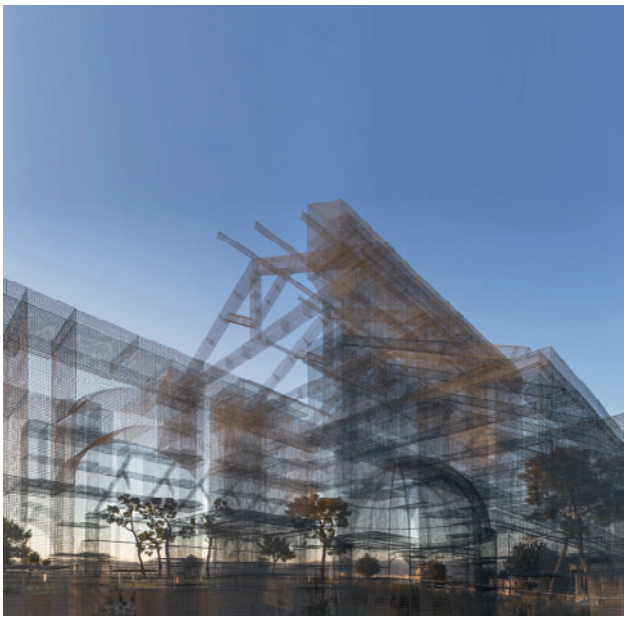
Edition Axel Menges GmbH
Esslinger Straße 24
D-70736 Stuttgart-Fellbach
tel. +49-711-5747 59
fax +49-711-5747 84



Anne Catrin Schultz (ed.)
Real and Fake in Architecture – Close to the Original, Far from Authenticity?
With contributions by Tom van Arman, Dan Hisel, Nicole Lambrou, Christina Lanzl, Eric Lum, Jennifer Lee Michaliszyn, Anne Catrin Schultz, Karen Seong, Ingrid T. Strong, Kemo Usto, and Justin Vigilanti. 232 pp. with 330 illus., 233 x 284.5 mm, hard-cover, English
ISBN 978-3-86905-018-8
Euro 69.00, £ 59.90, US$ 78.00

The condition of »fake« and »real« in architecture is rarely publicly discussed nor has it encountered broad journalistic or scholarly attention. This book explores the realm of truth, authenticity and fakery in architecture, providing a timely collection of analytical essays and projects. Photographers, writers and architects share their understanding and speculations about a broad range of spaces and concepts – all searching for common ground between real and imagined, function and story.

The authors challenge our perception of »authenticity« through the examination of built and simulated environments, architectural fiction, theatric illusions and mannerist trickery. They examine the notion that the principle of Sullivan's »form follows function« contains a paradox caused by the ambiguity and complexity of architectural expression. Buildings are perceived through an individual's personal experiences while also being interpreted along broader cultural values. The works shown demonstrate that under scrutiny, any built environment harbors both, reveals moments of truth, deception and ambiguity – all of it partially in the eye of the beholder.

The diverse contributions shed light on unexpected identities in architecture inviting critical thought about our built environment – analog and digital.

The goal of this publication goes beyond unmasking deception in architecture, it aims at unfolding time-lines and revealing the layered nature of people and places. The images and essays reveal our contemporary condition and let collective and individual narratives unfold, a range of truths in themselves. Expanding from the discussion about truthful materiality and tectonics, this book provides an understanding of real, authentic, and fake in urbanism and architecture.

Anne-Catrin Schultz studied architecture in Stuttgart and Florence. Following post-doctoral research at the Massachusetts Institute of Technoloy in Boston, she worked for several years with Turnbull Griffin Haesloop and Skidmore, Owings & Merrill in San Francisco. While developing her own practice, she has taught at the University of California in Berkeley, the California College of the Arts and the Academy of Arts University in San Francisco. In 2013 she joined the Department of Architecture at Wentworth Institute of Technology in Boston.

Distributors

Brockhaus Commission
Kreidlerstraße 9
D-70806 Kornwestheim
Germany
tel. +49-7154-1327-24
fax +49-7154-1327-13
menges@brocom.de

Gazelle Book Services Ltd.
White Cross Mills
Hightown
Lancaster LA1 4XS
United Kingdom
tel. +44-1524-528500
fax +44-1524-528510
sales@gazellebookservices.com

National Book Network
15200 NBN Way
Blue Ridge Summit, PA 17214
USA
tel. +1-800-4626420
fax +1-800-3384550
customercare@nbnbooks.com

The condition of »fake« and »real« in architecture is rarely publicly discussed nor has it encountered broad journalistic or scholarly attention. This book explores the realm of truth, authenticity and fakery in architecture, providing a timely collection of analytical essays and projects. Photographers, writers and architects share their understanding and speculations about a broad range of spaces and concepts – all searching for common ground between real and imagined, function and story.

The authors challenge our perception of »authenticity« through the examination of built and simulated environments, architectural fiction, theatric illusions and mannerist trickery. They examine the notion that the principle of Sullivan's »form follows function« contains a paradox caused by the ambiguity and complexity of architectural expression. Buildings are perceived through an individual's personal experiences while also being interpreted along broader cultural values. The works shown demonstrate that under scrutiny, any built environment harbors both, reveals moments of truth, deception and ambiguity – all of it partially in the eye of the beholder.

The diverse contributions shed light on unexpected identities in architecture inviting critical thought about our built environment – analog and digital.

The goal of this publication goes beyond unmasking deception in architecture, it aims at unfolding time-lines and revealing the layered nature of people and places. The images and essays reveal our contemporary condition and let collective and individual narratives unfold, a range of truths in themselves. Expanding from the discussion about truthful materiality and tectonics, this book provides an understanding of real, authentic, and fake in urbanism and architecture.

Anne-Catrin Schultz studied architecture in Stuttgart and Florence. Following post-doctoral research at the Massachusetts Institute of Technoloy in Boston, she worked for several years with Turnbull Griffin Haesloop and Skidmore, Owings & Merrill in San Francisco. While developing her own practice, she has taught at the University of California in Berkeley, the California College of the Arts and the Academy of Arts University in San Francisco. In 2013 she joined the Department of Architecture at Wentworth Institute of Technology in Boston.

069.00 Euro
059.90 £
078.00 US$

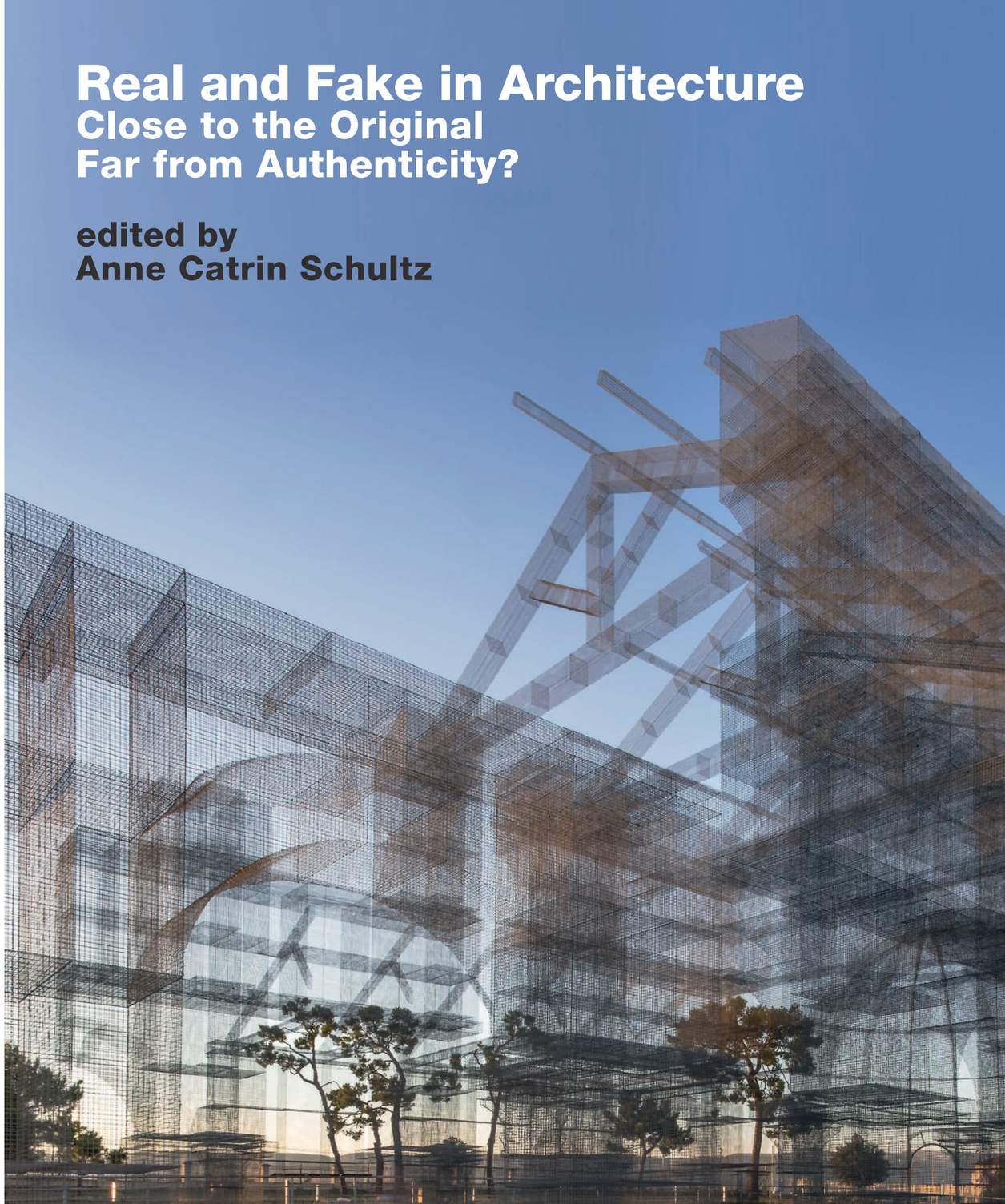
ISBN 978-3-86905-018-8

9 783869 050188 57800

Anne Catrin Schultz Real and Fake in Architecture Menges

Real and Fake in Architecture
Close to the Original
Far from Authenticity?

edited by
Anne Catrin Schultz



Real and Fake in Architecture

Close to the Original, Far from Authenticity?

edited by
Anne-Catrin Schultz

Edition Axel Menges

ISBN 978-3-86905-018-8

Printing and binding: Graspo CZ, s. a., Zlín, Czech Republic

Copy editing: Ann Cortissoz
Design: Axel Menges and Björn Schötten

Contents

Is fake the new real? Searching for an architectural reality

Anne-Catrin Schultz

1. Introduction: Setting the stage for fake and real

»Fakes teach us many things, most obviously perhaps the fallibility of experts.«[1] (Rem Koolhaas)

The term »fake« has been in the media frequently in the early 21st century, referring to headlines and fictional statements that are perceived as real and are influencing public opinion and action. Replacing the historically more common term »propaganda«, fake news aims at misinformation and strives to »damage an agency, entity, or person, and/or gain financially or politically, often using sensationalist, dishonest, or outright fabricated headlines«.[2] Tracing fake news and differentiating »real« information from personal opinions and identifying intentional (or unintentional) deceit can be complicated. It is similarly complex to trace the duality of fake and real in the built world. In order to explore the larger context of fake statements in architecture and environmental design, a look at the definition of fake and related terms might be useful. A surprising variety of terms unfolds, all describing an action or object mimicking another one.

While the exact etymology of the term remains unclear, according to the *Oxford English Dictionary*, the word fake could stem »from the German *fegen*, ›to furbish or clean up‹«.[3] The dictionary further lays out the definition as »a work of art or artifact that is not genuine and is intended to deceive. The etymology points to one characteristic of many fakes: they are often made up from fragments of various original works, for example from fragments of »antique sculpture«.[4]

Whether having to do with clearing out rubbish via broom or polishing something to look more precious, it has become a very prominent word in 2017.[5] An early definition of fake can be found in the dictionary *A New and Comprehensive Vocabulary of the Flash Language* published in 1819 by James Hardy Vaux, which lists criminal slang and provides its different applications.[6] Assuming that this dictionary shows a first evidence of our current use of the term, it displays criminal origins; author Vaux listed terms he had picked up while serving time in penal colonies in Australia.[7] Already during Vaux's times, the word was so widely used that he could only define it through a series of examples. One way to approach the meaning of fake is to look at what is considered real. In the art world real seems to refer to the so-called original.

Under the entry real *The Oxford Companion to Philosophy* writes: »Real is often used with some opposite term in mind, such as *ideal* or fake. In these cases, one can infer from *A* is not a real *F* that *A* is not an *F* at all.«[8] A simpler set of definitions would contrast real as the opposite of »imaginary« and »mental«, »objective« versus »subjective«.[9] Upon further examination, what makes an object fake becomes more complicated and links it to the essence of an object. A fake tree is an imitation of a tree – it does not grow, age, or even die. Fake flowers stay fresh and only change appearance by collecting dust over time. Fake jewelry is much cheaper than real jewelry and in the 18th and 19th century used to represent a substitute of material – a diamond was represented by facetted glass. Jewelry made from facetted glass is very common today, and at this point is as much real jewelry as its more expensive relatives. What defines the reality of an object is closely linked to its origin and its function. Something that looks like a piano but lacks the mechanisms to make music, is not a piano. The origin of accurate function and genuine materiality in architecture is even more complicated and highly dependent on the location, purpose, intent, and perception of all involved.

Fake art

The so-called original artwork describes an original object that has an author (or several) who signed the work at the time of its creation. For unidentified historic works, an educated authority is commonly consulted to identify the authorship (and with that the identity) of a work of art. Putting a special value on the original, as Western cultures have done in the last centuries, means that forgery has a negative connotation. Jonathan Keats writes: »In fact, forgery and art are deeply interrelated. They reflect the same social interests, and they have always evolved together. The modern Western response to forgery is anxiety. The mood of modern Western art is anxious. This is not a coincidence or an irony of modern life.«[10] The philosopher Roger Scruton distinguishes the lie from the fake in philosophy and art – suggesting that one lies to deceive but one fakes to convince oneself of the condition faked.[11] Scruton writes: »Anyone can lie. One need only have the requisite intention – in other words, to say something with the intention to deceive. Faking, by contrast, is an achievement. To fake things you have to take people in, yourself included.«[12] Faking is defined by an outcome, by the attempt to create a false impression while convincing oneself as well. A faked resume or fake expertise is aimed at bringing people to believe and trust the person supplying the credentials, while the pretender gradually becomes unsure about the boundary of real and fake. Fake emotion resides within the gray area of true and false, possibly not clear to the person who is generating the emotion. Some fake objects result in kitsch appealing to popular taste; a word of German origin, kitsch describes an object harboring sentimentality, excessive decoration, or poor taste while being appreciated by many because it appeals to their emotions.

Fakes might be embedded in the copy of a built original or relate to the unbuilt design executed in a different context, a reconstruction re-creating something that no longer exists, rendering it irrelevant or just nostalgic. Fake can be in the appearance: pretending value or specific materiality, a low-cost version of expensive materials, or in any way looking like something it is not. Architecture can fake many conditions through formal expression: sustainability, materiality (fake stone), vernacular origins, high technology functionality, and much more. The line between pretend architectural and cultural relationships and the creation of real cultural references is difficult to draw and is defined by the user's own history, experiences, and perceptions. Fake architectural elements are a subject of discussion in the field of preservation, where reconstruction and repair live close to imagination and storytelling over the course of history. The adjective fake is used by some critics to describe architectural reconstructions such as the new Baroque Berlin City Palace,[13] the replica of the collapsed Campanile on Venice's Saint Mark's Square (which became famous through a fake photograph of the collapse of the original) or the concrete copy of the Parthenon in Nashville, Tennessee (one of many copies of the Parthenon existing all over the world). While the definition of fake has its merits, it inevitably leads to the question of what is true or real, suggesting that once that is defined, everything outside of that definition is fake. Real Architecture with a capital »A« is differentiated by historians from mundane buildings. Nikolaus Pevsner wrote the famous phrase: »A bicycle shed is a building; Lincoln Cathedral is a piece of architecture.«[14] His differentiation suggests that »real« architecture has a larger (spiritual) purpose, is monumental and of coherent design, while a merely utilitarian structure does not qualify.

Truthful architecture

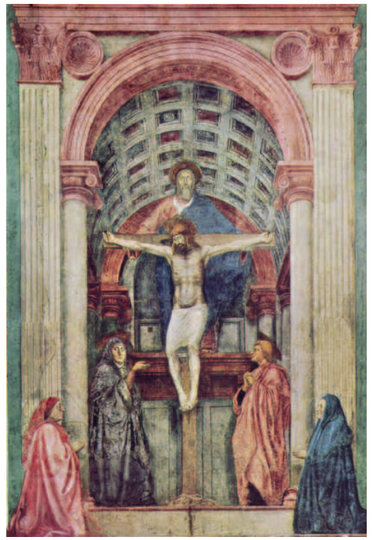
Over the course of architectural history, truthfulness in architecture was defined in a variety of ways. Gottfried Semper (1803–1879) looks for truth in the relationship between material and craft (with the focus on the textile arts and their evolution from cloth to building materials); his contemporary John Ruskin (1819–1900) advocates for truth in architecture based on borrowing from nature. In a chapter titled »The Lamp of Truth« in his architecture treatise, *The Seven Lamps of Architecture*, Ruskin begins his discourse with definitions and consequences of the literary lie, but quickly moves on to architecture. He identifies three types of deceits: the first has to do with false structure and is described as the »suggestion of a mode of structure or support, other than the true one«.[15] The second type of architectural deceit is »painting of surfaces to represent some other material than that of which they actually consist«,[16] and the third deceit is stated as the »use of cast or machine-made ornaments of any kind«.[17] All these »lies« have been common in historic and contemporary architecture in order to bring together the spectacle of desired built environments, stay within cost restrictions, or meet the client's expectations. Gottfried Semper identified the origins of architecture as put together from four elements: the hearth, the roof, the enclosure, and the mound.[18] These elements were connected to a materiality: the hearth to metal, the roof to wood and the craft of carpentry, the enclosure to woven textiles, and the mound to earthwork or stonework. Marc Antoine Laugier finds architecture's »original« in the past unity of architecture with nature, using the primitive hut as justification for neo-classicist tendencies: »Some branches in the forest are the right material for his purpose; he chooses four of the strongest, raises them upright and arranges them in a square; across their top he lays four other branches; on these he hoists from two sides yet another row of branches which, inclining towards each other, meet at their highest point. […] Such is the course of simple nature; by imitating the natural process, art was born. All splendors of architecture ever conceived have been

modeled on the little rustic hutl have just described.«[19] Laugier explained the ur-building, the archetype of human shelter, the primitive hut, as an order, a system taken from nature.

