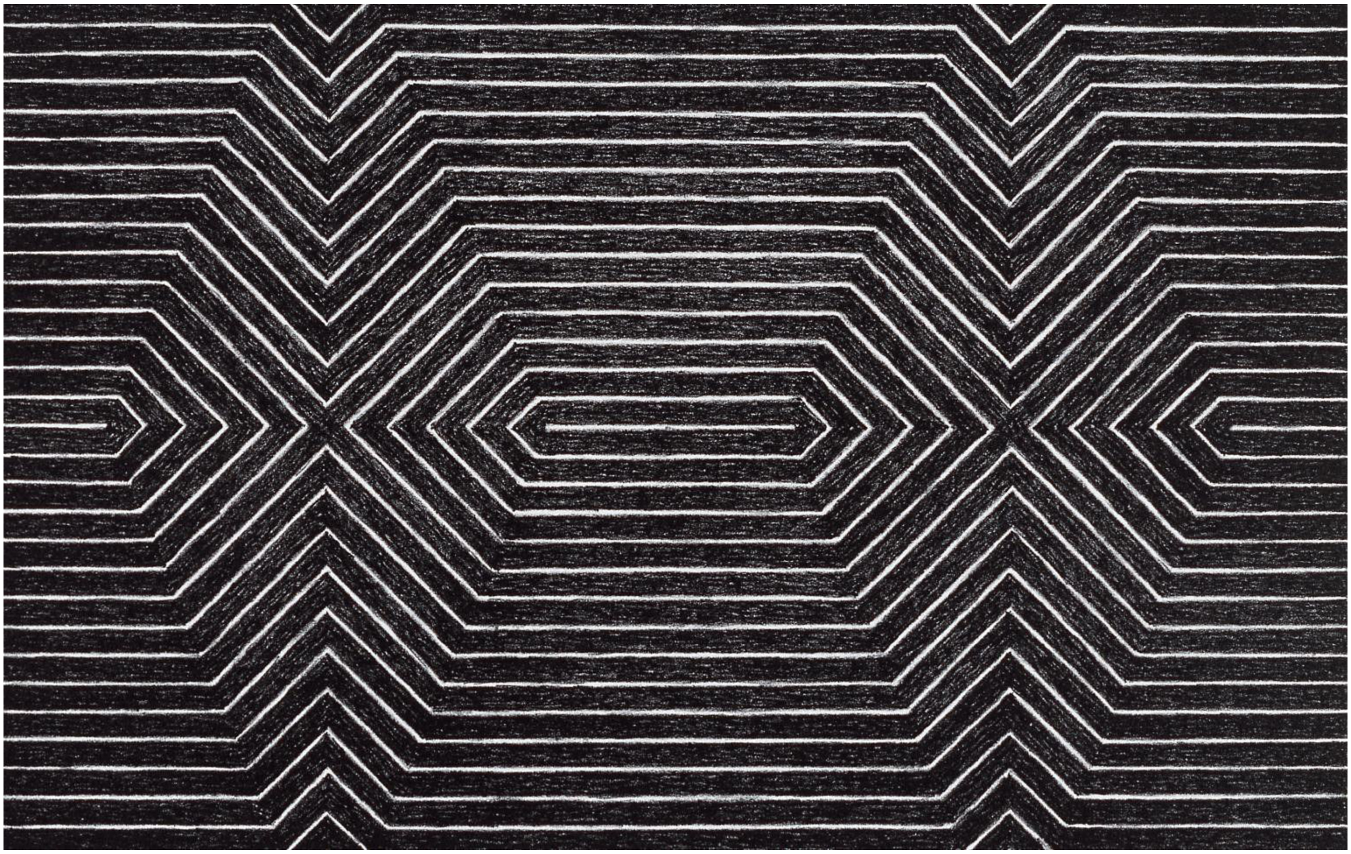
2.1

4.2



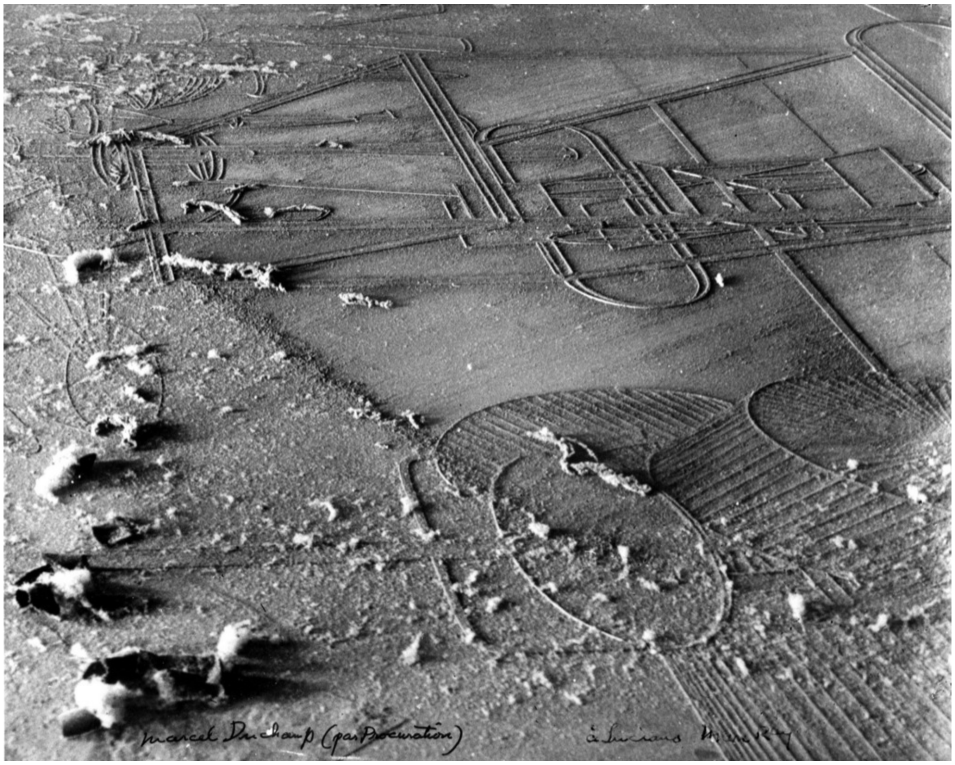
0.3

1.7

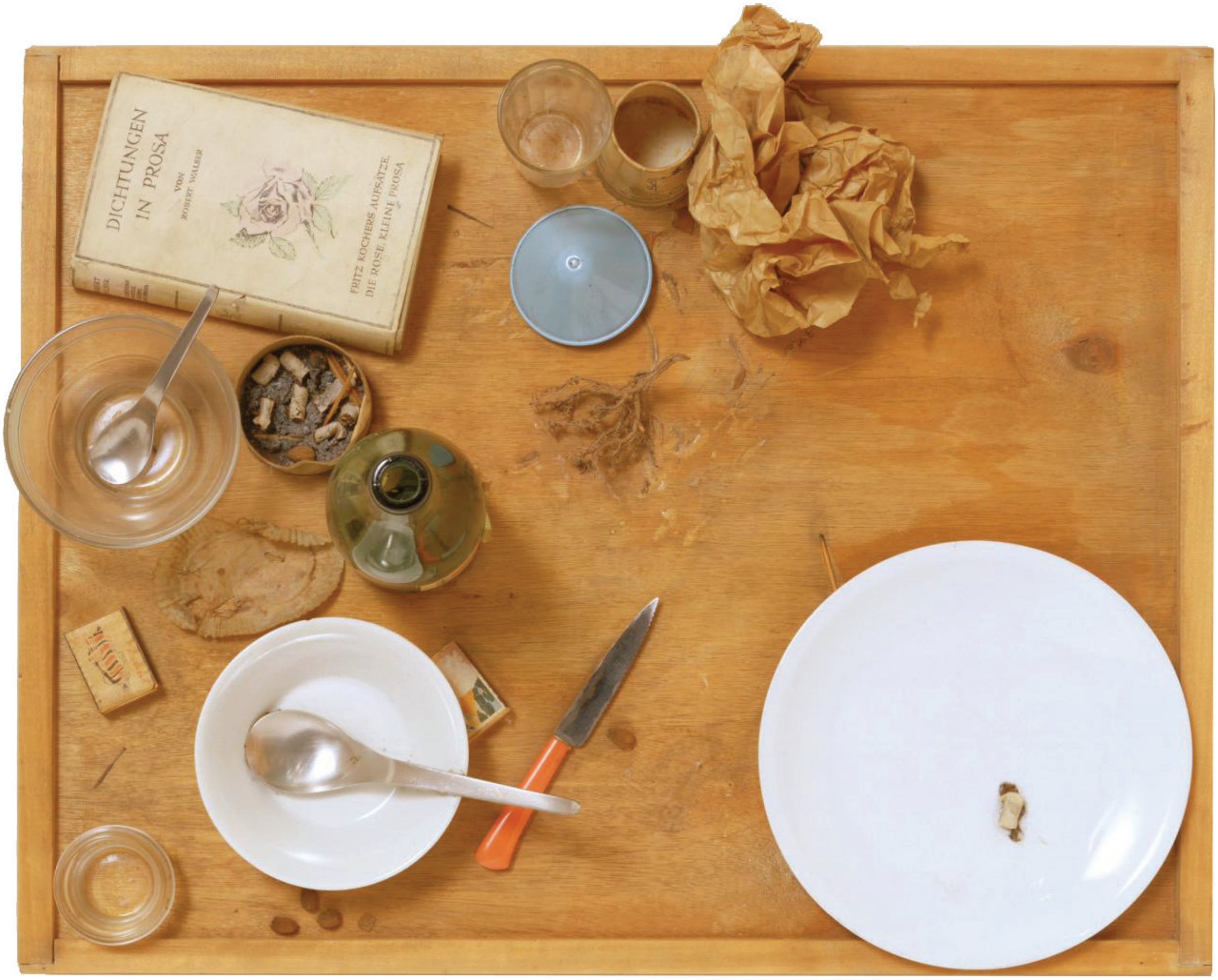


4.3

1.18


marcel Duchamp (par Procuration)
à Luciano Man Ray

4.4


DICHTUNGEN
IN PROSA
VON
ROBERT WALSER
FRITZ KOCHERS AUFSÄTZE.
DIE ROSE KLEINE PROSA

3.4

BIBLIOGRAPHY

A Square (Abbott, Edwin A.). *Flatland: A Romance of Many Dimensions*. New York: Barnes & Noble Books, [1884] 1963.

De Antonio, Emile. *Painters Painting*. Documentary film, 1:56:00. USA: 1973.

Baichwal, Jennifer and Burtynsky, Edward. *Watermark*. Documentary film, 1:32:00. Canada: Mongrel Media, 2013.

Barnes, Julian. *Levels of Life*. Toronto: Random House Canada, 2013.