Deviations from the perceived architectural truth of a specific era were often harshly criticized. Viennese architect Adolf Loos identifies parallels between the famous façades of Potemkin Villages created to impress Catherine the Great in 1797 (by her minister and lover Grigory Alexandrovich Potemkin) during an inspection tour of the Crimea and speculative Viennese housing developments:

»The building speculator would most dearly like to have his façades entirely plastered from top to bottom. It costs the least. And at the same time, he would be acting in the truest, most correct, and most artistic way. But people would not want to move into the building. And so, in the interest of rentability, the landlord is forced to nail on a particular kind of façade, and only this kind.«[20]

Architectural fakery can be wrapped up in pretense but also suggestiveness: buildings implying sustainable performance, high-end materials, or an iconic condition typically found elsewhere and in a different historic era or suggesting authenticity. Fake, visionary, and virtual spaces all have different purposes, without necessarily all leading to deceit or being a straight lie. In fact, architecture typically illustrates what the client is hoping to represent – power, values, democracy or other social, political, and cultural conditions. Sacred architecture displays the symbols and references that carry meaning for the community familiar with the narratives shown. At a large scale, theme parks have perfected the technique of making environments from fairy tales, films or, travel destinations inhabitable, realizing what was only imagined before and enhancing it to a point where it seems more effective than the original. Visitors to a theme park are not fooled into believing that they are spending time with the Pirates of the Caribbean, but they enjoy the immersive experience of a large theater combined with amusement park rides. Copies of recognizable landmarks transport cultural values around the globe, such as the replica of the Eiffel Tower identifying with Western history and lifestyle in Shenzhen, China. Miniature versions of those same monuments come home with us as souvenirs to prove and memorialize visits. Memorials recall buildings that no longer exist, in outlined reconstruction or just as a marker. After the Florentine sculptor, architect, and engineer Filippo Brunelleschi had discovered (or most likely re-discovered) linear perspective, it became a popular method to blur the boundaries between painting, sculpture, and architecture. The painter Masaccio applied perspective in his paintings, creating the illusion of depth and architectural realism. He is credited with being one of the first artists to command the principle, showing buildings and landscapes as they recede into the landscape. By the end of the 15th century, perspective had become ubiquitous in the arts, prominent in the works of Michelangelo, Raphael, Botticelli, and many other artists.



Fake facts

In 2018, fake content has taken on a life of its own in social media and entertainment in general. Reality TV pretends reality (in order to communicate authenticity) but is highly staged or lives somewhere in-between. Even knowing about its ambiguous relationship to reality, viewers nevertheless enjoy the notion of real life being faked. Consumer platforms such as reality TV and social media blur the distinction between what is produced entertainment and what is documented everyday life.[21] »*Reality* is no longer the dominant issue of reality TV, but rather the knowledge that it fails so fully to represent reality. This impacts the behavior of reality TV on-screen participants in equal measure, who embark on the reality TV enterprise not to affirm their own reality, but instead to become part of that contrivance.«[22] Films or TV series reveal fake backdrops to break the illusion that what is happening is real. Theater in many instances works more explicitly with the dual awareness that the situation shown is »played«. In the Post-Truth Era in which the influential power of objective facts has been replaced by appeals to emotion and personal belief, architectural space and attributes followed suit. Small tokens that reference a past or different environment frequently are sufficient for the general public to »feel« that connection. A parallel to reality TV could be seen in the so-called *Trumpitecture*, described by Oliver Wainwright in the *Guardian* as »building inexpensive walls and filling them with very expensive apartments«.[23] Trump Tower in Chicago displays the owner's name in 20-foot-high letters – symbols of luxury that are just veneer deep, focused on signs of money and wealth, just one example of a reality show in the form of a building.

2. The copy – compliment or crime?

The U.S. Copyright Code states:

»An original design of a building created in any tangible medium of expression, including a constructed building or architectural plans, models, or drawings, is subject to copyright protection as an ›architectural work‹ under section 102 of the Copyright Act (title 17 of the United States Code), as amended on December 1, 1990. Protection extends to the overall form as well as the arrangement and composition of spaces and elements in the design but does not include individual standard features or design elements that are functionally required. […] The term ›building‹ means structures that are habitable by humans and intended to be both permanent and stationary, such as houses and office buildings and other permanent and stationary structures designed for human occupancy, including, but not limited to, churches, museums, gazebos, and garden pavilions.«[24]

Contemporary human existence is full of replication, copying, and reproduction in various disciplines and parts of life. Hillel Schwartz describes the importance of the copy in her book *The Culture of the Copy*: »biological and electronic reproduction, multiple identities and identity theft, piracy of artistic and intellectual property, theories of copyright and patent protection, bank fraud and the devastating virtualities of financial derivatives«.[25] In business administration, the original role of a document and its relationship to its copy has changed profoundly over the last years – with easier and easier replication being possible. Mass production stands in stark contrast to unauthorized reproductions – the legal conditions of a process determine if it is an acceptable or criminal replication of goods. Faking behavior is also an everyday occurrence, we fake being excited to see someone, we fake wellbeing or illness, etc. In card games it is advantageous to know how to bluff and fake conditions that put us at an advantage to win the game. Walter Benjamin distinguishes manual from technical reproduction, seeing the potential of photographic technology to augment the capacity of the human eye while posing a threat to authenticity: »The authenticity of a thing is the quintessence of all that is transmissible in it from its origin on, ranging from its physical duration to the historical testimony relating to it. Since the historical testimony is founded on the physical duration, the former, too, is jeopardized by reproduction, in which the physical duration plays no part.«[26] Over time the technology to produce copies of literature has changed: monks used to hand write copies of books for their dissemination, the printing press generated countless versions of one and the same book without an original. The Xerox machine allowed the multiplication of almost any document, and computer technology works with unlimited amounts of file replication. In ancient Rome, Greek vases and sculptures were more valuable than the Roman copies satisfying market demand. Fake relics adorn many medieval churches in the form of bone fragments from animal bones, instead of bones from the saints they were ascribed to. A questionable Crown of Thorns was believed to be real by Byzantine emperors, which made it more likely to be believed by others – a plausible story makes something that is unlikely to be real much more real.[27] Not all fakes are frauds, copying artwork and working with precedents is and has been a learning technique in many artistic trades and is also part of the Western

1. Disneyland, It's a Small World, Anaheim, CA, USA.
2. Masaccio, Holy Trinity for Santa Maria Novella, Florence, Italy, 1426.
3. Steel Replica of Delft Gate, Cor Kraat, Rotterdam, The Netherlands, 1995.
4. Frederick Burr Opper, A man with »fake news« rushing to the printing press, 1894.

tradition. Artists have long acquired supervising roles rather than being the ones executing the work, especially with artworks of a certain size or large quantities. In the 19th century, »at precisely that moment when historical museums first arose in large numbers – one also finds representatives of the Enlightenment commending the copy as a means of aesthetic appreciation and education. Museums acquired plaster reproductions of ancient models for their collections […]«.[28] The strong appreciation of the object made the copy a legitimate replacement of the original since it was not an option to acquire the original or the supply of originals was limited.

The design process

The design process in architecture and design tends to be iterative. Furthermore, over the course of an architect's career or the lifespan of an office, topics of interest appear in different forms and variations. Without being called replicas, these similarities are part of the architects' agenda and way of expression. Similar ideas get tested and re-evaluated over time; the originality lies in the specific application in a project's particular location and purpose. Architect Felix Madrazo recommends: »We must let go of our obsession with originality and conscientiously replicate the wheel, the window, the world – and whatever else we want.«[29] Working for the architecture firm OMA, Madrazo lays out how he decided to »recycle« a design for a skyscraper from OMA's archive and re-test the idea of a twisted shape. Explaining the concept and detailing it further led to the search for slightly different twisting shapes, trying at all cost to avoid the earlier, recycled version, since it had »been done before«.[30] With originality highly valued, customization or a new idea is key. At the same time, reproducibility has defined our production system since the 19th century. Industrialization was driven by the production of multiples, photographs got reproduced and have turned into a medium without a recognizable original in the digital world. Philosopher Walter Benjamin writes: »In principle, the work of art has always been reproducible. Objects made by humans could always be copied by humans. Replicas were made by pupils in practicing for their craft, by masters in dissemination of their work, and finally by third parties in pursuit of profit. But the technological reproduction of artwork is something new. Having appeared intermittently in history, at widely spaced intervals, it is now being adopted with ever-increasing intensity.[31] […] Even in the most perfect reproduction, *one* thing is lacking: the here and now of the work of art – its unique existence in a particular place.«[32] Benjamin attributes a special element to the original artwork: the aura, a combination of time, place, and intention that is only inherent to the original. The appreciation of the original in architecture has given rise to the culture of the star architect who delivers a unique but branded building that brings celebrity status for the institution that commissioned the building and the city or region the building is placed in. Imitations might follow suit in an attempt to replicate what well-known architects have achieved. When a single name is suggested as author of a large-scale structure, one has to wonder about authorship in architecture in general and the role of involved team members.

Famous copies

The Parthenon is possibly one of the best-known buildings of Greek antiquity and acted as a cultural and physical precedent for the Western world for centuries. Its enormous impact on Western culture is difficult to measure. Today's ruin of the temple is situated on the Acropolis in Athens, a central hill that was inhabited long before the Greeks built on it. The site of the Acropolis is an architectural palimpsest that has seen thousands of years of building, re-building, destruction, demolition, and re-appropriation – the current Parthenon is built on top of the remnants of its predecessor(s). Frequently the artifact (of the Parthenon) is at the core of research and study, expanded by an analysis of its meaning, of the narratives embedded in the sculptural friezes and the building's close connection to the *Panathenaia* festival depicted in the representational scheme on the outside of the building and the building's site configuration.[33] The overall message of the scale and dignity is one of victory over barbaric others who might claim Athenian land and cultural treasures. This perceived unity of cultural message and architectural form is transported to the different Parthenon copies all over the world – in a simplified way, as embodiment of Western values – retaining some of its meaning despite the change in place, climate, material, and program. Oneof the first 19th century re-appearance of the Parthenon design was most likely in William Strick-land's Second Bank in Philadelphia, completed in 1824, re-

5. Parthenon, Athens, Greece, 447 BCE.
6. Parthenon, Centennial Exposition, Nashville, TN, USA, 1897.

duced to three-fifths of its original scale. A complete copy of the Parthenon was erected in Nashville, Tennessee, as a temporary structure for the Centennial Exposition in 1897. This copy paid great attention to the details of sculptural forms but neglected to represent recent findings of polychromy. An act of cultural criticism, it left out the layer of paint but »restored« aspects of the original Parthenon that were damaged or missing: metopes and the pediment sculptures for example. Renovations in 1920 by Russell Hart brought it even closer to the original Parthenon's shapes, rebuilding the exterior out of concrete with casts of the Elgin marbles and other artifacts.[34] The renovation efforts were interrupted by the Great Depression, with many ambitious plans being put on hold. The statue of Athena (missing in the actual ruin) took a while to get financed; she was unveiled only in 1990. Other parts of the world built their Parthenons or selected parts of it as well, borrowing the dignity and perfection that symbolizes justice, educational depth, and democracy. Edward Hollis writes: »The High Court of Sri Lanka[35] is lent an air of gravitas by the expedient of attaching a Parthenon to it as a porch, while Edinburgh College of Art in Scotland was designed to house casts of the sculptures that once adorned the Greek temple. Everywhere it appears, the Parthenon is used to symbolize art and civilization, liberty and eternal fame.«[36] The latest replica of the Parthenon was a re-issued version of the »Parthenon of Books« by Argentinian artist Marta Minujín, a reconstruction made from metal scaffolding covered by banned books originally set up in Buenos Aires 1983 and re-built in Kassel for the art show *Documenta* in 2017.

Place and authenticity

The notion of place is crucial in the search for architectural authenticity – a type of building developed in a certain place might be perceived as belonging there and its qualities might be thought of as difficult to transplant. The Swiss architect Peter Zumthor, for example, has developed an approach to architecture that is widely perceived as authentic and related to its place despite the fact that he designs projects for locations all over the world. Close attention to materiality and related fabrication mark Zumthor's work; it is characterized by careful attention to textured enclosures with a clear sense of architecture as a finite object that is juxtaposed to the landscape. His work exudes continuity of ancient patterns and craft while showing off the perfection of a high-end contemporary practice. He does not copy from the past but seems to develop it further, creating a type of contemporary authenticity within the continuity of the cities his office works in. Speaking to tactility and personal perception, the buildings seem to reflect memories from long

ago. Zumthor himself describes evoking architectural memories to re-create specific atmospheres: »When I design a building, I frequently find myself sinking into half-forgotten memories, and then I try to recollect what the remembered situation was really like, what it had meant to me at the time, and I try to think how it could help me now to revive that vibrant atmosphere pervaded by the simple presence of things, in which everything had its own specific place and form.«[37] He finds »real« also in nature and the self-evidence of things: water, earth, light, and machines, tools or musical instruments that are »not mere vehicles for an artistic message, whose presence is self-evident«.[38]

In the U.S. in 2016 only two percent of houses were designed by architects, the rest are »fast-food homes«,[39] according to architect Duo Dickinson, products that are standardized, off the shelf and mechanically reproduced by an efficient construction industry. The vast number of buildings found in suburbia therefore are not part of the complex architectural discourse cultivated in academia. Ellen Dunham Jones writes: »A traveler driving to any American city will inevitably pass through a ring of recent construction. However, because so much of this new building is generic in design, if not downright ugly, and because it is spread out at low densities or hidden from view in cul-de-sacs, this vast body of work rarely figures in discussions of contemporary architecture. The prevalent attitude in architectural discourse – and not without reason – is that malls, office park buildings, apartment complexes, and suburban houses are overwhelmingly formulaic, market-driven, unimaginative designs unworthy of the designation architecture.«[40] One has to wonder if buildings produced by non-architects are not architecture and more or less fake as a result? Tract houses represent numerous copies that exist without an original but display a variety of references to »original« historic homes. While the profession is little involved in the conception or construction of subdivisions, questions of authenticity and retrofitting are part of the professional discourse.

Examining the issue of authenticity and authorship in the art world, British art historian Mark Jones states that a painting by Peter Paul Rubens might be more authentic than a painting in which he only painted the face of a person and his workshop took care of the rest. Authorship declarations vary depending on how much the master actually did, switching from the artist's name to the one of the studio. If an original by Rubens is restored by repainting parts of it, the Rubens turns into what is nowadays seen as a fake or ruined work.[41] Noah Charney writes about the different attitudes toward copying art work: »The concept of ›fake‹ is a Western import. In China, older art has always been considered more desirable, so great Chinese artists have always copied the work of their predecessors, trying to create works that would be perceived older than they were. What was antique was of great value, so the legitimate art trade in China involved copying ancient works.«[42] Authorship is relatively straightforward in painting (as it depends on the artists painting it or not); it becomes more difficult in sculpture or printmaking, where the artist's role changes from creating the original work to creating the matrix, the plate, woodblock, or whatever surface gets used to print the final work. Impressions created might still qualify as work by the artist even if the act of printing is done by someone else. A reproduction of a print moves further away from being authored by the artist and being an original unless it is signed and authorized.[43] A facsimile[44] represents an exact copy of an object, frequently used for written or printed material. Adding a signature to a work (even a print becomes more original if it is signed) changes things. While adding a false signature might not change the inherent value of an artwork, it now is expanded by an error or a false claim.

Learning from the masters

Copying and imitating activities and behaviors is an important part of human development. Children learn many skills by imitating members of their community. Role models are essential for cognitive and behavioral development, not only of children. Initial imitation results in children manipulating action schemes, reversing them, and developing them further. In most architecture schools, architecture students are encouraged to study precedents for inspiration but not copy them – a fine line to walk between skill-building (required transformation of the precedent, learning from processes and phenomena and adapting them) and actual plagiarism, claiming someone else's work as one's own. Teachers can be hugely influential and lead to a »school« themselves with their former students continuing their ideas in a recognizable way.

The famous École Nationale et Spéciale des Beaux Arts in Paris used copying as their artistic training tool for all media. The Beaux Arts education was based on classes given by the academies of painting, sculpture and architecture, all of which started under Louis XIV as early as 1671. It remained in business under varying administrations and political contexts until 1968. It was based on the belief that architecture is an art that can be taught systematically.[45] The building of the school was designed by architect Félix Duban and was inspired by the reconstruction of a temple he had studied during his stay in Rome. He integrated fragments of other buildings into the school building, creating an eclectic collage, all of which was used as a pedagogic teaching tool, to inspire and instruct the students. In order to support learning from ancient Greece and Rome, he practically turned the school into a museum.[46] In the Europe of the 19th century, the exploration and reconstruction of antique structures was considered at the core of the architecture education. At the end of their education students were all able to participate in the *Grand Prix de Rome*, which awarded winners a full scholarship to study the originals in Rome. The design process would work strongly with neo-classical references, buildings that use the kit of parts of the ancients adapted to new uses and scale. The revival of classical details and architecture types is testimony to a continuing search for expression, but also deep appreciation of the values and cultural depth afforded by associating with them.

Architectural copies

While multiple versions of individual buildings exist, they rarely are clandestine copies that are sold to an unknown buyer as something else or as from a different architect. With »copy/paste« operations being common commands in data processing, in architecture drafting and 3D modeling programs, replication is easy. Laser scanning, a technique used in the field of preservation, can lead to mass production of any building if combined with 3D printing,[47] replicating the exact geometry of the scanned structure while reproducing it in one homogeneous material. In the

7. Marta Minujín, *Parthenon of Books*, Dokumenta 14, Kassel, Germany, 2017.

same way photography gave rise to concerns related to the original of the image, 3D printing questions the duality of the fake and the original. The copy becomes its own form of expression – possibly free from the burden of the original. Ines Weizman writes:

»Previous discussions of the copy place acts like this within a discourse of the fake and the original, or concerning ideas of authorship and intellectual property, but an alternative reading would look at this new technology as existing at the pinnacle of a cultural process of the copy that is best understood as media form. If media is understood as the multiple means of storing and transmitting information, then the copy must be understood as its total manifestation.«[48] Weizman continues her exploration of architectural doppelgängers: »But what makes the copy, and in particular the architectural copy, so interesting is that it is a phenomenon of modernity. Just like the print, the photograph, the film or the digital file, it is both a product of the media and a media form in itself, that in every situation and period reflects on the existing means of production and reproduction; part of an endless series of 'aura-less' multiplications.«[49] Architecture historian and critic Mario Carpo explains how contemporary digital technologies can not only produce numerous identical copies but go beyond that multiplication and produce slightly varied copies, mass customized elements that follow more complex geometries than a modular standard: »concurrent with the construction of the Guggenheim Bilbao, new theories were emerging to claim just that – namely, that digital technologies could be put to better use designing and building digitallyvariable objects, rather than making three-dimensional copies; and that digital design could be digital from the start (i.e., design could start from algorithms rather than from the scanning and scaling of physical models)«.[50]

Architectural works are protected in the U.S. by the U.S. Copyright Act, but precise and applicable standards are lacking.[51] A fast food restaurant in Zhengzhou in China built in the shape of Le Corbusier's Ronchamp chapel Notre Dame du Haut was forced to be torn down after the Le Corbusier Foundation sued for a breach of copyright.[52] The foundation argued that the destruction was necessary in order to assure »proper« preservation of European architectural heritage – an argument that raises many questions, such as: Would an excellent reconstruction or copy have assured this proper preservation or is proper preservation reserved to the original?

In his essay »Fake Zaha Hadid in Chongqing«[53] Kevin Holden Platt describes: »The appeal of the Pritzker Prize winner's experimental architecture, especially since the unveiling of her glowing, crystalline Guangzhou Opera House two years ago has expanded so explosively that a contingent of pirate architects and construction teams in southern China is now building a carbon copy of one of Hadid's Beijing projects.«[54] The project being pirated is Wangjing SOHO, three curved office towers sculpted in stone and etched with wave-like aluminum bands. It is a counterfeit that forced the developer who had commissioned Zaha Hadid to design Wangjing SOHO to speedup construction since the pirated building was being completed faster than the original. The so-called »imposter project«[55] was named »Meiquan 22nd Century«.[56] An interesting architectural aspect to the Wangjing case is the interchangeability of buildings designed to be iconic, in part stemming from celebrity architects placing foremost attention to the flamboyant form of their schemes over other design considerations, such as those relating to material or context.[57] It is unclear if a 3D model was pirated out of Zaha Hadid's office or if it was simply rebuilt based on the information globally available.

In his essay »Similarity«, Bernard Hulsman writes about the Erasmus Bridge in Rotterdam by UN Studio: »Although most people in this country considered the bridge a highly original wonder of the world, to me it looked very much like the older Alamillo Bridge in Seville, designed by Spanish architect Santiago Calatrava, at whose firm Van Berkel had done part of his training. The Erasmus Bridge could not be called plagiarism, as I made a point of saying – but it was very similar to the Alamillo Bridge.«[58] Plagiarism lawsuits in architecture have recently made headlines – for example, David M. Childs and SOM (Skidmore, Owings and Merrill) has been accused of copying an early version of Daniel Libeskind's project for 1 World Trade Center in New York City. Authorship in architecture is customarily stated with more clarity than it can hold in reality – building design and execution is team work. Conception of a building frequently involves the studying of examples and precedents or spaces and details remembered in addition to following contemporary conventions of expression. Architect and writer Witold Rybczynski refers to the lawsuit alleging plagiarism against David M. Childs and SOM: »Whatever the merits of the claim, the suit raises a broader issue, one that is particularly relevant in an age in which ›starchitect‹ buildings have become the norm: How important should artistic authorship be in the world of architecture?«[59] He posits that imitation has been the sincerest form of architectural flattery for a big portion of the last 500 years.

8. View of Hallstatt, Hallstatt, Austria, 2007.
9. View of duplitecture version of Hallstatt, Luoyang, China, 2013.

Copyright concepts that were upheld in the 19th and 20th century are less and less applicable in a time of digital multiples. Architectural copyright for the most part relates to the set of drawings produced by a firm being protected from being re-utilized by another. Architecture offices produce buildings that are recognizably theirs without being copies of each other. A defensible »original« in architecture resides in the space between the design and the executed building and brings us back to the division of design and object initiated by Leon Battista Alberti. If the design is the original and the building itself a copy of a mental construct (with multiple authors and executers), where does that leave multiple copies? Architect and educator Sam Jacob (also former director of the architecture firm FAT – Fashion Architecture Taste) suggests a new role for the copy, emancipating itself from the artefact, becomes a radical form of expression: »What does it mean if the artefacts they are entrusted to take care of begin to escape their boundaries? What would it mean if the digital spirits left the body of all their artefacts, ghosting out through networks into the ether, multiplying exponentially, information, knowledge and culture circulating electromagnetically, re-precipitated back into solid form. Archeology evaporated and distilled, remade and reimagined. How might a world of liberated objects work? How might these objects be able to perform in new and different ways?«[60] The new role for the copy brings with it an altered understanding of the original. This expansion of the term original is also laid out by Weizman: »The idea of the expanding of the notion of the original seems particularly useful when we consider the politics in which copies and originals are enmeshed. […] The copy therefore needs two things, or more precisely two types of technologies: the productive type, which designates the methods of making and means of production, and the legal technologies, which define a field of regulation and control.«[61]

Duplitecture

China is known for a different attitude toward the culture of the copy and has made headlinesby copying buildings (so-called »duplitecture«) and even entire towns. For example, a full-scale replica of the Austrian town of Hallstatt was erected in China, creating a copy of the UNESCO World Heritage Site – a residential development built by developers for profit, an inhabited theme park with horse carriages and all. In the *Daily Mail*, Simon Parry writes in 2012: »No expense has been spared. The original buildings have been copied and reproduced with startling precision. […] The village is a surreal distortion. While the church and the cluster of Alpine buildings look as Austrian as lederhosen, many of the Hallstatt features simply don't measure up. The fake lake, for instance, is not just muddy, it is 50 times smaller than the original, a stagnant shallow pool. Then there is the vista of two-mile-high snowy mountains that surround the real thing. The version in front of us is ringed by parched yellow hills, a few hundred feet above sea level.«[62] This effort of rebuilding an icon of the West goes beyond its physical appearance, »duplitecture« comes with lifestyle amenities re-creating the experience of a Western town or city without the inconvenience of a foreign language and international travel.

Bianka Bosker contrasts China's »simulacrascapes« with developments of cultural fakes in the United States: »China's simulacrascapes are also differentiated by the foreign origins of the originals from which they take inspiration. While cultures commonly appropriate alien architecture to serve nostalgic or prestige functions, historically they tend to borrow from within the same civilizational matrix with which they identify. In the United States, on the other hand, *fakes* have been based on Anglo-Saxon (British Tudor, Queen Anne, Gothic), Mediterranean, or Teutonic models and the architectural styles and morphologies of peoples who share the same geocultural genealogy. The United States has yet to produce on American soil full-scale residential communities that replicate Thai villages or Chinese *siheyuan* courtyard homes. The various Chinatowns, Germantowns and Little Italies that do exist in many American cities are the products of immigration, rather than imitation, and reflect the cultural roots and traditions of their primary residents.«[63] Discretely themed neighborhoods and developments are even more prolific; millions of suburban homes in the U.S. refer back to Colonial architectural heritage, using a kit of parts that is recognizable and nostalgic. In many instances the historic references are fragmented and are perceived as fake by the design profession but appreciated by their owners.

In the Chinese re-creations of European towns, the buildings' scale is changed and the placement of landmarks in relationship to each other is different than the original,[64] materials and building details are simplified form the original structures. Having to house many more people than, for example, a medieval Italian town, the Chinese buildings are larger, taller, and lack the traces of

weathering familiar to those of us who have seen the originals. The architectural features oftenare simplified to a pastiche of the grown version, having to satisfy different lifestyles and expectations. »Among the most distinctive of the devices used by the simulacra towns to enhance their ›Western feel‹ are the cultural amenities. These include features that in their original context serve three functions: to orient the indigenous community in a cosmology (i.e., houses of worship); in a collective historical time (monuments to nationally significant events or figures); and in a community (food markets, public events and rituals, festivals, attire). In many instances, the Chinese simulacra communities appropriate these markers but deploy them in significantly selective ways. When these elements are transferred into the simulacra communities, they are voided of original meaning and are put into the service of branding the community, as well as delivering on the promise of enabling homeowners to live like the middle and upper classes in the developed world.«[65]

Digital duplications for restoration and reconstruction

As already mentioned, digital technologies are expanding the capacity that the printing press initiated. Digital scanning, digital printing and 3D printing allow the documentation and reproduction of artwork and architectural space without having to physically replicate them. In collaboration with artists and craftspeople, copies can be raised to a different level. The firm *Factum Arte* [66] is able to produce two- and three-dimensional scans of relatively large-scale artwork conducted non-invasively from a distance. These scans produce digital models that make spaces and artifacts available even while the original is inevitably decaying. »Factum Arte takes its scanning capabilities a step further and employs specialized printers alongside hands-on artists to create facsimile artworks and artefacts for conservation and research purposes, as well as for museum exhibitions. These grand (and expensive) projects are undertaken in collaboration with national ministries of culture and museums, and include pinpoint accurate reproductions of relief sculptures, including the entire eastern end of the throne room of Ashurnasirpal II, based on an original at the British Museum.«[67] A facsimile of the burial chamber from the Tomb of Thutmosis in the Valley of the Kings shows the difficult nature of archaeological replicas: the original tomb was meant to provide space for the king's afterlife, housing functional items, pets, servants, and anything else the king might need. The presence of countless visitors has led to high humidity levels that are damaging to the artifacts; damage caused by people touching the walls and the artworks initially was counteracted with protective glass panels, but it became clear that one has to either deprive the interested public from seeing these spaces or build a replica in a different place. »The delocalized facsimile has established the reasons for the continued importance of the burial chamber and at the same time money generated by the exhibition has been used by the Supreme Council of Antiquities to help preserve Egypt's heritage – effectively turning the visitors into a proactive force in the conservation of the tomb – an approach that could become part of a long-term policy that will keep the original version safe but accessible to the small number of specialists who require access for continued study and monitoring – while providing access for those wishing to experience from the tomb and text.«[68] The replica of the throne room of Ashurnasirpal II from the North West Palace in Nimrud also was an attempt to re-create an environment that had fallen victim to 19th century archaeologists spreading their discoveries all over the world. The polychrome friezes of the throne room were removed and ended up in different museums in Europe, dividinga coherent narrative cycle into fragments. Factum Arte documented the relief panels and related sculptures in the different museum locations as well as on site in Nimrud. Combining scanned 3D information with high resolution photography allows the study of color, texture and formal detail of the work. In an act of virtual repatriation, a replica of Veronese's painting *Wedding at Cama* was produced and installed in the original location. A scan of the painting, which is located at the Louvre in Paris was created in 2006. The facsimile generated by it was positioned in the monastery San Giorgio Maggiore in Venice, where the painting originally belonged.[69] Leonardo da Vinci's *Last Supper* was shown in Milan to 55,000 visitors – a compromise when showing the original appeared too complicated.

Factum Arte also was involved in creating a facsimile of Spain's Altamira Cave in 2001. The cave housing the Paleolithic ceiling drawings of animals had been closed in the 1970s due to high carbon dioxide levels that threatened the paintings. Now a UNESCO World Heritage Site, the treasure of early human art was made available to visitors as a replica. A replica burial chamberof King Tut's tomb has been available to the public in the Child Museum in Cairo since 2010 and parts of the (replicated) tomb and its contents have been travelling as an exhibition for years. Exhibitions that use replicas to educate the public without straining original archaeological objects expand the lifespan of the original heritage.

10. Lascaux Caves, cave painting of Megaloceros, Lascaux, France.

Multiplied spaces: Lascaux and its multiple »copies«

Creating a copy of a building in order to save the original has also been the strategy for the caves of Lascaux in France. A replica of the Neolithic treasure was opened in 2016 to share prehistoric art whose originals are 18,000 years old. An earlier partial copy of the caves had been opened in 1983, making 90% of the cave's wall art available. It had been installed too close to the actual archaeological site of the Stone Age caves and caused issues around mold that started to threaten the paintings in the original cave and therefore had to be closed. The copies are numbered starting with the original being number one, the 1983 copy environment, number two; a traveling exhibit of highlights, currently in Tokyo, number three; and the 2016 copy, number four. The latest Lascaux cave is embedded in a contemporary glass and concrete building – a layered museum to human history. The original caves had been discovered in 1940 by a group of young boys from Montignac. The caves were opened to the public after WWII, attracting 1,500 visitors every day. The paintings soon showed the decaying effect of carbon dioxide brought in by human breath resulting in the closing of the caves, a UNESCO World Heritage Site since 1979.

Of the copy number four, opened in 2016, French president François Hollande is quoted saying: »This is more than a copy, it's a work of art!«[70] Hollande's statement positions the copy at the same level as the original. In this case, the copy brings back a condition that the original can no longer provide, without the equipment, protective fencing and barriers erected to protect it from the visitors. All that counts are the paintings: »The pigments have kept their strong colors, red, yellow black. We can recognize the Stone Age painting techniques: They sprayed the pigments on the wall to portray the snout and the fluffy fur on the throat of the bull. You can even see in which direction they turned their writing instruments to draw these small dots […].«[71] In the meanwhile, cave number one is in a fragile state – it is not clear if the continuing issues with mold, fungus, and chemical decay are attributable to climate change, to the presence of the researchers, or to other factors. »At the time of mass tourism, increasingly vocal campaigns for the repatriation of spoils of wars or commerce, when so many restorations are akin to iconoclasm, it does not require excessive foresight to maintain that digital facsimiles offer a remarkable new handle to facilitate and rejuvenate our appreciation of the complexity of art. Since all originals have to be reproduced anyway, simply to survive, it is crucial to be able to discriminate between good and bad reproductions.«[72]

References and plagiarism

While copying is commonplace for many of our daily activities, in the design profession it remains criticized and presents a complex set of issues. Though copies of landmarks and well-known monuments are undesirable, references and common repetitive architectural themes are an intrinsic part of a cohesive building culture. Celebrated cultural narratives, creative re-interpretations, or simply the outcome of prevalent construction technology, recognizable similarities in buildings create social and cultural cohesion.

Mario Botta's expansion of Scarpa's Querini Foundation in Venice (1993–2003), quotes a stair Carlo Scarpa built in the Padiglione d'Italia (Italian Pavilion) in the Giardini in Venice in 1963. The stucco wall panels, overall materiality, the mosaic floor, and several other details clearly reference Scarpa's work in the same building. Carlo Scarpa's architecture itself is filled with references to the art world, to modern architecture of his time, and to Veneto craftsmanship traditions. The concrete chapel at the Brion cemetery in San Vito di Altivole in Italy displays stepped concrete reliefs on the façades that could be seen as reminiscent of Josef Hoffmann's Austrian Pavilion for the International Art Exhibition in Rome in 1911.[73]

The Mexican-born artist Gabriel Orozco created a sculpture with the title *Shade Between Rings of Air*, on the occasion of the 50th Venice Biennale in 2003. The sculpture is a full-scale replica of Scarpa's roof in the sculpture garden of the Italian pavilion completed in 1952 (*La Pensilina*) – made in birch wood instead of concrete. Scarpa's version of the garden and roof structure underwent a complete restoration in 2005, but at the time of Orozco's replica showed clearly the traces of weathering and decay. Scarpa had transformed an exhibition gallery into the small patio, remov-

ing the roof and replacing it with his sculptural intervention. He turned the walls to their brick structure and inserted the free-standing curved cover resting on three eye-shaped pillars rotated against each other. Small spheres on pyramid shaped bases situated on top of the pillars balance the roof, signaling lightness and elegance. Orozco's sculpture was displayed inside, a »cultural memory and replication«.[74] The sculpture clearly challenged and probed the relationship between original and replica, time and place by »introducing a deliberate anachronism, thus putting into question the idea of history as a linear process, while at the same time interrogating the mechanisms for the construction of cultural memory. Both the designation of Scarpa's Pensilina as a ›modern ruin‹ and Orozco's replica as a ›platonic pavilion‹ introduce significant anachronisms; the phrase ›modern ruin‹ because it entails a temporal contradiction between the term ›modern‹, usually understood to be present and future-orientated, and ›ruin‹ referring to the past; while in the second instance, envisioning the replica as a ›platonic pavilion‹ denotes both a platonic, ideal model predating the original and, simultaneously, a replica constructed after the original.«[75]

Originally placed in a space adjacent to Scarpa's garden, the replica is a cleaner and updated version of Scarpa's more complex and layered roof. Devoid of function (no weather, rain or sun to protect from) it turns into a shape of memory, a model following the sizes of the architectural structure without fulfilling any of the functions (also connecting two spaces, exhibiting sculptures, protecting visitors). Orozco describes how he experiences the two structures: »The experience of walking between the two, between the ruin of the dusty, open-air pavilion and the wooden replica inside – one to one, almost like a model, which stood in a white room that was very pristine and clean. It was about the time between the platonic pavilion and the pavilion eroded by weather. It was a shiny new idea that was immediately eroded and accident-ed by reality.«[76]

Open source architecture

Architect Felix Madrazo asks: »How bad is it to copy something ›good‹?« In his search for an answer, he points out that Mies van der Rohe represents an interesting case study in masterly repetition: »He thought his work was so good that he copied himself liberally, and even praised those who copied him with skill.«[77] Madrazo continues: »Our need for obsessive innovation is overkill. Instead of originality being the primary aim and measure of quality of all design, we should choose it only when originality is necessary, or worth the effort it takes to achieve.«[78] Art historian George Kubler tackled the question of the desirability of originality in his *Remarks on the History of Things*, suggesting that we are instinctively ambivalent about it. He is convinced that humans are torn between the replica and the invention, meaning the desire to stay with the known versus the progression to a new variation. He is also sure that if the world was cleared of all replicas, there would be nothing left as ›the whole of human experience consists of replicas, gradually changing by minute alterations more than by abrupt leaps of invention‹.[79] Copies continue a sequence unraveled by the prime object. But they also prove that formal sequences exceed the ability of any individual creation to exhaust its own possibilities.

In 2011 *Domus* magazine solicited Carlo Ratti to develop a special issue on »Open Source Design« (Issue #948, Spring 2011); the initiative resulted in a collaboratively written open source publication reflecting the topic pursued. The ensuing exploration resides at the other side of the spectrum of a highly recognizable author-based and branded architecture. Open source designis community based and participatory design that is interdisciplinary and has collaboration and-dialogue at its core. The book includes many examples of typology based design, such as Le Corbusier's Ville Contemporaine, arranged as a series of towers with parks surrounding them, replacing the stuffy downtown of Paris except for Notre Dame.[80] The authors discuss the timeless and ancient version of open source architecture: architecture without architects or designers and buildings from the 1500s whose builders and craftsmen were unknown until Vasari wrote his book known in English as *The Lives of the Most Excellent Painters, Sculptors, and Architects* establishing the spotlight cast on the authorial artist. The authors define architecture as communal art: »The pinnacle of this ›communal art‹ arrived when a drip of catalyst – technical innovations in stone and graphic representation – fell into Europe's thick cultural glue, yielding the great cathedral projects of the middle ages. […] There is an predetermined set of strictures and traditions defining the cathedral typology – cruciform plan, nave, aisles – with certain variables defined by the architect – number or spires, configuration of chapels, – but the design (and construction) of any given component is the responsibility of a single craftsman-builder.«[81] The availability of open source (or also »use for fee«) components, details, and design suggestions would allow a collage approach to architecture, sampling parts to create something new as is common in the music industry. Felix Madrazo and Diana Ibañez López with Tom Keely-Reid ask: »Could sampling work on this scale in the architecture? In a parallel model, when an architect sampled details, concepts or other successful strategies from existing works they'd pay royalties to their creator, much like musical artists do. To simplify the model further, architects could contribute with a flat rate membership under a simple license to sample, modelled on the sample-clearance companies that cover DJs (Salmon 2008). This practice could result in new and unique works that are faster and cheaper to produce without an excessively labour-intensive design and detailing process, with profit and credit still going to the original source – making Copy Paste a guilt-free industry standard.«[82]

11. Carlo Scarpa, Brion Cemetery, San Vito di Altivole, Italy, 1968.
12. Josef Hoffmann, Austrian Pavilion for the International Art Exhibition, Rome, Italy, 1911.
13. Carlo Scarpa, Italian Pavilion, Giardini, Venice, Italy, 1963.
14. Mario Botta, Fondazione Querini, Venice, Italy 2003.