Barthes, Roland. "The Eiffel Tower." In *A Barthes Reader*. Edited by Susan Sontag. New York: Hill & Wang, [1979] 1983: 236-50.

Beil, Ralf. "Just What Is It That Makes Gursky's Photos So Different, So Appealing?: On Andreas Gursky's Pictorial Strategy And The Emblematic Nature Of His Architectural Photographs." In *Andreas Gursky: Architecture*. Mathildenhohe Darmstadt: Hatje Cantz, 2008.

Benjamin, Walter. "The Work of Art in the Age of Its Technological Reproducibility." In T*he Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press, [1936] 2008: 19-55.

––––. "Painting and the Graphic Arts." In *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press, [1936] 2008: 219-20.

Berger, John. *Ways of Seeing*. New York: The Viking Press, 1973.

BIBLIOGRAPHY

Bois, Yve-Alain and Krauss, Rosalind. *Formless: A User's Guide*. New York: Zone Books, 1997.

Borges, Jorge Luis. "The Aleph." In *The Aleph and Other Stories*. Translated by Andrew Hurley. New York: Penguin Books, [1949] 1998: 274-88.

––––. "Of Exactitude in Science." In *A Universal History of Infamy*. New York: Dutton, 1972: 141.

Burke, Edmund. *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful: And Other Pre-Revolutionary Writings*. Edited by David Womersley. London: Penguin Books, [1757] 1998.

Bush, Susan and Shih, Hsio-yen. *Early Chinese Texts on Painting*. Cambridge, Massachusetts: Harvard University Press, 1985.