3. Systematic repetition: questions of type, style and tectonics. The kit of parts of the ancients: from type to style to pastiche

In the *Oxford English Dictionary* »type« is defined as »the general form, structure, or character distinguishing a particular kind, group, or class of beings or objects; hence *transf.* a pattern or model after which something is made«. It is also described as »an imperfect symbol or anticipation of something, a figure or picture of something; a representation, an image or imitation. *Typology*: The study of classes with common characteristics; classification, esp. of human products, behavior, characteristics, etc., according to type; the comparative analysis of structural or other characteristics; a classification or analysis of this kind.«[83] Ancient Greek temples evolved and changed over time, but share many conditions that make them recognizable as part of one culture and belonging to similar rituals. Historian Bernard Hulsman describes how imitation was an important goal in antiquity: »To classical architects, then, imitation was not a sin but a tribute – an attitude that was inherent in the very nature of classicism. Marcus Vitruvius Pollio, author of *De Architectura* – the only surviving ancient treatise on architecture, which laid the foundations for the Renaissance – saw architecture as an imitation of nature. According to Vitruvius, the Greek temple with its stone columns was derived from the primitive hut consisting of two rows of trees with a roof of logs, branches and twigs in between.«[84] This first natural architectural model was used to justify a continuation of architectural elements used by ancient Greeks employing columns, the entablature and a sloped roof. This kit of parts would continue to be used through the 19th century. The Romans also favored repetitive strategies – for their cities and for their buildings. Building typologies included the basilica, temples, theaters, capitol buildings (temple of state religion), and thermae, covering political, spiritual, educational, and cultural/recreational needs. Ancient Roman housing also followed specific typologies; a single-family home, typically built asa double courtyard type, was called *domus,* and a multi-use apartment building with stores or shops on the bottom floor was called *insula.* Typology corresponds to a taxonomic classification of physical characteristics commonly found in housing and documented through volumetric arrangements rather than formal traits. Repetition was far from fake but was the correct way to attain the ideal solution. The Renaissance continued to work with repetition and a fixed kit of parts – architectural types. Several authors published treatises sharing architectural types and entire projects and the key proportional relationships to replicate and learn from. Sebastiano Serlio's books were illustrated offering information by drawing instead of description, a tradition continued by Andrea Palladio and others. Palladio published idealized versions of his built projects in which he removed compromises caused by site or client, encouraging anyone who wanted to use the materials to build the same buildings. Leandro Madrazo writes: »The most eloquent manifesta-tion of Type in architecture is provided by the architectural works themselves. Any coherent group of architectural works, like the Greek temples, the Palladian villas, the Prairie houses of Wright, as well as examples of vernacular architecture, are all tangible manifestations of the notion of type.«[85]

15. Carlo Scarpa, Italian Pavilion, sculpture garden, Venice, Italy, 1952.
16. Gabriel Orozco, Shade Between Rings of Air, Venice, Italy, 2003.

In Which Style Should We Build?

The German architect Heinrich Hübsch wrote the book *In Which Style Should We Build?* in 1828, distancing himself from Neoclassic architecture and looking for a more appropriate expression for changing lifestyles and technological advances. Preferring the splendor of the Gothic and medieval form in general, he set out to develop a new and universal architectural language. He identified walls, ceiling, roof, supports, windows, and doors as main elements of a style. Citing the need for functionality as a driver for design decisions, he recommended leaving out ornament and decoration. He advocated for »real« buildings: »Now, since the size and arrangement of every building is conditioned by its purpose, which is the main reason for its existence, and since its continued existence depends on the physical properties of the material and on the resulting arrangement and formation of individual parts, it is obvious that two criteria of functionality [Zweckmässigkeit] **–** namely, fitness for purpose (commodity) and lasting existence (solidity) **–** determine the size and basic form of the essential parts or every building […].«[86] His text laid outthe defining elements of a building style and offered insights into what might impact them in the process of design decisions having to be made.

Scholars in the19th century, predominantly in the German-speaking world, identified schemes of period styles and their shared formal traits. A classification was developed based on form, method of construction, and materiality – with regional variations. Changing over time, architectural styles reflect new ideas based on cultural shifts, spiritual orientation, and political rituals. Formal expression traveled and expanded from its originating locations. Stylistic tendencies in architecture develop in parallel to developments in literature and the fine arts. The Italian Renais-sance started in Florence, Italy, and was spread all over Europe by architects and artists copying and replicating the changing architectural forms. Stylistic expression travels with political or religious power that expands its territory. As a style spreads, it transforms and adjusts to local con-ditions, materials, and tastes. Baroque architecture spread as a vehicle for communicating the Catholic church's promise through arts and architecture (and an initial counter reaction to the Reformation). While the spreading of similar details and expressive forms typically is not referred to as copying, the re-oc-

currence of styles later in history as revivals is seen by some as a fake version of the earlier style. The architecture of antiquity has undergone revivals all over the world; the ancient kit of parts the Greeks perfected has been re-appropriated time and again. As mentioned before, schools of architecture in the 19th century strongly supported the study of historic architecture in order to be able to replicate it for contemporary structures. In the 19th century, Eclecticism was an acceptable approach for many architects mixing and matching elements from previous historic styles to generate a new type of expression. The Californian architect Julia Morgan has realized over 700 projects – many of which display combinations of historic forms at times combined with actual historic elements brought in from Europe, as visible in Hearst Castle. Morgan's eclecticism does not suggest that the building stems from a different time, it celebrates what is considered beautiful and meaningful. Morgan used new construction technologies in order to achieve her formal goals instead of replicating craftsmanship that once produced the forms she is quoting.

Twentieth-century modernism renounced this imitation of the old – ornament and decorationin the classic sense – and favored a function-based minimalism with clean volumes. Aesthetic expression was achieved by displaying materiality instead of artistically manipulated items attached to façades or interiors. Postmodernism even more explicitly aimed at defining authenticity by composing (legible) cultural forms into a new assemblage, expressing a desire for a new incarnation of culture and showing a lot of sympathy for architectural history. Styles can be mimicked, details can be copied, but it is difficult to replicate meaning as it resides in the dialog between the viewer/visitor and the environment at a specific time.

17, 18. Julia Morgan, Berkeley City Club, Berkeley, CA, USA, 1927.
19. Charles Willard Moore, Piazza d'Italia, New Orleans, MS, USA, 1978.
20. Piet Bloom, Tree Houses, Rotterdam, The Netherlands, 1984.

Similarity: typologies and systems

Buildings of similar use and status have traits in common: plan organization, overall volume, and construction technique. By sharing organizational traits without being identical, they embody an architectural typology. A »type« is closely connected to overall architectural form, a conceptual model that can be repeated with variations. No original can be identified, materiality and exact construction technique change from region to region. Rudofsky called vernacular dwellings »architecture without architects« – in his opinion »real« architecture. He writes: »The beauty of this architecture has long been dismissed as accidental, but today we should be able to recognize it as the result of rare good sense in the handling of practical problems. The shapes of the houses, sometimes transmitted through a hundred generations, seem eternally valid, like those of their tools.«[87] While Rudofsky deems vernacular informal architecture that evolved without the input of a trained professional as real and most beautiful, the large version of his exploration, informal settlements which are home to 25 percent of the world's urban population, are considered »not real« cities, with not real architecture even if they correspond to Rudofksy's parameters. Self-built, without services, they remain disconnected from the infrastructure and socio-cultural network of the »official« sanctioned parts of the urban area they are located in.

Christopher Alexander developed a systematic architectural and urban typology linked to architectural archetypes in his *Pattern Language*. Alexander's intention is that »many thousands of people can use it«[88] and take advantage of timeless ways of producing architecture. The book is meant to teach and instruct people about archetypes »rooted in the nature of things«,[89] back to origins that he sees as timeless. A variety of organization patterns are suggested for cities, villages and towns, suggesting a diverse mix of uses, varying zoning and other parameters. Building types allow multiple shapes and resulting arrangements,[90] with conditions laid out for entrances, courtyards, gardens, roofs, and more. The concept of »type« in architecture is also connected to the principles of industrial manufacturing. Anthony Vidler writes: »The idea of type has, since the late eighteenth century, informed the production of architecture in two different ways. First, by rooting architecture in a notion of first principles, either in nature or industrial production, it has provided an ontology, so to speak, for the legitimacy of design in an age which has largely discarded the ancient theory of imitation and absolute beauty.«[91] Working with typology aligned architecture with the blossoming scientific fields as the concept of type had evolved through the establishment of the modern sciences and the classification of plants, animals, and general matter. Based on the creation of a set of relations or rules rather than specific form, typological systems are universal and not individual. The modern root of type is at the core of the Structuralism of the late 20th century. Madrazo writes: »Like the notion of structure, type embodies a whole methodological approach which can be applied to different realms, whether it be philosophy, science, or art. In this regard, type is a ›conceptual paradigm‹ applicable to every intellectual discipline.

Furthermore, the modern notion of type, with its emphasis on the object, contains the seeds that lead to a more radical negation of the subject that characterizes Structuralist thinking.«[92]

Housing has lent itself to the development and repetition of types that began in the 19th century and continue into the present. Especially in the United States, industrialized construction and available transit resulted in a decentralized model of sprawl that combines repetitive models of tract housing, »cookie cutter« style arrangements with slight variations. Lacking a tie to specifically regional construction materials and craftsmanship that impacts form and appearance (as it did in vernacular conditions), tract housing displays a series of symbolic details that in some instances show affinities to historic structures or express a contemporary version of a regional character. Formerly vernacular elements such as shutters turn into fake remnants, reminiscent of past mechanisms of light control applied as a symbolic texture. This kind of reference is decorative and partial – simple symbols are used to brand a home to be part of a larger and longer cultural construct. The suburban home seeks to be an expression of conformity (and the belonging to a certain social strata) and individuality at once. Colonnaded entries, pedimented archways, and other elements reminiscent of ancient Greece are common themes. These houses are part of subdivisions realized by developers specializing in mass-produced housing, a product for living. Since the late 20th century, the suburbs have been urbanizing, installing urban centers to create a sense of place. Simultaneously cities in the Western world seem to head toward suburbanization. Kim Velsey calls the recent phenomenon of making the city work in terms of suburbia-style convenience: »Simulacra of Urban Experience in a Suburbanizing New York.«[93]

In the 1980s New Urbanism picked up principles from historic towns – block sizes, street patterns, and walkable neighborhoods – and focused on human-scaled environments. Counteracting typical post-WWII developments with their low density, principles of new urbanism »can be applied to new development, urban infill and revitalization, and preservation. They can be applied to all scales of development in the full range of places including rural Main Streets, booming suburban areas, urban neighborhoods, dense city centers, and even entire regions.«[94] New Urbanism has been accused of being faux urbanism since its inception. The new town centers come without historic structures or texture and have to follow an ordering system that might evoke geometries from decades ago. They seem to fake urban life, lacking the complexity of all social layers, the crime and chaos that comes with a »real« city. Vibrancy created by visual simulation only, according to many, does not do the job of creating a city, but maybe that was not the goal. Will Doig calls the shiny new cities set in the suburbs »the invasion of the faux cities« and writes: »But as much as these urban simulacra might be an improvement over the sprawl they're jury-rigged into, you don't have to be Jane Jacobs to see that many are not what we've always thought of as ›urban‹. If anything, they reflect suburban ideals contorted (sometimes painfully) into vaguely urbanish form, a Frankenstein of supermarkets, outdoor dining, parking lots, and mock-cobblestone sidewalks.«[95]

Urban taxidermy and facadism

The term »façade« is closely linked to the term for »face«, from the French term »façade« which derives from the Italian »facciata«. While »façade« suggests the exposed visible layer of an object or person, the forward-looking element that is encountered first, it also is used to describe a deceptive outward appearance, an impression pasted on that does not reflect what is happening inside. Facadism describes an architectural practice that treats the façade separately from the rest of the building, sometimes the case in adaptive reuse projects. Looking more closely at refurbished historic downtowns or thriving commercial areas in U.S. cities and elsewhere, one finds separated façades illustrating a small-scale parcel size and quaint distinct uses while a large hotel has expanded on the interior. Newly built parking garages get clad in what seems to be small individual houses to avoid the view of functional ramps and stacked cars, contextualizing a large-scale struc- ture into possibly smaller-scale surroundings.

Robert Allsopp calls disguised developer architecture »urban taxidermy« in an essay that laments the disappearance of the cultural landscape of Yonge Street in Toronto and calls for preservation far beyond the physical façades of buildings:

»My definition of urban taxidermy: the art of preserving, stuffing, and mounting buildings for lifelike effect to simulate an intrinsic social, cultural, or commercial vitality. Urban taxidermy seems to be the most popular current compromise between complete heritage preservation and massive, wholesale redevelopment. Instead of façades, we are keeping large pieces of a building's fabric, but what remains gives only the illusion of a vital, fully functioning, street-related structure. What once sustained street life is being replaced by inert material. Collectively, these ›dead‹ buildings offer a streetscape diorama. They show well on Google Street View but have little capacity to generate the social interaction of street life when the only access is through the mall. Like a diorama, they require suspension of disbelief. Is it worth keeping these buildings? Yes, of course, but do we have to kill, stuff, and mount them for them to survive? They are more than historical artifacts, bricks-and-mortar façades with finely detailed sills and cornices. They are part of an economic, social, and cultural ecology that cannot be disassembled. If we want to keep and recycle Yonge Street as part of the city we want (as I think we should), we need to consider the whole thing as a dynamic, evolving cultural landscape.«[96]

Facadism is not a recent phenomenon, architects have re-skinned façades throughout architecture history. Modern architecture has advocated for a close and inseparable link between the exterior and the interior of a building, an honest expression versus a false mask. Gilbert Herbert critically states in his essay »Facadism in Italian Architecture« in 1960: »Facadism denotes the conception of a main elevation to a building, that is, a frontispiece, where there is a concentration of emphasis at the expense of the flanks and rear ...« [97] The screen façade implies such a frontispiece divorced in some way from the building it fronts, because it fails to coincide in dimension with the building behind it. To an architect belonging to the modern school of thought, plan and functionality is the generator of a building, striving for honesty of expression, which makes facadism an alien concept. Yet throughout the entire history of architecture of the Italian peninsula,

21. Celebration, New Urbanism, Florida, FL, USA, 1994.
22. Santa Croce, Florence, Italy.
23. Grand Canal façade, Venice, Italy.

separate façades are regarded as a normal and legitimate formal expression. Architect Thomas L. Schumacher detects a disconnect between the interior and the façade even in Le Corbusier's work: »Le Corbusier's Assembly Building in Chandigarh, India, of the late 1950s, wears a porch that is both unreflective of the interior spaces and detached from the body of the building. Likewise, the glassless horizontal strip window that covers the open terrace, not interior rooms, of Le Corbusier's Villa Savoye, is just as fake […].«[98]

Architectural history is abundant with examples of front façades updated to new styles with the rest of the building remaining as is. While modernism claimed expressive truth as generative principle, Postmodernism of the 1970s freed itself of the corset of modern truth and freely collaged fake elements, enlarged adaptations of classical details. Schumacher states: »To the modernist sensibility, an ensemble of buildings like the Neo-Greek Waterworks on the Schuylkill River in Philadelphia was worthy of the seventh circle of architectural hell for its blatant fakery in using Grecian temple forms for a pumping station.«[99] Setting meaning over function, the postmodern sensibility embraced allusion and representation, the rediscovery of metaphor, symbol, and the traditional kit-of-parts of the Greco Roman styles.[100] Continuing the taste for breaking the rules, postmodern collage or montage is questioning conventions and modernist rigidity with a playful set of expressions. Robert Venturi, Denise Scott-Brown, and Steve Izenour made a distinction between the »duck« and the »decorated shed«, separating buildings into the ones that are a symbol and the ones that communicate with the symbol applied without having to embody and represent the symbol itself. They wrote:

»1. Where the architectural systems of space, structure, and program are submerged and distorted by an overall symbolic form. This kind of building-becoming-sculpture we call the duck in honor of the duck–shaped drive-in, ›The Long Island Duckling‹, illustrated in God's Own Junkyard by Peter Blake.

2. Where systems of space and structure are directly at the service of program, and ornament is applied independently of them. This we call the decorated shed.«[101]

Fake structure – real tectonics?

With modernism's concentration on showing real materiality and tasking materials to display their natural texture, the form and expression of structural systems also became a more obvious part of built form. The expression of force, the art and science of putting buildings together is at the heart of a tectonic approach. Making visible the flow of forces equals a formal celebration of the structural truth. Originally applied to a better understanding of Greek architecture, »tectonics« entails formal conditions that communicate its strength and structural balance in a beautiful and poetic way. Mies van der Rohe's buildings are seen as an incarnation of »honest« structure and therefore considered the antithesis of fake. His rational, clear, and straightforward architecture expresses structure, materiality, and the modern spatial ideals of flexibility. Mies was able to build his idea of a logical modernity, following a design process independent of preconceived form. Mies's writings follow that same principle – short, as if reduced to notes, like poems. Mies's letters to Walter Riezler, publisher of the journal *Die Form* (The Form) describes his thoughts about the irrelevance of the term:

»I am not addressing myself against form, only against form as goal. And I do that on the basis of a number of experiences and the insights gained from them.
Form as goal results always in formalism
For this effort does not aim toward something internal but toward an external.
But only a vital inside has a vital outside.
Only life intensity has form intensity.
Every how is supported by a what.
The unformed is not worse than the overformed.
One is nothing, the other illusion.
Authentic form presupposes authentic life.
But not one that has been nor one that has been thought.
Therein lies the criterion.
We value not the result but the starting point of the form-giving process.
This in particular reveals whether form was derived from life or for its own sake.
This is why the form-giving process appears to me so important.
Life is what matters.
In its entire fullness, in its spiritual and concrete interconnection.«[102]

Mies's interest in expressing architectural tectonics was not free from obstacles. According to William Curtis, Mies had to resort to dishonesty to tell the truth about his structures. Hiding the diagonal shear supports in the core walls of the Seagram Building in New York (which he designed with Philip Johnson), Mies preferred a trabeated look for his façades, the clarity and rationale of a rectilinear axis system. Curtis explains: »He lied to tell the truth. This is something he does in almost all of his projects. To enhance the clarity and rationality and logic of his pristine boxes, he hides the components of design that confuse the logic of the building.«[103] Where codes and requirements make showing the building's structure as it operates impossible, a decorative element explains the way it was meant to be. The structural I beams of the Seagram Building had to be clad in concrete for fireproofing, something that Mies corrected by adding I beams as trim – a layered assembly expressing and bearing loads in different strata.

24. Mies van der Rohe, Seagram Building, New York City, NY, USA, 1959.
25. The North Portico in Knossos, Crete, Greece.
26. St. Mark's Campanile, Venice, Italy, 1514.
27. Sather Tower at the University of California, Berkeley, CA, USA, 1914.

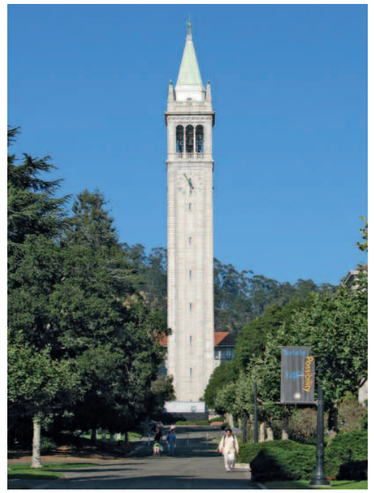
Repair and restoration: changing views of authenticity

Preservation of historic monuments and aging structures is important for the cultural continuity of our societies. The determination of what is considered worthy of preservation is part of a complex process. Jorge Otero-Pailos writes: »Preservation is at the core of every cultural institution. By definition, an institution is a society organized around a particular object. A religious institution is organized around religious objects, art institutions around art objects, and cultural institutions around preserved objects.«[104] Cities and buildings are constantly changing; buildings get functionally or stylistically outdated and at times destroyed by disaster or war. How to treat historic buildings has been the subject of multiple theories since preservation became a course of action in the 17th century. In the 21st century, the field seems to be caught between regulatory procedures and materials conservation.[105] While the »original« on a historic site might be testimony of a specific era, most sites undergo continuous change with layers added and subtracted. Typically, the latest layer or intervention is contested at the time of its implementation and receives more appreciation as it settles into the system of evolving changes. The architect David Fixler advocates for a concept of flexibility: »When there can be doubt about the authenticity of a well-documented, museum-quality restoration project, it is clear that, short of jettisoning the concept in its entirety, we must allow some flexibility in applying any notion of authenticity to the interpretation and re-presentation of a cultural resource.«[106]

In 1878 Sir Arthur Evans excavated a spectacular Bronze Age citadel in Knossos on Crete. He interpreted the structure he uncovered as the palace of the Cretan King Minos (an interpretation that is now disputed), the largest known site of the Minoan civilization. He was not the first one to dig there, but he was influential in reconstructing parts of the buildings in concrete, including their vivid color scheme – often criticized as over-interpreted. Evans called his approach »reconstitution« and justified it with the goal of stabilizing the elements found. Preservation through reconstruction is a pedagogic tool and successful in suggesting how the site might have appeared. It shows the selective process alluded to earlier, a favoring of a moment in time, removing all later interventions. In the case of Knossos, it appears as if it had been an exclusively Minoan site, ignoring the fact that it was used during Neolithic times and was altered by the Greeks and the Romans. The intervention is one of the most controversial ones, its vivid colors were toned down later, the buildings seen as fakes based on assumptions not on evidence.

Theorists in the 19th century came to a variety of conclusions about how to deal with historic buildings. While Eugène Viollet-le-Duc creatively restored the church of Notre Dame in Paris (making it his own perfected version of the church), his contemporary John Ruskin recommended leaving historic buildings untouched so they would follow a natural course of decay. Viollet-le-Duc's approach was rampant, an intensification of history – the Gothic being more gothic after a restoration, castles being even more true to themselves, and cities like Venice being made even more Venetian with enhanced, historicized, and idealized buildings, façades, and details. In the 20th century, concepts of reversibility have become a middle ground, allowing interventions but reserving the option of changing the treatment if a more suitable process is available. Especially the Western tradition grapples with the original artifact and how to treat it. Reconstruction is discouraged, even banned by international legislation and guidelines. UNESCO's World Heritage Convention of 1972 states: »In relation to authenticity, the reconstruction of archaeological remains or historic buildings or districts is justifiable only in exceptional circumstances. Reconstruction is acceptable only on the basis of complete and detailed documentation and to no extent on conjecture.«[107] The Charter of Venice (1964) allows anastylosis, the reassembling of existing but dismembered parts. At the same time, reconstruction, rebuilding, and other repairs remain common practice owing to the expansion of tourism justified by commercial interests as well as educational and pedagogic intent. Even without an interpretative expansion of content and symbolism in architecture, simple repairs result in the removal of site-specific patina, weathering and picturesque discoloration of historic surfaces.

The intervention of Lothar Malskat, a German painter and restoration specialist for medieval frescoes, shows how ambiguous the perception of real versus fake can become. Malskat was hired to restore frescoes in the Marienkirche in Lübeck, Germany. The frescoes had been severely damaged by Allied incendiary bombs in 1942. The damage was extensive, and photographic documentation was not available, which led to a great deal of re-imagination being necessary. Noah Charney describes: »While painting the re-imagined frescoes, which only occupied a small portion of the church's interior, Malskat took the opportunity to insert supplementary images that essentially amounted to inside-jokes.«[108] He told the client that he had discovered lost frescoes under whitewashing and that they had been undamaged. The restoration was revealed, and while scholars were surprised, nobody suspected foul play. Later Malskat announced that he painted the frescoes but was ridiculed – his partner in crime even denied the claim. With a government stamp, the frescoes had become real.



Com'era dov'era (How it was, where it was)

Beyond weathering, architecture falls prey to destruction and disasters such as the one that happened to the Campanile in Venice, Italy. In 1902, the bell tower collapsed, probably a victim of land subsidence. The city council immediately decided to reconstruct the campanile exactly »as it was and where it was« (com'era, dov'era) and did so over the next decade (with a few changes such as an elevator added for ease of access to the top). The reconstructed campanile became a symbol itself and is replicated in other locations, such as the campanile at the University of California, in Berkeley, in the U.S.

Reconstruction is a controversial topic in architecture and preservation discourse. Some are convinced that the original is »material evidence of the past«[109] and should not be altered. Others support an immediate repair of what has been damaged or lost, maintaining the identity of a place.

If a building has been lost, at times a full reconstruction is considered creating a new version of the lost original. A highly disputed topic, there are many reasons that might justify a full reconstruction: national symbolic value, continuing function or re-use, education and research, tourism promotion.[110] Nicholas Stanley-Price lays out arguments against the reconstruction of a ruin: He

cites the loss of the evocative, memorial and aesthetic value of ruined buildings which will be lost as they are repaired. He also states the impossibility of achieving authenticity,[111] the ethical issue of conveying erroneous information in the case of inaccuracy, the possible destruction of original evidence that comprises the ruin, changes in landscape values and distorted site interpretation and possibly excessive cost.[112] He suggests documenting a structure slated for removal in detail,[113] while defining the reconstruction a new building.

In Dresden, Germany, well-known German architect Günter Behnisch advocated (and later acted as consultant) for the reconstruction of the Frauenkirche.[114] He imagined a rebuilding of the outer stone shell accompanied by a contemporary interpretation of the interior. After lengthy debate, the Baroque Frauenkirche was reconstructed and consecrated in 2005. The 18th century Baroque church by George Bähr stood on the site of a Romanesque style church first erected in the 11th century. It was destroyed in 1945 by Anglo-American Allied forces during intensive bombing of the city; the charred fragments soon after were numbered and stored right next to the ruin, turning the site into a memorial against war. The new building re-created the stone shell to match the construction technique of Bähr's church despite known structural issues. At the same time, the stone details of the façade did follow the craftsmanship of the Baroque predecessor; new techniques available at the time of reconstruction were used to re-create the façade's appearance. The reconstructed church once more acts as a memorial against war and a reminder of WWII and its losses, the original façade elements black and charred standing out in the new much lighter stone surface.

Several other cities in Germany are still executing or continuing repairs of damage done more than 70 years ago during WWII. The Römerberg square in Frankfurt is a popular tourist destination – medieval buildings flank the square, among others the so-called Römer – a large block, originally with eleven different buildings – Alte Nikolaikirche, and other small-scale structures. While the Römer was destroyed in 1944 and rebuilt with its neogothic façades in 1955, subsequent reconstructions have continued into the 21st century. In the 1980s, one of the oldest streets in Frankfurt's downtown was reimagined by a set of playful postmodern buildings that followed the overall sizing of the previous urban texture. The latest part of Frankfurt's old town reconstruction effort is going to be completed in the fall of 2018, replacing the so-called Technisches Rathaus from 1974. A combination of old and new as an urban renewal project involves an entire district combining 15 reconstructions with 20 modern buildings alluding to the texture of their reconstructed context.

28. George Bähr, Frauenkirche, (Church of our Lady), Dresden, Germany, 1726–43, photo 1860.
29. Frauenkirche, Dresden, ruin with fragments in shelves in foreground, 1994.
30. Frauenkirche , Dresden, reconstruction 1994 to 2005.
31. Am Römerberg 19–27 as seen from Römerberg from southeast, Frankfurt am Main, Germany, 2011.
32. View of Dom-Römer project from the campanile of the Dome, Frankfurt am Main, Germany, June 2017.

Berlin Stadtschloss turned Humboldt Forum

Another nuance of complexity unfolds with the reconstruction of the Stadtschloss in Berlin, Germany, based on a competition run in 2008. The Italian architect Francesco Stella won the first prize and the jury described the successful reconstruction of the three Baroque urban façades of the castle, the three Baroque façades of Schlüter's courtyard, and the historic dome.[115] A collage made from preserved spaces (the original basement), reconstructed elements, and new spaces will house multiple museum collections and a cultural center. The journalist Michael Scaturro applauds the move in the *Guardian* as a sign of dealing with Germany's colonial past,[116] because the fairly vague plan for a reconstructed royal palace was to create a museum that would in some way address the colonial history and include ethnological artefacts as well as copies of the royal rooms. The history of the Berliner Stadtschloss is a mirror of the history of the city itself, defined by alterations and continuing change over centuries. The Stadtschloss is the birthplace of Berlin, founded in 1443 as residential seat of the Hohenzollern dynasty, making it a highly symbolic and meaningful spot in town. Probably a defensive castle in its early days, the building was situated in Cölln at a bridge over the river Spree connecting to a small town named Berlin. Over the centuries, numerous aristocrats made the castle their home and with that it grew, turned into a Renaissance building and later a Baroque castle under architect and sculptor Andreas Schlüter. The Prussian king moved into the new Baroque residence, by now the Prussian Royal Palace (inspired by Italian Baroque and Michelangelo's work) in 1701. The building's history was not without calamities: after a Schlüter-designed tower threatened to collapse and was torn down, he was chased out of the job and other architects added expansions and alterations to the king's apartments throughout the next centuries. On February 3, 1945, the palace was bombed and burned for several days, the final battles applying further damage to it. After the war was over, architect Hans Scharoun drafted a cost proposal for securing the ruins, but it was not executed. Berlin was divided in two, and mayor of East Berlin Friedrich Ebert – an opponent of its reconstruction – deemed the palace in danger of collapsing and ordered it to be torn down. After 500 years of history, the palace was demolished in 1950 and replaced by the so-called »Palace of the Republic« (Palast der Republik), a steel skeleton with curtain walls, defined by bronze mullions and reflecting colored glass. Well lit, it was referred to as »Erich's lighting store« (Erich Honecker was East Germany's leader from 1971–1989). In 1990 Germany reunited and a re-interpretation of Berlin's architectural history began. A nonprofit formed that dedicated itself to generating an exhibition that would illustrate the meaning and importance of the lost Stadtschloss.[117] A truly fake version of the royal palace was erected – a scaffolding with an image of the latest (pre-World War II) version of the palace mounted on it. Based on the idea of historian and Schlüter scholar Goerd Peschken and architect colleague Frank Augustin, the simulation was to bring the building back to the people's memory. The large trompe-l'œil painting of the Berlin castle was painted by artists, which made it an original in itself.[118] The concept of a reconstruction was supported and turned into reality by Hamburg businessman Wilhelm von Boddien, who lobbied for more than a decade to bring the palace back. Sixteen years after the re-unification of Germany, in 2006, Angela Merkel's government, in a move against the communism of East Germany, initiated the demolition of the Palace of the Republic. The stated reason was the massive amount of asbestos rather than a revisionist desire to go back to more glorious seeming times.[119] This decision freed

up half of the territory that was still missing from the footprint of the Baroque castle lost to communism in the 20th century. It was deemed a »fake Baroque palace, a copy of the Hohenzollern Stadtschloss that once stood where that hole is«[120] by Michael Kimmelman of the *New York Times*. The director of the urban museums of Berlin and curator of the Humboldt Forum said in an interview published in the *Berliner Zeitung* on July 4, 2017: »One could have reconstructed the Palace of the Republic. But if we plan to reconstruct the castle, why not the palace? But at this point, the castle is ok. It will be a very beautiful building! Within a few years, it will acquire a patina, then nobody will believe that it is brand new.«[121]

Brand-new with built in patina also describes the so-called glass farm in Schijndel in the Netherlands, designed by Winnie Maas, architect and co-founder of the Dutch architecture firm MVRDV. Schijndel's market square had suffered from WWII bombings and needed reconfiguration (it also happens to be Maas's hometown). Maas designed and built a market building for the center of town. A collaboration with artist Frank van der Salm, the building turned out to follow the envelope of a traditional farm which had been developed as a synthesis of photographs made from dozens of historic farmhouses of the area. Instead of replicating one, the operation merged the features to a »typical« barn that encompassed a large number of real barns, all of them still standing. Far from a historic reconstruction (there was never even a farmhouse in the square), this building constitutes a creative re-invention of a farmhouse using a slightly larger scale and a modern glass-curtain wall system with the image of the farm printed on it. The selection of façade elements, for example, followed the parameters laid out by Gerard Buenen: »Once the façade composition of the average farmhouse had been determined, a selection of applicable façade elements was made, based on the set of 87 farmhouses. The criteria for selection included, but were not limited to, the degree of authenticity, degree of intactness, and the personal preferences of the photographer and artist Frank van der Salm. The elements selected were photographed in such a manner that they could be assembled from tens of photos, making it possible to obtain images with an extremely high resolution. Photos were made of stable doors, stable windows, shutters, and window frames, supplemented with such details as wall decorations, stabilization anchors, rowlock courses, and flower boxes.«[122] This overall photo is pasted on the volume of the barn's glass façade. »By letting each façade vaguely filter through the print of the opposing façade, the illusion is created that the building as a whole is transparent.«[123] The photos themselves merge into a whole by divergent representations that can be found in the window reflections, for example, the glow of a sunset, tree branches and other contextual features that differ from the actual context. A highly manipulated image, an invention of a historic building has become a new community center. Transparent areas are implemented where a view in or out was necessary; the contemporary window is just a change in print pattern on the glass rather than a framed piece of fenestration (which in turn can be found as a high definition photograph on the façade). »The print of the Glass Farm consists of 4 components: the texture, the façade elements, the creative layer, and the transparent fields. Together, they form the building's overall picture.«[124]

33. Simulation of Stadtschloss, Berlin, Germany, 1994.
34. Stadtschloss, Berlin, construction, 2018.

4. Play and deception world's fairs – stage sets and animations

Theater and spectacle

Physical architectural space has the potential for spectacle, illusion, and theatric expansion of its material presence. Greek theaters housed plays that would put spectators through an emotional catharsis (purification) through experiencing theatric performances. Stage sets suggest buildings, spaces, and entire landscapes to act out plays in. A combination of sculpture, painting, and architecture can easily stretch the reality of built walls beyond their own materiality. Examples of deceptive spaces, acting like expanded stage sets, are numerous in architectural history. In 1482 Donato Bramante worked around a site constraint by having a perspective illusion provide one arm of the transept in Milan's Santa Maria presso San Satiro. This trompe-l'œil apse allowed Bramante to follow the expected plan typology on a site that was not big enough and play out the technique of perspective and architectural illusion.

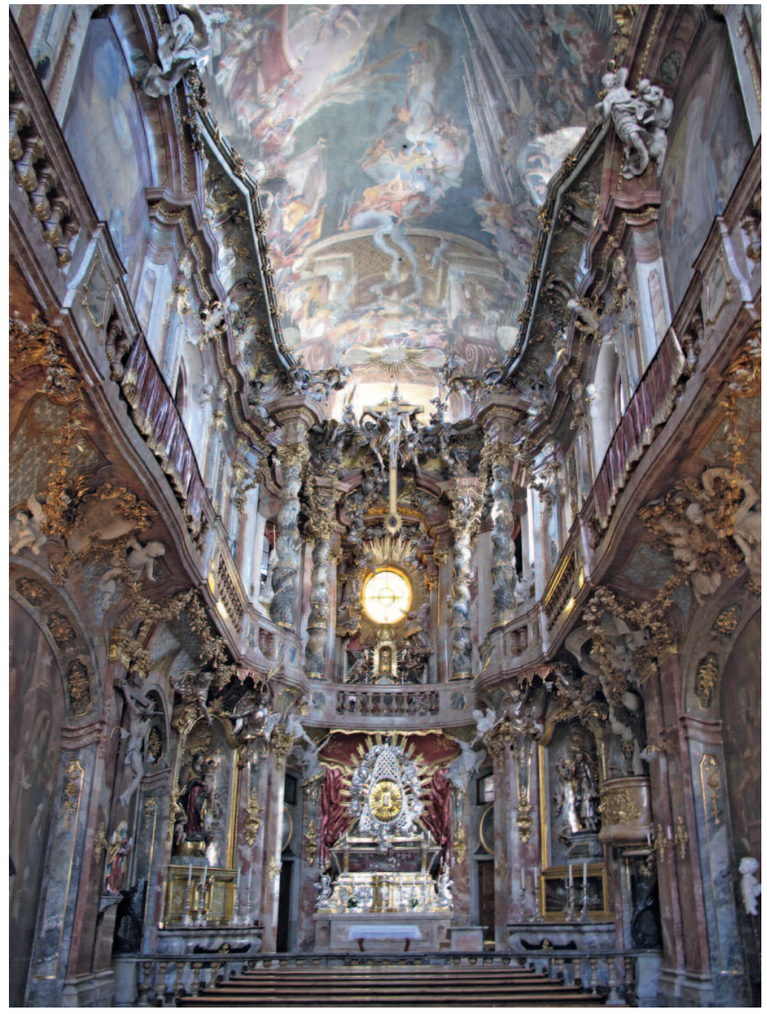
In the early 20th century complex film sets brought ancient civilizations to life, in the late 20th and early 21st century, video games take on the same role: reconstructing environments to play in. Tom Carson writes in his essay »True Fakes on Location« that »the bulk of people's information about the architecture of archaic societies comes from movies«.[125] He continues to explain the lure and success of the set for the 1916 epic film *Intolerance* by David Wark most well known as D.W. Griffith: »One reason *Intolerance*'s Babylon still looks stunning is that the age of computer-generated imagery has all but ruined our capacity to experience Hollywood's imagineering as something nonetheless rooted in the material world. Maybe Griffith's epic is only a movie, but viewers can't help registering that its artifice is paradoxically factual. Countless people labored to construct it; those towering elephants weren't just clouds in God's coffee.«[126] For many films, Hollywood reconstructed the historic condition of pretty much any environment: Chinese cities and waterfronts and a *Titanic* 10% smaller than the original ship, set on a hinge for its dramatic sinking and connected to a large water tank. Cinecittà Studios in Rome was home to a Roman Forum three times the size of the original for Cleopatra (1963) and the large sets for Ben Hur's chariot arena that took up 148 acres. Warner Bros. in London built the Great Hall, the Forbidden Forest, Platform 9 3/4 and Dragon Alley to stage Harry Potter's adventures.[127] Many more film cities and environments could be described, all of them bringing the stories to life with fusions of architectural styles and details that are the source of many people's »knowledge« about architectural history. More recently, animated environments have merged with filmed sequences, blurring the boundary of physical and virtual space in set design. The film *Black Panther,* released in 2018, features the fictional land of Wakanda, brought to life by production designer Hannah Beachler and her team. Building a large variety of digital environments combining genuine African landscapes with the technological advances of a science fiction film, cultural connotations were especially important. Viewers would »feel« if something did not seem authentic, even with little knowledge of the precedents used. Merging the familiar with the futuristic made it necessary to balance steel and glass curtain walls with mud brick walls and thatch roofing. Among several locations in Africa, landscape scenes in *Black Panther* were shot mostly in Uganda, providing aerial footage of thick forests which later would be combined with digital environments and actual footage with built stage sets.[128] Theater sets work with a much more limited palette to suggest complete atmospheric environments. Stage designer and architect David Rockwell writes:

»I think the first thing about designing for the stage is it is telling a story. It's what interests me about architecture frankly, is extracting a point of view in a narrative that's specific to the project.