Casey, Edward S. *Representing Place: Landscape Painting & Maps*. Minneapolis: University of Minnesota Press, 2002.

De Certeau, Michel. "Walking in the City." In *The Practice of Everyday Life*. Translated by Steven Rendall. Berkeley: University of California Press, 1984: 91-110.

Chen, Chien-Chung and Tyler, Christopher W. "Chinese Perspective As A Rational System: Relationship To Panofsky's Symbolic Form." In *Chinese Journal of Psychology*, 53(4) (2011): 7-27.

Clouston, W. A. "Invisible Caps and Cloaks; Shoes of Swiftness; Inexhaustible Purse, Etc." In *Popular Tales and Fictions: Their Migrations and Transformations*, Volume 1. Edinburgh and London: William Blackwood and Sons, 1887: 72-122.

Corner, James. *The Landscape Imagination: Collected Essays of James Corner 1990-2010*. Edited by James Corner and Alison Bick Hirsch. New York: Princeton Architectural Press, 2014.

–––– and Maclean, Alex S. *Taking Measures Across The American Landscape*. New Haven: Yale University Press, 1996.

Dalston, Lorraine and Galison, Peter. "The Image of Objectivity." In *Representations*, No. 40, Special Issue: Seeing Science (Autumn 1992): 81-128.

Eames, Ray and Charles. *Powers of Ten: A Film Dealing with the Relative Size of Things in the Universe and the Effect of Adding Another Zero*. Film, 9:01. USA: IBM, 1977.

Eco, Umberto. *The Infinity of Lists*. Translated by Alastair McEwen. New York: Rizzoli International Publications, Inc., 2009.

Fast, Omer. *5000 Feet is the Best*. Digital video, 30:20. US: Commonwealth Projects, 2011.

Foucault, Michel. *Discipline and Punish: The Birth of The Prison*. Translated by Alan Sheridan. New York: Vintage Books [1975], 1995.

––––. *The Order of Things*. Edited by R. D. Laing. New York: Pantheon Books, [1966] 1970.

Glimcher, Arne. *Agnes Martin: Paintings, Writings, Remembrances*. London: Phaidon Press Limited, 2012.

Van Gulik, Robert Hans. *Chinese Pictorial Art as Viewed by the Connoisseur: Notes on the Means and Methods of Traditional Chinese Connoisseurship of Pictorial Art, Based Upon a Study of the Art of Mounting Scrolls in China and Japan*. Rome: SMC Publishing Incorporated, 1958.

Hung, Wu. "The Painted Screen." In *Critical Inquiry*, Vol. 23, No. 1 (Autumn 1996): 37-79.

Krauss, Rosalind. "Grids." In *October*, Vol. 9. (Summer 1979): 50-64.

Harbison, Robert. *Eccentric Spaces*. Boston: David R. Godine, Publisher, Inc., 1988.

Hugo, Victor. *Notre-Dame of Paris*. Translated by Isabel F. Hapgood. Gutenberg Press, [1831] 2009. https://www.gutenberg.org/files/2610/2610-h/2610-h.htm.

Kracauer, Siegfried. "Analysis of a City Map." In *The Mass Ornament: Weimar Essays*. Translated and edited by Thomas Y. Levin. Cambridge, Massachusetts: Harvard University Press, [1963] 1995: 40-4.

Krauss, Rosalind. "Postmodernism's Museum Without Walls." In *Thinking About Exhibitions*. Edited by Reesa Greenberg, Bruce W. Ferguson, and Sandy Nairne. New York: Routledge, 1996: 241-245.

Lodder, Christina. "Transfiguring Reality: Suprematism and the Aerial View." In *Seeing From Above: The Aerial View in Visual Culture*. Edited by Mark Dorrian and Frederic Pousin. London, New York: I.B. Taurus & Co., Ltd., 2013: 95-117.

Macarthur, John. "The Figure from Above: On the Obliqueness of the Plan in Urbanism and Architecture." In *Seeing From Above: The Aerial View in Visual Culture*. Edited by Mark Dorrian and Frederic Pousin. London, New York: I.B. Taurus & Co., Ltd., 2013: 188-209.

Maclean, Alex S. *The Playbook*. London: Thames & Hudson, 2006.