35. Santa Maria presso San Satiro, Milan, Italy, 1482.
36. Stage design for Griffith's film *Intolerance*, 1916.
37. Film *Ben Hur*, 1959.
38. Giulio Romano, Palazzo Te, Sala dei Giganti, Mantova, Italy, 1534.
39. Palazzo Te, exterior façade.
40. Palazzo Stati Maccarani, Rome, Italy, 1524.
41. Asam Church, Munich, Germany, 1764.

In theater you're dealing with a very different toolbox, you're dealing with temporal structures, you're dealing with automation, you're dealing with high integration of lighting, but where they're similar is more interesting to me than when they're different. Where they're similar is the importance of design in creating a place for that emotional connection.«[129]

Entertainment was the main purpose of Giulio Romano's Palazzo Te, a large hybrid between palace and villa outside of the city of Mantova, Italy, initially designed for Federico II Gonazaga. The courtyard building is a remarkable example of an interplay of fake and real. The building was extensively decorated by a large team of artists immersing art into architecture. Three frescoes are of impressive realism, creating illusions of spaces, people, and narratives. Inside, the Sala dei Giganti offers an illusionary immersion into the *Metamorphoses* by the Latin poet Ovid. The painting *The Fall of the Giants* seems to defy spatial constraints in concealing geometric transitions and corners. The scene shows how divine vengeance is unleashed against the giants who attempted to conquer Olympus. Jupiter descends from his throne and hurls thunderbolts toward the assault. Giants are hit by the mountain collapsing, streams of water, and collapsing buildings.[130]



An example of Mannerist style, Palazzo Te is defined by the use of contradictory design decisions, drawing attention to breaking the rules and attracting the attention of the viewer to small narrative details. On the exterior façade, Romano plays out innovative variations of the formerly rigid Renaissance grammar, with skewed symmetries, dropped triglyphs and raised keystones, and syncopated spacing between columns and pilasters, ironic replays of an order system Romano started questioning. Alluding to building elements dropping out of place unsettles the viewer's sense of the solidity of such a large and heavy seeming structure. The elements on the north façade appear evenly spaced, but a closer look reveals a few irregularities. It is not clear if the building is a one- or two-story building, there is a secret garden with a grotto, and fake doors and windows are displayed throughout. Romano is said to not only have been playing tricks with his architecture but also conducting special performances at dinner gatherings questioning the identity of all and everything involved.

Even more exuberance can be found in Baroque architecture that became the messenger for promoting the Catholic church through the arts after the reformation had questioned its practices. St. Johann Nepomuk church in Munich is a private church built by the Asam brothers for their own use next to their house. Independent of a specific denomination, it was solely aiming at celebrating god and therefore was free to use its own symbolism. On a tiny lot, the building's façade swings convexly out into the street, while the interior is a symphony of light and intrinsic curvatures. Rowan Moore describes the complex mixture of real and fake materiality in the church:

»Games are played with appearance and reality. Some of the marble is real and some fake, but it is not always easy to know which. Sometimes, in the pews and the confessional booths, wood is clearly wood; sometimes it is sculpted beyond recognition into garlands of fruit and flowers. Daylight is augmented by yellow glass and by gilded, carved sunbeams. The ceiling contains painted architecture, which continues the three-dimensional stuff below.

Echoes start to yodel across the space: the S-curves of sculpted ribbons with those of turbulent cornices, with those of angels' drapery, and those of vegetal ironwork. Two long painted plumes of smoke continue the upward twist of barley-sugar columns below them, stone becoming vapor, before becoming the clouds that carry the ascending saint. In the ceiling a crowd ofcitizens are shown witnessing the miraculous event, standing in a city (Prague, the scene of the saint's martyrdom) with recognizably central European towers. Although they are placed in the heavenly zone, above angels and saints, they are mortals, and echo the living congregation standing below them.«[131]

Fake »cities«

Architectural deception is also common in the realm of the military, which sees defense as the most important goal, training soldiers for future and present wars. Stephen Graham describes the construction of practice areas for the military, an entire genre of fake urbanism in which to practice warfare. Intentional deception for a clear purpose and playful illusion in architecture lay close together. In order to mislead the British fighter pilots during WWII, the city of Hamburg covered over 225,000 square yards of water in its port with wood planks painted to look like blocks of the city, showing rooftops and streets to offer successful targets. The real railroad station and port were painted to be invisible, while new ones were suggested in order to shift attention from the actual city center to the implied one.[132] Camouflage is an important military strategy, applied to buildings, vehicles, and people to change the reality of their physical presence, to make things appear and disappear from view. Since many conflicts take place in cities, ghost cities are built as a training ground for these future battles. Stephen Graham writes about the simulation of military targets: »A hidden archipelago of mini-cities is now being constructed across the US sunbelt, presenting a jarring contrast to the surrounding strip-mall suburbia; other Third World cityscapes are rising out of the deserts of Kuwait and Israel, the downs of Southern England, the plains of Germany and the islands of Singapore. Some are replete with lines of drying washing, continuous loop tapes playing calls to prayer, wandering donkeys, Arabic graffiti, ersatz minarets and mosques; on occasion, civilian ›populations‹ are bused in to wander about and role-play in Arab dress. Others have slum or favela districts, with built-in olfactory machines that can simulate the smells of death and decay.«[133] The 21st century fake military cities are stage sets[134], they are not just artifacts to practice in but come with role-playing »insurgents« such as the training facility Zussman Village at Fort Knox, Kentucky. A social and political message of the type of conflict is embedded in the mock war-torn urban elements complete with rats, odors of rotting bodies and sewage, the fake becoming quite real.[135]

Built stories

Storytelling is an important part of human existence; literature represents a way to imagine, learn, and experience things beyond one's own life. It is obvious that reading a book is a journey into fantasy and allows one to drift away into other worlds without much equipment needed. Theater and plays also have played a crucial role in human culture for millennia. Three-dimensional storytelling through stage sets and experiential rides is at the core of Disney's theme parks, using common stories and popular films, creating a machine-run entertainment experience. Michael Sorkin writes in a 1992 essay »See you in Disneyland«: »Thanks to Disney and like attractions, Orlando has become America's capital of transience, with more hotel rooms than Chicago, Lost Angeles, or New York. But the empire of Disney transcends these physical sites; its aura is all-pervasive. Decades of films have furnished a common iconography on generations. Now there is a television channel too. And years of shrewd and massive merchandizing have sold billions of Disney things …«.[136] Disney's success caused the intensification of the imaginary cause, turning Disneyland (Los Angeles) into a nostalgic historic site that is being replicated at Disney World in Orlando, Florida. The simulacrum of a fantasyland, two degrees removed from reality. Jean Baudrillard explains how Disney erases the real and replaces it with a two-dimensional experience in a collapsed time: »Disney wins at yet another level. It is not only interested in erasing the real by turning it into a three-dimensional virtual image with no depth, but it also seeks to erase time by synchronizing all the periods, all the cultures, in a single traveling motion, by juxtaposing them ina single scenario. Thus, it marks the beginning of real, punctual, and unidimensional time, which is also without depth. No present, no past, no future, but an immediate synchronism of all the places and all the periods in a single atemporal virtuality.«[137]

Amusement theme parks are tightly programmed and controlled entertainment that peoplepatiently stand in line for as they go from ride to ride, living through an eclectic combination of worlds mixing time, context, and culture. Disney's parks go for scaled perfection, the stage set of Main Street USA acting as a pseudo-historic city center, a nostalgic testimony of what people think is a remake of authenticity. The theme park approach also entered the design of America's malls in the early 20th century, and the trend of fictional habitats keeps evolving. Nickelodeon Universe Theme Park opened as the largest indoor park in the U.S., in 2008, offering immersion into all your favorite childhood shows from the 1990s. A Sponge Bob Square Pants utopia with ample shopping and hotel accommodations is part of the Mall of America. The interior appears like a trade show arrangement with rides set up one next to the other under a large-span industrial roof structure, a colorful production place for fun to be had.

Tourism, while seemingly an innocent and even educational travel endeavor of the middle and upper class, has many moments of deception to offer. As expectations are linked to finding an authentic experience, many locations help intensify their original flair with enhancements. Set in contrast to work life, travel and leisure is responsible for the fun part of our existence, the entertainment and pleasure that work might not grant. As we stay more and more connected to our work at all times, the search for the real becomes more urgent and is aimed at known and authentic places. The symbols of our touristic endeavors are offered to us as clean versions of themselves, romantic, exotic, or deeply cultural. The stereotype of a place and landmark precedes its actuality. Dean MacCannell writes: »Promotion material can mark a separation of fiction from reality as it tries to do just the opposite. It presents a sanitized tourist city as the actual city; the cats at the Roman Forum without their fleas.«[138] Marketing and films have shared so many images of the most famous tourist attractions, such as the Eiffel Tower or the Statue of Liberty, that one can only re-visit them, there is never a first time. The symbolism attached to famous monuments unites us all during the visit, representing a cultural agreement of the collective. »Every tourist visit is a microscopic event at the level of cultural DNA. It is an occasion for social affirmation and renewal, atrophy, or questioning, leading to changes in values at the individualand eventually collective levels. These moments of engagement with tourist symbolism constitute our highest ethical challenge even if they are misrecognized as having little to do with ethics. The most un-ethical thing one can do in the presence of an attraction is to accept a fixed, fantasy version of its symbolism.«[139]

Las Vegas is known for an assembly of themed resorts where gambling, shopping, and other entertainment comes together. The city is defined by what is dubbed »casinopolitanism«, an urban strategy that is being applied in other cities that allow gambling. The famous Las Vegas strip is where a century ago a ghost town lay inactively in the desert. The first casinos opened in 1941 and since then developers have reinvented the city many times. Guests can have New York, Paris, Venice, the Italian village Bellagio, and much more, all in one place. Identified through scaled down parts of major monuments (Eiffel Tower, Grand Canal, and Venice's Ca d'Oro's), they are trying to *be* Paris or Venice but to offer an even better and condensed experience that is much easier to maneuver.

42. Aerial view of a part of Disneyworld, Orlando, FL, USA, 2011.
43. Hotel »Paris«, Las Vegas, NV, USA.
44. SITE, The »Indeterminate Facade« of the BEST Store in Houston, TX, 1974/75.
45. SITE, The »Notch Façade« of the BEST Store in Sacramento, CA, USA, 1977.

Themed buildings

James Wines is the founder of SITE, an architecture and arts organization known especially for its series of stores for the BEST corporation. SITE embedded cultural commentary and criticism into their work, playing out tongue-in-cheek gestures such as peeling off façade layers, crumbling bricks, and gaping holes in the façades of big box stores.[140] Revealing what is inside, the gestures are linked to the pop art and graphic novel type of entertainment radiating from their buildings. James Wines explains his motivation toward an integrated environmental and sculptural architecture in an interview: »I became much more interested in a fusion of ideas, fusion of art and its context, art and architecture, experimenting with environmental art.«[141] He continues »another aspect of this work was to open up a questioning of the typical commercial environment; meaning a process of motivating people to react differently to their routine surroundings. The resulting public reactions became everything from bemusement, to confusion, to uneasiness, even sometimes outrage.«[142] »A great deal of SITE's work is about inversion, fusion, intervention, exaggeration – often just taking something apart and examining the elements of construction from a different point of view. This element of »in process (or, more specifically, engaging process as the content) has always been more interesting to me than a finished building. The point is to attack!«[143] In a process of de-architecturalization, images and partial theatric moments of deformation go beyond the necessary and introduce a recognizable story or momentary experience, all in the service of marketing.

Beyond reality

»An original, autographic work (for example a painting made and signed by the artist's hand) is the unmediated making of its author. But in the Albertian, allographic way of building the only work truly made by the author is the design of the building – not the building itself, which by definition is made by others. The only way for Alberti to claim an extension of authorship, so to speak, from the drawing to the building was to require that the building and its design should be seen as perfectly identical.«[144] (Mario Carpo)

The text above looks at a variety of instances where real and fake applies to the built environment in different ways. Phenomena such as authenticity, authorship, and originality are intertwined with factors related to time, form, place, and perception. Illusionary spaces and details can appear quite real even if they cite fiction or spiritual dimensions. Real buildings that are lacking essential elements can seem unreal and devoid of identity. The factor of time and cultural acceptance has rendered buildings and sites real, despite a clear recognition that they are borrowed from somewhere else. Building types and formal expressions get appropriated across regions through migration and experimentation, shifting rituals, and continuing social evolution.

Real architecture is dependent on sincere creativity paired with functional and technical prowess – it is achieved only by the simplest or most sophisticated buildings. The notion of real is dynamic and experiential, repetition of a ritual might turn an action from a singular event into a meaningful tradition. Resistance to change drives a sense that the status quo is the right place to stay, even if it is the result of continuous layered construction in which the status quo never lasted long.

The exploration of fake and real invites the rethinking of a series of architectural definitions, seeing »architecture« as being inhabited by the mind and the body throughout history. Buildings are imagined, anticipated, experienced, and viewed by humans, which makes conception and construction an inseparable part of them. The critical evaluation of truth can provide an enlarged tool palette to designers, considering our increasingly hybrid cultural contexts, popular opinion, and virtual processes as part of the design process. This expansion of the tool palette goes hand in hand with the acknowledgement of larger teams involved in design and construction and the presence of participatory approaches that turn building into a community process. The duality of fake and real also has to do with the availability of technologies that have added the new dimension of digital tools and virtual space to design and execution.

Western culture is known for holding on to the original building, which has spawned intense discourse about preservation, reconstruction, and maintenance. Parts of the Asian culture value the brand new or repaired over a historic artifact. The Japanese Ise Grand Shrine has been torn down and rebuilt every 20 years for the past millennium, a process celebrated in the form of the Shikinen Sengu ceremony. Modeled after historic granaries, the shrine's typology stems from a formerly agrarian use. Through that process of repeated renewal, the regional craftsmen retain the skills necessary to renew the shrine. The value of the building is independent of its »originality« or

46. Kōtai-jingū (Naiku) at Ise city, Mie prefecture, Japan.

historic age; it is the form and process that carries the meaning. The continuous rebuilding is an efficient way to avoid decay and expiration. This same process of rebuilding the same model of housing or ritual structures also characterizes vernacular and indigenous construction, which are experiencing renewed interest in the 21st century.

»We live in a world increasingly dominated by fake, the prepackaged, and the artificial. Whichever way we turn we are beset by outrageous advertising, lying politicians, and fraudulent memoirists. Some of us live in cookie-cutter suburban developments, others in gentrified urban neighborhoods almost indistinguishable from team parks. […] But if we look around, there are intimations of a growing backlash as the demand for the honest, the natural, the real – that is, the authentic – has become one of the most powerful movements in contemporary life.«[145] (Andrew Potter)

The backlash against artificial products and rituals especially in the post-industrial Western lifestyle has led to an increased demand for the natural and authentic. With everyday life being strongly impacted by commercial interests of corporations and their products, the term »authentic« has become a successful marketing tool. In his book *The Authenticity Hoax – How We Got Lost Finding Ourselves* author Andrew Potter identifies the creation of »fake authenticity«[146] – generated to make consumers feel that they are getting closer to the essence of things. There is great profit in authentic vacations, furniture, houses, and meals. The term »place« also has been revitalized and plays a role in communities fighting car dominated cities that have no room for the public. Farmers markets have gained popularity, complemented by events, concerts, and community gatherings, they are nostalgic in invoking the historic local market place and innovative in appropriating a variety of spaces for their purpose.

The increasing desire for authentic experiences, objects, and spaces is connected to the need for sustainability, ethics, simplicity, and rootedness. Authenticity is never seen as negative and relates to an ancient desire of humans to be one with nature. Andrew Potter argues that this kindof authenticity desired by so many does not exist but represents an ideology, a literal chasing of rainbows. A lack of specificity and rootedness to the nature of places has brought renewed interest in imagined or real local architectural traditions counteracting the global nature of modern architecture production. Widespread tourism and travel with the desire to immerse in local culture has turned our attention to an updated and often artificially produced version of vernacular. New vernacular building types have evolved that historically did not exist. Hotels and resorts allude to regional character – for some a sensitive way to follow a sense of place, for others a fakery with the notion of a theme park. In a time when identity is deemed important and people long for the sensations of real places, exaggerated authenticity comes in handy and sells well. Architects and designers are a highly educated group of professionals confident that they know what constitutes high design and authentic buildings. As Andrew Potter identifies, authenticity however lives in a circle of exclusivity; it is dependent on a continuity of habit and make, that in a globalized world is impossible to hold onto. Our condition of hybrid reality,

global influences and changing construction technologies makes it impossible to maintain a traditional notion of authenticity. Materials and details that are presented to us as authentic are non-composites, materials that were common before modernism unfolded, unprocessed and natural seeming. Manufactured and hybrid construction materials are struggling to acquire a notion of authenticity.

Is the fake the new real?

Daniele Barbieri wrote an essay in 1987 with the title »Is Reality a Fake?« in which he explores the semiotic[147] side of copies and fakes. His initial definition of fake is: »A fake is an object resembling the authentic one, being nevertheless not identical.«[148] This leads him to point out the issues of defining what an authentic object is and what identity entails. Adding the factor of time to the conversation, he states: »Even the same person, or the same object is not absolutely identical with himself/itself at two different instants.« Absolute identity (meaning you cannot find it in any different property) therefore cannot be found if one defines temporal properties as pertinent for identity. »We need to fix a pertinence criterion to have the possibility of observing identity: identity is never absolute, it is always relative to a pertinence criterion.«[149] In our lifetime, understanding and interpretation of spaces and related symbols change – they are not static.

The fake fake

The artificial is tightly embedded into Americana, and what looks real is often good enough. Jaap Kooijman refers to »clichéd genre conventions, imitation, and continuously recycled images which tend to be viewed, particularly by Europeans, as signs of fakeness.«[150] Especially American culture and consumer context is justifiably working with representations of an imagined world. American pop culture freed itself from high artistic endeavors seeking boldness and everyday topics. Its fakeness is a relief, a space to fabricate an individual and independent lifestyle. The content is light and easily consumable versus the traditional arts that require education and effort to be understood. Ada Louise Huxtable bemoans the prevalence of the surrogate in the *New York Times* on March 30, 1997: »Surrogate experience and synthetic settings have become the preferred American way of life. […] Distinctions are no longer made or deemed necessary between the real and the false; the edge usually goes to the latter, as an improved version with defects corrected – accessible and user-friendly. […] All fakes are clearly not equal; there are good fakes and bad fakes. The standard is no longer real versus phony but the relative merits of the imitation. What makes the good ones better is their improvement on reality.«[151] She continues to talk about how Las Vegas turned fake into an art form. »The outrageously fake fake has developed its own indigenous style and life style to become a real place.«[152]

Even the fake façades of the legendary Potemkin Villages turn out not to be real fakes – a cultural myth according to Aleksandr Panchenko. They were honest fakes, never hiding the fact that they were stage sets put up for Catherine the Great. Michael David Fox cites Panchenko: »While elaborate entertainments staged to project the extent of Russian imperial might, here is what is important: Potemkin did in fact decorate the city and settlements, but he never hid the fact that they were decorations.«[153] The stage-sets and entertainment structures turned into a deception myth of political stagecraft only later. They were an early version of the world's fairs and entertainment venues we are used to in the 21st century.

Looking behind the obvious interpretation of events and conditions is crucial for designers and architects alike; allowing one dominant factor (especially profit) to drive all decisions leads to skewed outcomes and fakery. In our excursion through fake architecture, do we observe buildings and spaces that act like spaces but should not be considered architecture?

Changes of authenticity – hyper reality

Where fake and real have almost merged, replaced each other, we reach the realm of hyper reality, an exaggerated version of reality itself. This cultural condition is especially possible in technologically advanced societies, in which architecture and cities can be simulated and in which the image can fool the viewer. Virtual reality co-exists and blends with the built reality. Formerly meaningful signs have lost their meaning in the abundance of images and information accessible to hu-

mans. Neil Leach writes »The modern office and home are deluged with reproduced images and information: news on the hour, every hour; movies previewed, premiered, released, cloned into videos, and drip-fed trough cable TV. It is a culture of the copy, a society of saturation, the second flood. The world has become ›xeroxisized‹ to infinity.«[154] Where one would think more information creates more meaning, the opposite occurs. The image and the imaginary have been accepted as the real, the prop is the real thing. In the sense of the fairy tale *The Emperor's New Clothes*, fake and virtual is accepted and enjoyed as its own reality. This condition of going beyond reality is linked to Paul Virilio's overexposed city,[155] which has collapsed perceptions of time and territory. He states: »With the screen interface of computers, television and teleconferences, the surface of inscription, hitherto devoid of depth, becomes a kind of *distance*, a depth of field of a new kind of representation, a visibility without any face-to-face encounter in which the *vis-à-vis* of the ancient street disappears and is erased. […] Devoid of objective boundaries, the architectonic element begins to drift and float in an electronic ether, devoid of spatial dimensions, but inscribed in the singular temporality of an instantaneous diffusion.«[156]

Jean Baudrillard explains the concept of *hyperreality* in his essay *Simulacra and Simulation*, a reality generated by models of a real without origin:

»It is going further than the ›real‹ being fused with the symbol which represents it; it creates a symbol of something that does not actually exist, a copy world, where we thrive on simulated stimuli rather than real ones. It comes with an inability to distinguish the virtual from the real and encompasses the merging of the communication with the reality.«[157]

Baudrillard continues to explain how in our post-modern postmodern society, imitation or parody are no longer relevant, it is the time of substituting »the signs of the real for the real«,[158] it is beyond artificial since the contrast to a sense of reality has gone missing. The fake is real, and historic reality has been lost. If modernism had replaced the real with an image of it, post-modernism has lost track of its copies, with representation determining reality with simulated images. Baudrillard writes further:

»It is the dimension of the virtual, of real time; a dimension which, far from adding to the others, erases them all. And so it has been said that, in a century or in a millennium, gladiator movies will be watched as if they were authentic Roman movies, dating back to the era of the Roman empire, as real documentaries on Ancient Rome; that in the John Paul Getty Museum in Malibu, a pastiche of a Pompeian villa, will be confused, in an anachronistic manner, with a villa of the third century BC (including the pieces inside from Rembrandt, Fra Angelico, everything confused in a single crush of time); that the celebration of the French Revolution in Los Angeles in 1989 will retrospectively be confused with the real revolutionary event. Disney realizes de facto such an atemporal utopia by producing all the events, past or future, on simultaneous screens, and by inexorably mixing all the sequences as they would or will appear to a different civilization than ours. But it is already ours. It is more and more difficult for us to imagine the real, History, the depth of time, or three-dimensional space, just as before it was difficult, from our real-world perspective, to imagine a virtual universe or the fourth dimension.«[159]

The low-hanging fruit: maintenance

The question of fake and real is also prevalent around the use of materiality in architecture – removing the need for maintenance, petroleum products have long replaced building skins of natural materials that otherwise need repainting, re-sealing, and replacement. Vinyl siding with the imprint of wooden grain has taken over many homes that formerly were clad in horizontal wood siding; it never has to be painted again (and is much more affordable than solid wood panels). Having become a common view in suburban cul-de-sacs, the vinyl cracks and ages like a Tupperware box. Simulating wood, they are fake wood but real siding. Vinyl siding (and many other building products made to mimic others) allows us to display the look of horizontal boards while not having to maintain them. The goal for the next centuries will be to test and examine available materials, to revisit old technologies of generating comfort and security without much energy use. This will entail the development of new tools for a more carbon-neutral balance sheet. With climate change's effects becoming more obvious and the availability of resources being in question, real buildings will have to be the outcome of collaborative teams combining engineering, research, and design.

Looking at many instances that weigh real versus fake, it becomes obvious that fake seems easier to recognize than real. The assessment of both is guided by emotions, time, locale, and culture

and is strongly connected to architectural practice, material use, and fabrication. Attaching the value of authenticity solely to place would render a relocated historic building un-authentic and fake. Linking the origin of a building exclusively to its original architect or builder would deny cultural and stylistic tendencies that an architect is inevitably part of. Linking »real« with the initial intention of a building would freeze it in time and make any change or adaptation impossible. An emphasis on material culture would suggest that change or even maintenance is questionable. Fake architectural elements are easily identified, when focusing on a specific social group or one premise only, citing an emotional attachment to how things have to be in order to be real (often driven by nostalgia or random purism regarding materiality and shape). Appropriate buildings are highly dependent on their context and use – if any condition changes, a building's status will change as well. Most buildings don't have to be unique; they act as humble participants in the ecosystem that we inhabit, aiming at sustainability and communal well-being. Since it is much easier to point fingers at fake than to identify the real with solid parameters, it comes down to looking for the fleeting poetry that alludes to a combination of sincerity, place, time, and purpose – the poetry that allows architecture to take care of our needs, to make us feel like we belong, and to inspire our fantasy.

Notes

[1] Rem Koolhaas, *S, M, L, XL*, New-York, Sigler, 1998, p. 476.
[2] https://en.wikipedia.org/wiki/Fake_news (accessed April 23, 2018).
[3] *Oxford Art Online*, Oxford, Oxford University Press, 2007. http://www.oxfordartonline.com.ezproxywit.flo.org/subscriber/article/opr/t4/e696?q=Fake&search=quick&pos=2&_start=1#firsthit (accessed June 18, 2018).
[4] *Oxford Art Online*, Oxford, Oxford University Press, 2007. http://www.oxfordartonline.com.ezproxywit.flo.org/subscriber/article/opr/t4/e696?q=Fake&search=quick&pos=2&_start=1#firsthit (accessed June 18, 2018).
[5] https://www.theguardian.com/books/2017/nov/02/fake-news-is-very-real-word-of-the-year-for-2017 (accessed June 18, 2018).
[6] James Hardy Vaux, *A New and Comprehensive Vocabulary of the Flash Language*, Project Gutenberg Australia, 2006, http://gutenberg.net.au/ebooks06/0600111.txt (accessed June 18, 2018).
[7] http://mentalfloss.com/article/92556/fake-etymology-story-behind-one-dictionarys-most-intriguing-words (accessed June 18, 2018).
[8] Ted Honderich,*The Oxford Companion to Philosophy*, Oxford, Oxford University Press, 2005, p. 787.
[9] *Oxford Art Online*, Oxford, England, Oxford University Press, 2007 (accessed April 23, 2018).
[10] Jonathon Keats, *Forged: Why Fakes Are the Great Art of Our Age*, Oxford, Oxford University Press, 2013, p. 3.
[11] Roger Scruton, *Fake Culture and the Culture of Fakes*. (lecture, October 11, 2012, https://jmp.princeton.edu/events/fake-culture-and-culture-fakes) (accessed August 3, 2017).
[12] https://www.theguardian.com/commentisfree/2012/dec/19/high-culture-fake (accessed August 3, 2017)
[13] Michael Kimmelman, »In Berlin, Rebuilding the Hohenzollern Stadtschloss May Have Become a Grand Blunder«, *The New York Times*, December 31, 2008, sec. Art & Design, https://www.nytimes.com/2009/01/01/arts/design/01abroad.html (accessed June 18, 2018).
[14] Nikolaus Pevsner, *An Outline of European Architecture*, Harmondsworth, Penguin, 1957, p. 23.
[15] John Ruskin, 1998. *The Seven Lamps of Architecture*, Kila, Mont, Kessinger. http://site.ebrary.com/id/10003777. p. 40 (accessed June 18, 2018).
[16] ibid.
[17] ibid.
[18] Gottfried Semper, *The Four Elements of Architecture and Other Writings*, Cambridge, Cambridge University Press, 2010.
[19] Marc-Antoine Laugier, *An Essay on Architecture*, Los Angeles, Hennessey & Ingalls, 1977, p.12.
[20] Adolf Loos, *Potemkin Village*, in: »Ver Sacrum«, July 1898.
[21] Aaron Duplantier, *Authenticity and How We Fake It: Belief and Subjectivity in Reality TV, Facebook and YouTube*, Jefferson, North Carolina, McFarland & Company, Inc., 2016, p. 7.

[22] *ibid.*
[23] Oliver Wainwright, *Trumpitecture: What we can expect from the billionaire cowboy builder, November 27, 2016*, https://www.theguardian.com/artanddesign/2016/nov/27/architecture-donald-trump-tower-president-elect (accessed July 25, 2018).
[24] United States Copyright Office, Copyright Claims in Architectural Works, https://www.copyright.gov/circs/circ41.pdf (accessed July 25, 2018).
[25] Hillel Schwartz, *The Culture of the Copy: Striking Likenesses, Unreasonable Facsimiles*, New York, Zone Books, 2014.
[26] Walter Benjamin, Michael William Jennings, Brigid Doherty, Thomas Y Levin, and Edmund Jephcott, *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*, Cambridge, Mass., London, The Belknap Press of Harvard University Press, 2008, p. 22.
[27] Noah Charney, *The Art of Forgery*, Berlin, Phaidon, 2015, p. 21.
[28] Rosmarie Beier-de Haan, Introduction, *Proceedings Annual Meeting ICOM International Committee for Museums and Collections of Archaeology and History*, Shanghai, China, 2010, p. 3.
[29] Felix Madrazo, »Copy Right« in: Winy Maas, *Copy Paste: The Badass Architectural Copy Guide*, Rotterdam, nai010 publishers, 2017.
[30] ibid.
[31]Walter Benjamin, Michael William Jennings, Brigid Doherty, Thomas Y Levin, and Edmund Jephcott. *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media* The Belknap Press of Harvard University Press, Cambridge, Mass., London,, 2008, pp. 21–22.
[32] ibid.
[33] »Architecture as Spatial-Textile Storytelling: Metamorphosis of Frieze as a Narrative Medium Mediating the Panathenaia Festival.« *Frontiers of Architectural Research* 5, no. 4, 2016, pp. 489–498.
[34] https://www.artsy.net/article/artsy-editorial-full-scale-replica-parthenon-nashville-tennessee (accessed January 21, 2020).
[35] http://www.greatmirror.com/images/medium/015850.jpg(accessed January 21, 2020).
[36] Edward Hollis, *The Secret Lives of Buildings: From the Parthenon to the Vegas Strip in Thirteen Stories*, London, Portobello, 2010, p. 16
[37] Peter Zumthor, Maureen Oberli-Turner, and Catherine Schelbert, *Thinking Architecture*, Basel, Birkhäuser, 2015. p.10.
[38] *ibid.,* p.17.
[39] Duo Dickinson, »Architects design just 2% of all Houses–Why?«, *Commonedge, 04.07.2016*, http://commonedge.org/architects-design-just-2-of-all-houses-why/ (accessed June 6, 2018).
[40] Ellen Dunham-Jones, »Seventy-Five Percent«, *Harvard Design Magazine*, #12, Fall 2000, http://www.harvarddesignmagazine.org/issues/12/seventy-five-percent (accessed June 6, 2018).
[41] Mark Jones, P. T. Craddock, and Nicolas Barker, *Fake?: The Art of Deception*, London, published for the Trustees of the British Museum by British Museum Publications, 1990. p. 50.
[42] Noah Charney, *The Art of Forgery*, Phaidon, Berlin, 2015, p. 202.
[43] Mark Jones, P. T. Craddock, and Nicolas Barker. 1990. *Fake?: The Art of Deception*, London, Published for the Trustees of the British Museum by British Museum Publications, 1990. p. 50.
[44] https://www.merriam-webster.com/dictionary/facsimile (accessed January 21, 2020).
[45] Joan Draper, »The Ecole des Beaux-Arts and the Architectural Profession in the United States: The Case of John Galen Howard», in: Spiro Kostof and Dana Cuff, *The Architect: Chapters in the History of the Profession*, University of California Press, Berkeley, 2008.
[46] David van Zanten, »Félix Duban and the Buildings of the Ecole des Beaux-Arts, 1832 to 1840«, *Journal of the Society of Architectural Historians / Society of Architectural Historians,* 37, 1978, pp. 161–174.
[47] Ines Weizman, »Architectural Doppelgangers.« *AA FILES,* no. 65, 2012, pp.19–24, p.19.
[48] Ibid.
[49] Ibid.
[50] Mario Carpo, *The Alphabet and the Algorithm*, Cambridge, Mass.,The MIT Press, 2011, p. 39.
[51] Mitch Tuchman, What Makes a Copy-Cat a Copy-Cat? The Complex Case of Architectural Copyright, April 20, 2014, https://www.archdaily.com/497568/what-makes-a-copy-cat-a-copy-cat-the-complex-case-of-architectural-copyright (accessed July 25, 2018).

[52] https://www.theguardian.com/artanddesign/gallery/2013/jan/07/replica-architecture-china-in-pictures (accessed, July 25, 2018).
[53] http://www.timfranco.com/china/photographer/professional/shanghai/blog/2014/6/21/fake-zaha-hadid-in-chongqing (accessed, July 25, 2018).
[54] Kevin Holden Platt, »Copycat Architects in China Take Aim at the Stars«, *Der Spiegel Online*, December 28, 2012, http://www.spiegel.de/international/zeitgeist/pirated-copy-of-design-by-star-architect-hadid-being-built-in-china-a-874390.html (accessed June 27, 2017).
[55] Hannah Wood, *Never Meant to Copy, Only to Surpass: Plagiarism Versus Innovation in Architectural Imitation*, April 13, 2017. https://archinect.com/features/article/150002511/never-meant-to-copy-only-to-surpass-plagiarism-versus-innovation-in-architectural-imitation (accessed July 25, 2018).
[56] ibid.
[57] ibid.
[58] Bernard Hulsman, *Similarity,* Winy Maas, *Copy paste: the badass architectural copy guide*, Rotterdam, nai010 publishers, 2017, p. 28.
[59] Witold Rybczynski, *When architects plagiarize–It is not always bad*, September 14, 2005 , http://www.slate.com/articles/arts/architecture/2005/09/when_architects_plagiarize.html (accessed, July 25, 2018).
[60] Sam Jacob, *The copy in contemporary culture is both despised and feared*, February 25, 2016, https://www.dezeen.com/2016/02/25/sam-jacob-opinion-column-copying-conservation-contemporary-culture-queen-other-nefertiti/ (accessed July 25, 2018).
[61] Ines Weizman, »Architectural Doppelgangers«. *AA FILES,* no. 65, 2012, p. 21.
[62] Kevin Holden Platt, »Copycat Architects in China take Aim at the Stars«, *Der Spiegel Online*, December 28, 2012, http://www.spiegel.de/international/zeitgeist/pirated-copy-of-design-by-star-architect-hadid-being-built-in-china-a-874390.html (accessed July 25, 2018).
[63] Bianca Bosker, *Original Copies: Architectural Mimicry in Contemporary China*, Honolulu, University of Hawaii Press, 2013, p.7.
[64] ibid., p. 47.
[65] ibid., p. 55.
[66] http://www.factum-arte.com/aboutus, accessed, July 25, 2018.
[67] Noah Charney, *The Art of Forgery*, Berlin, Phaidon, 2015, p. 244.
[68] Paolo Caliari, Returning ›Les Noces de Cana‹ and some issues concerning repatriation and originality, January 2018, http://www.factum-arte.com/pag/537/http://www.factum-arte.com/pag/204/returning-les-noces-de-cana-by-paolo-caliari, (accessed June 27, 2017).
[69] http://www.factum-arte.com/pag/38/A-facsimile-of-the-Wedding-at-Cana-by-Paolo-Veronese, (accessed, July 25, 2018).
[70] Laurrent Banguet, »France Opens New Lascaux Prehistoric Art Cave Replica«, *Phys.org.* https://phys.org/news/2016–12-france-lascaux-prehistoric-art-cave.html, (accessed May 19, 2017).
[71] Jearn-Pierre Chadelle, »Replica of Ancient Lascaux Cave Art Opens in France«, *Deutsche Welle,* Culture, DW, 13.12.2016, http://www.dw.com/en/replica-of-ancient-lascaux-cave-art-opens-in-france/a-36735934, (accessed May 19, 2017).
[72] Paolo Caliari, Returning ›Les Noces de Cana‹ and some issues concerning repatriation and originality, January 2018, http://www.factum-arte.com/pag/537/-p--em-Returning--quot-Les-Noces-de-Cana-quot---em--by-Paolo-Caliari-br---Conference--2008--p-, (Accessed June 27, 2017).
[73] For more information: Anne-Catrin Schultz, *Carlo Scarpa: Layers*, Stuttgart, Edition Axel Menges, 2014.
[74] Natasha Adamou, 2016. »›Shade Between Rings of Air‹: architecture, sculpture, replication: Carlo Scarpa / Gabriel Orozco, 1952 / 2003«, *The Sculpture Journal / Publ. by the Public Monuments and Sculpture Association,* vol. 25, 3, 2016, pp. 401–419.
[75] ibid., p. 403.
[76] ibid., p. 403.
[77] Felix Madrazo, »Copy Right« in: Winy Maas, *Copy Paste: The Badass Architectural Copy Guide*. Rotterdam, nai010 publishers, 2017, p. 38.
[78] ibid, p. 41.
[79] ibid, p. 41.
[80] Carlo Ratti and Matthew Claudel, *Open Source Architecture*, London, Thames & Hudson, 2015, p. 6.