Malevich, Kasimir. *The Non-Objective World*. Translated by Howard Dearstyne. Chicago: I.S. Berlin Press, [1926] 1959.

McDonough, Tom. "Situationist Space." In *Guy Debord and the Situationist International*. Cambridge, Massachusetts: MIT Press, 2002: 241-66.

McHugh, Gene; McNeil, Joanne; and Quaranta, Domenica. *Collect the WWWorld: The Artist as Archivist in the Internet Age*. Brescia: LINK Editions, 2011.

McKelway, Matthew Philip. *Capitalscapes: Folding Screens and Political Imagination in Late Medieval Kyoto*. Honolulu: University of Hawai'i Press, 2006.

Merian, Matthäeus. *Deutsche Stadte*. Hamburg: Hoffmann und Campe Verlag, 1962.

Mulvey, Laura. "Visual Pleasure and Narrative Cinema." In *Screen* 16.3 (Autumn 1975), 6-18.

Rémi, Cornelia. "Reading As Playing: The Cognitive Challenge of the Wimmelbook." In *Emergent Literacy: Children's Books from 0 to 3*. Edited by Bettina Kümmerling-Meibauer. Amsterdam: John Benjamins, 2010: 115-39.

Ruscha, Ed. L*eave Any Information At The Signal: Writings, Interviews, Bits, Pages*. Edited by Alexandra Schwartz. Cambridge: MIT Press, 2002.

Schwartz, Alexandra. *Ed Ruscha's Los Angeles*. Cambridge: The MIT Press, 2010.

Scolari, Massimo. "The Jesuit Perspective in China." In *Oblique Drawing: A History of Anti-Perspective*. Cambridge: MIT Press, 2012: 341-57.

Sontag, Susan. *On Photography*. New York: Farrar, Straus and Giroux, 1977.

Spoerri, Daniel; Williams, Emmett; Filliou, Robert; Roth, Dieter; and Topor, Roland. *An Anecdoted Topography of Chance*. Edited by Alastair Brotchie and Malcolm Green. London: Atlas Press, [1962] 2016.

Steinberg, Leo. "Other Criteria." In *Confrontations With Twentieth-Century Art*. New York: Oxford University Press, 1972: 55-91.

Stewart, Susan. *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*. Durham and London: Duke University Press, 1993.

Steyerl, Hito. *How Not To Be Seen: A Fucking Didactic Educational .MOV File*. HD Video File, single screen, 15:52. 2013.

––––. "In Defense of the Poor Image." In *The Wretched of the Screen*. Edited by Julieta Aranda, Brain Kuan Wood, Anton Vidokle. Berlin, New York: Sternberg Press, 2012: 31-45.

––––. "In Free Fall: A Thought-Experiment On Vertical Perspective." In *The Wretched of the Screen*. Edited by Julieta Aranda, Brain Kuan Wood, Anton Vidokle. Berlin, New York: Sternberg Press, 2012: 12-30.

Sullivan, Michael. "Notes On Early Chinese Screen Painting." In *Artibus Asiae*, Vol. 27, No. 3 (1954): 239-64.

Törmä, Minna. "Looking at Chinese Landscape Painting: Traditions of Spatial Representation." In *Looking At Other Cultures: Works of Art as Icons of Memory*. Edited by Anja Kervanto Nevanlinna. Vaasa: Society for Art History in Finland, 1999: 119-35.

Trieb, Mark. "Mapping Experience." In *Design Quarterly*, No. 115 (1980): 1-32.

Tuan, Yi-Fu. "Space and Place: Humanistic Perspective." In *Philosophy in Geography*. Edited by Stephen Gale and Gunnar Olsson. Dordrecht, Holland: Springer Netherlands, 1979: 387-427.

Tufte, Edward R. *Envisioning Information*. Cheshire, Connecticut: Graphics Press, 1990.

Vidler, Anthony. "Photourbanism: Planning the City from Above and from Below." In *The Scenes of the Street and Other Essays*. New York: Monacelli Press, 2011: 317-28.

Waldheim, Charles. "Aerial Representation and the Recovery of Landscape." In *Recovering Landscape*. Edited by James Corner. New York: Princeton Architectural Press, 1999: 120-39.