[81] ibid.
[82] Winy Maas, *Copy Paste: The Badass Architectural Copy Guide*. Rotterdam, nai010 publishers, 2017, p. 309.
[83] *Oxford Art Online*, Oxford, Oxford University Press, 2007.
[84] Bernard Hulsman, »Similarity«, Winy Maas, *Copy Paste: The Badass Architectural Copy Guide*, Rotterdam, nai010 publishers, 2017, p. 38.
[85] Felix Madrazo, »Copy Right« in: Winy Maas, *Copy Paste: The Badass Architectural Copy Guide*, Rotterdam, nai010 publishers, 2017, p. 38.
[86] Wolfgang Herrmann, *In What Style Should We Build?: The German Debate on Architectural Style; Heinrich Hübsch, 1828, Rudolf Wiegmann, 1829, Carl Albert Rosenthal, 1844, Johann Heinrich Wolff, 1845, Carl Gottlieb Wilhelm Bötticher, 1846, Heinrich Hübsch, 1847*, Chicago/Ill, Univ. of Chicago Press, 1992, p. 64.
[87] Bernard Rudofsky, *Architecture Without Architects: A Short Introduction to Non-Pedigreed Architecture*, New York, Museum of Modern Art, 1965. p. 5.
[88] Christopher Alexander, *A Pattern Language: Towns, Buildings, Construction*, New York, Oxford University Press, 1977, p. xvi.
[89] ibid., p. 535.
[91] Anthony Vidler, *The Idea of Type: The Transformation of the Academic Ideal, 1750–1830*, Cambridge, Mass., MIT Press, 1977, p. 94.
[92] Leandro Madrazo, The concept of type in architecture : an inquiry into the nature of architectural form : a dissertation submitted to the Swiss Federal Institute of Technology, Zürich for the degree of Doctor of Technical Sciences, January 1995 https://www.researchgate.net/profile/Leandro_Madrazo/publication/304347927_The_concept_of_type_in_architecture_an_inquiry_into_the_nature_of_architectural_form_a_dissertation_submitted_to_the_Swiss_Federal_Institute_of_Technology_Zurich_for_the_degree_of_Doctor_of_Technical_/links/576c4f7708aec1ce8e1e5fb7/The-concept-of-type-in-architecture-an-inquiry-into-the-nature-of-architectural-form-a-dissertation-submitted-to-the-Swiss-Federal-Institute-of-Technology-Zuerich-for-the-degree-of-Doctor-of-Technik.pdf, (accessed July 25, 2018).
[93] Kim Velsey, »Simulacra of Urban Experience in a Suburbanizing New York«, *Observer,* September 1st, 2015, http://observer.com/2015/09/ersatz-urbanism-simulacrums-of-urban-experience-in-a-suburbanizing-new-york/, (accessed July 25, 2018).
[94] *What is New Urbanism?*, https://www.cnu.org/resources/what-new-urbanism, (accessed July 25, 2018).
[95] Will Doig , »Invasion of the faux cities«, *Salon*, September 22, 2012, https://www.salon.com/2012/09/22/invasion_of_the_faux_cities/, (accessed July 25, 2018).
[96] Robert Allsopp, »Are we killing Yonge Street?«, *Nowtoronto*, July 6, 2016, https://nowtoronto.com/news/are-we-killing-yonge-street/#.V341gu1dyKw.facebook, (accessed June 13, 2018).
[97] Gilbert Herbert, »Facadism in Italian Architecture«, *RIBA Journal*, 68, 1960, p. 30.
[98] Thomas L. Schumacher,. »›Facadism‹ Returns, or the Advent of the ›Duck-orated Shed‹« – *Journal of Architectural Education.* 63, (2), 2010, p. 129.
[99] ibid.
[100] ibid.
[101] Robert Venturi, »The duck and the decorated shed«, *Postmodernism: a Reader,* ed. by Thomas Docherty, 1993, p. 87.
[102] Mies van der Rohe, »On Form in Architecture«, *Die Form,* 2, 1927, p. 59, p. 257.
[103] https://thelyingtruthofarchitecture.wordpress.com/2009/09/12/mies-van-der-rohe-the-liar/ (accessed July 25, 2018).
[104] Jorge Otero-Pailos, Erik F. Langdalen, and Thordis Arrhenius, *Experimental Preservation*, Zürich, Lars Müller Publishers, 2016, p. 24.
[105] David N. Fixler, »Is It Real and Does It Matter?: Rethinking Authenticity and Preservation«, *Journal of the Society of Architectural Historians / Society of Architectural Historians*, 67, 2008, 1, p. 11.
[106] ibid.
[107] *Operational Guidelines for the Implementation of the World Heritage Convention,* Paris, UNESCO, revised 2005, https://whc.unesco.org/en/guidelines/, (accessed July 25, 2018).
[108] Noah Charney, *The Art of Forgery*, Berlin, Phaidon, 2015, p.125.
[109] Nicholas Stanley-Price, »The Reconstruction of Ruins: Principles and Practice«, Sharon Sullivan = and Richard Mackay, *Archaeological Sites: Conservation and Management*, Los Angeles, Calif: Getty Conservation Institute, 2013, p. 515, https://www.archaeological.org/pdfs/sitepreservation/N_S-P_Article_Dec_2009.pdf, (accessed July 25, 2018).
[110] ibid.
[111] ibid.
[112] ibid.
[113] ibid.
[114] Fritz Wenzel, *Berichte vom Wiederaufbau der Frauenkirche zu Dresden: Konstruktion des Steinbaus und Integration der Ruine*, Karlsruhe, Univ.-Verl. Karlsruhe, 2007.
[115] http://berliner-schloss.de/neues-schloss-humboldt-forum/die-preistraeger-des-architektur-wettbewerbs-2008/ (accessed July 25, 2018).
[116] Michael Scatturo, *Berlin's rebuilt Prussian palace to address long-ignored colonial atrocities*, www.theguardian.com, May 18, 2015, https://www.theguardian.com/world/2015/may/18/berlins-rebuilt-prussian-palace-to-address-long-ignored-colonial-atrocities (accessed August 3, 2017).
[117] Förderverein für die Ausstellung, »Die Bedeutung des Berliner Stadtschlosses für die Mitte Berlins e.V.«
[118] http://berliner-schloss.de/das-historische-schloss/die-schloss-simulation-1993–1994/ (accessed August 3, 2017).
[119] Overview of architectural history: http://berliner-schloss.de/en/palace-history/short-architectural-history/ (accessed January 21, 2020).
[120] Michael Kimmelman, »Rebuilding a Palace May Become a Grand Blunder«, *New York Times,* December 31, 2008, http://www.nytimes.com/2009/01/01/arts/design/01abroad.html, (accessed August 3, 2017).
[121] Sabine Deckwert, »Paul Spies: ›Das Schloss ist eine Rekonstruktion – das Kreuz gehört auf die Kuppel‹«, *Berliner Zeitung*, July 4, 2016, https://www.berliner-zeitung.de/berlin/paul-spies--das-schloss-ist-eine-rekonstruktion---das-kreuz-gehoert-auf-die-kuppel--27914516 (accessed July 25, 2018).
[122] Gerard Buenen, *The Glass Farm: Biography of a Building*, Rotterdam, nai 010 publishers, 2014, p. 286.
[123] ibid.
[124] ibid.
[125] Tom Carson, »True Fakes on Location–World Building Hollywood Style«, *The Baffler*, no. 31, June 2016, https://thebaffler.com/salvos/true-fakes-carson, (accessed July 25, 2018).
[126] ibid.
[127] Jordi Lippe-Mcgraw, »The Nine Best Movie Sets of all Time«, *The Architectural Digest*, August 31, 2015, https://www.architecturaldigest.com/story/the-9-best-movie-sets-of-all-time, (accessed July 25, 2018).
[128] Mike Seymour, »Black Panther: Building Wakanda«, *Fxguide* (blog), February 25, 2018, https://www.fxguide.com/featured/black-panther-building-wakanda/, (accessed July 25, 2018).
[129] Asad Syrkett and Zoe Rosenberg, »Architect David Rockwell pulls curtain back on designing for the stage«, *Curbed*, November 10, 2016. https://www.curbed.com/2016/11/10/13574950/david-rockwell-group-set-design-stage-she-loves-me (accessed July 25, 2018).
[130] http://www.palazzote.it/index.php/en/te-palace/monumental-rooms/chamber-of-the-giants (accessed July 25, 2018).
[131] Rowan Moore, *Why We Build: Power and Desire in Architecture*, Harperdesign, 2014, p. 94.
[132] Hillel Schwartz, *Culture of the Copy: Striking Likenesses, Unreasonable Facsimiles*, New York, Zone Books, 2014, p.166.
[133] Steven Graham, »Theme Park Archipelago: Architectural simulacra and urban warfare«, *Conference lectured at the Symposium Architectures of fear. Terrorism and the Future of Urbanism in the West*, CCCB 17–18 May 2007, http://publicspace.org/es/texto-biblioteca/eng/b037-theme-park-archipelago-architectural-simulacra-and-urban-warfare, (accessed June 13, 2018).
[134] See also Gregor Sailer's contribution in this book.
[135] Steven Graham, »Theme Park Archipelago: Architectural simulacra and urban warfare«, *Conference lectured at the Symposium Architectures of fear. Terrorism and the Future of Urbanism in the West*, CCCB 17–18 May 2007, http://publicspace.org/es/texto-biblioteca/eng/b037-theme-park-archipelago-architectural-simulacra-and-urban-warfare, (accessed June 13, 2018).

[136] Michael Sorkin, *Variations on a Theme Park: The New American City and the End of Public Space*, New York, NY, Hill and Wang, 2011, p. 205.
[137] This is a translation of Jean Baudrillard's »Disneyworld Company«, published on March 4, 1996 in the Parisian newspaper, *Liberation*,https://journals.uvic.ca/index.php/ctheory/article /view/14846/5716, (accessed March 25, 2018).
[138] Dean MacCannell, *The Ethics of Sightseeing*, Berkeley, Calif, University of California Press, 2011, p. 59.
[139] ibid.
[140] http://www.siteenvirodesign.com/content/best-products, (accessed, July 25, 2018).
[141] Vladimir Belogolovsky, »Interview with James Wines ›The Point is to Attack Architecture‹«, *Archdaily*, March 9, 2016, 2018, https://www.archdaily.com/783491/interview-with-james-wines-the-point-is-to-attack-architecture (accessed March 25).
[142] ibid.
[143] ibid.
[144] Mario Carpo, *The Alphabet and the Algorithm*, Cambridge, Mass, MIT Press, 2011, p. 22.
[145] Andrew Potter, *The Authenticity Hoax – How We Got Lost Finding Ourselves*, New York,Harper/HarperCollins, 2011, p. 4.
[146] ibid.
[147] Merriam Webster Dictionary, 2018, https://www.merriam-webster.com/dictionary/semiotics (accessed July 25) »A general philosophical theory of signs and symbols that deals especially with their function in both artificially constructed and natural languages and comprises syntactics, semantics and pragmatics.«
[148] Daniele Barbieri, »Is reality a fake?«*, Versus*, 46, 1987, p. 43.
[149] ibid.
[150] Jaap Kooijman, *Fabricating the Absolute Fake: America in Contemporary Pop Culture,* revised edition, Amsterdam, Amsterdam University Press, 2014, p. 12.
[151] Ada Louise Huxtable, »Living with the Fake, and Liking It«, *The New York Times*, March 30, 1997, https://www.nytimes.com/1997/03/30/arts/living-with-the-fake-and-liking-it.html (accessed April 25, 2018).
[152] ibid.
[153] David Fox, *The Myth of the Soviet Potemkin Village*, dans le séminaire de l'Université Paris 1 Panthéon Sorbonne et de l'ENS La Russie aux XIXe et XXe siècles: politique intérieure et influences internationales (Sabine Dullin et Sophie Coeuré), séance co-organisée avec l'EHESS, à l'université Paris 1 Sorbonne, https://histoire.ens.fr/IMG/file/Coeure/David-Fox%20Potemkin%20villages.pdf (accessed July 25, 2018).
[154] Neil Leach, *The Anaesthetics of Architecture*, Cambridge, Mass., MIT Pres, 2000, p.1.
[155] Paul Virilio, Daniel Moshenberg, and Jean-Louis Violeau, *Lost Dimension*, Cambridge, Mass, MIT Press, 2012, pp.11–12.
[156] ibid.
[157] Jean Baudrillard, *Simulacra & Simulation*, Ann Arbor, Michigan, University of Michigan Press,1994. p.1.
[158] ibid.
[159] Jean Baudrillard, »Disney World Company«, *Archis*, 3, 1998, pp. 52–54, https://journals.uvic.ca/index.php/ctheory/article/view/14846/5716 (accessed July 25, 2018).

Bibliography

Amore, Anthony M., *The Art of the Con: The Most Notorious Fakes, Frauds, and Forgeries in the Art World*, Place of publication not identified: Griffin, 2016.
Anton, Mike, »A Desert City That Didn't Fan Out.« *Los Angeles Times*, August 14, 2010. http://articles.latimes.com/2010/aug/14/local/la-me-cal-city-20100814.
Arnau, Frank, *The Art of the* Faker: 3000 Years of Deception, Boston, Little, Brown, 1961.
Baudrillard, Jean. »Disneyworld Company.« *CTheory* 0, no. 0 (August 24, 2015): 3–27/1996. https://journals.uvic.ca/index.php/ctheory/article/view/14846.
Baudrillard, Jean, *Simulations*, New York, Semiotext Columbia University, 1983.
Baudrillard, Jean, and Mark Poster, *Selected Writings*, Stanford, Calif., Stanford Univ. Press, 2007.

Bauman, Lawrence Scott, »Legal Control of the Fabrication and Marketing of Fake Paintings«, *Stanford Law Review* 24, no. 5 (1972), 930–946. https://doi.org/10.2307/1228019.
Beardsworth, Sara G., and Randall E. Auxier, *The Philosophy of Umberto Eco*, Open Court Publishing, 2017.
Beckett, Alice, *Fakes Forgery and the Art World*. London, Richard Cohen Books, 1995.
Benjamin, Walter, *Illuminations*, New York: Random House, 1968.
Benjamin, Walter, Michael William Jennings, Brigid Doherty, Thomas Y Levin, and Edmund Jephcott, *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*, Cambridge, Mass., London, The Belknap Press of Harvard University Press, 2008.
Billock, Jennifer, »Everything in This Museum Is Fake«, Smithsonian, https://www.smithsonian-mag.com/travel/nothing-art-museum-real-180964918/ (accessed March 1, 2018).
Bosker, Bianca, *Original Copies: Architectural Mimicry in Contemporary China*, Honolulu, University of Hawaii Press, 2013.
Bouman, Ole, Roemer van Toorn, and Donald Gardner, *The Invisible in Architecture*, London, Academy Editions; Berlin, Ernst & Sohn, 1994.
Braham, Allan, *The Architecture of the French Enlightenment*, Berkeley, Calif., University of California Press, 1989.
Buenen, Gerard, *The Glass Farm: Biography of a Building*, Rotterdam: Nai010 publ., 2014.
Burleigh, Nina, *Unholy Business,* Collins, 2008.
Carpo, Mario, *The Alphabet and the Algorithm*, Cambridge, Mass., MIT Press, 2011.
Charney, Noah, *Art and Crime: Exploring the Dark Side of the Art World*, ABC-CLIO, 2009.
Chidester, David, *Authentic Fakes Religion and American Popular Culture*, Berkeley, Calif., University of California Press, 2010.
Comaroff, Joshua, and Ker-Shing Ong, *Horror in Architecture*, Singapure, ORD Editions, 2014.
»Copycat Behavior in Children Is Universal and May Help Promote Human Culture«, *ScienceDaily*, https://www.sciencedaily.com/releases/2010/05/100503135705.htm (accessed June 5, 2018).
CultureLabDetroit, *Culture Lab Detroit 2017: Alternative Facts*, https://www.youtube.com/watch?v=LvZZjpuHumk&utm_source=Culture+Lab+Master+List&utm_campaign=e54e2b6a2a-CLD_Dialogue_Video&utm_medium=email&utm_term=0_e503403fe1-e54e2b6a2a-306076789&mc_cid=e54e2b6a2a&mc_eid=d6591b16b7 (accessed November 27, 2018).
Curtis, William J. R., *Modern Architecture since 1900*. London; New York, Phaidon Press, 2013.
Denyer, Simon, »Along the New Silk Road, a City Built on Sand Is a Monument to China's Problems«, *Washington Post*, May 29, 2016, sec. Asia & Pacific, https://www.washingtonpost.com/world/asia_pacific/along-the-new-silk-road-a-city-built-on-sand-is-a-monument-to-chinas-problems/2016/05/29/982424c0-1d09-11e6-82c2-a7dcb313287d_story.html (accessed June 5, 2018).
»Designer Tomas Libertiny on Copying in Design.« *Dezeen*, August 8, 2013. https://www.dezeen.com/2013/08/08/opinion-tomas-libertiny-on-copying-in-design/.
Duplantier, Aaron, *Authenticity and How We Fake It: Belief and Subjectivity in Reality TV, Facebook and YouTube*, Jefferson, North Carolina, McFarland & Company, Inc., 2016.
Eagleton, Terry, *The Idea of Culture*, Malden, MA: Wiley-Blackwell, 2000.
Eckardt, Stephanie, »Damien Hirst's Massive, Polarizing New Shipwreck in Venice Is Maybe the Most Expensive Art Show Ever«, *W Magazine*, http://www.wmagazine.com/story/damien-hirst-venice-pinault-collection (accessed April 13, 2017).
Eco, Umberto, *Travels in Hyper Reality: Essays*, San Diego, Harcourt, 2002.
Fergusson, Adam, *The Sack of Bath*, London, Persephone Books, 2011.
Ferré-Sadurní, Luis, »Art Forger Is Accused of Selling Fake Prints. Again«, *The New York Times*, June 19, 2017, sec. N.Y. / Region. https://www.nytimes.com/2017/06/19/nyregion/art-forger-is-accused-of-selling-fake-prints-again.html (accessed April 13, 2017).
Fixler, David N., »Is It Real and Does It Matter?: Rethinking Authenticity and Preservation«, *Journal of the Society of Architectural Historians / Society of Architectural Historians.*, 2008, pp. 11 to 13.
»France Opens New Lascaux Prehistoric Art Cave Replica«, https://phys.org/news/2016-12-france-lascaux-prehistoric-art-cave.html (accessed May 19, 2017).
Fusco, Coco, *Corpus Delecti: Performance Art of the Americas*, London, Routledge 2005.

Gardner, Erle Stanley, *The Case of the Fabulous Fake*, New York, Fawcett Books, 2000.
Gatz, Konrad, Werner Peipenburg, and Wilhelm Otto Wallenfang, *Farbige Bauten. Color in Architecture. A Guide to Exterior* Design, New York, Reinhold Pub. Corp, 1961.
Gifford, Henry, *Buildings Don't Lie: Better Buildings by Understanding Basic Building Science?: (The Movement through Buildings of Heat, Air, Water, Light, Sound, Fire, and Pests)?: Important Information for Anyone Who Designs, Builds, Owns, Repairs, Works, or Lives in a Building*, New York, Energy Savings Press, 2017.
Giovannini, Joseph, »Architectural Imitation: Is It Plagiarism«, *The New York Times*, March 17, 1983, sec. Home & Garden. https://www.nytimes.com/1983/03/17/garden/architectural-imitation-is-it-plagiarism.html.
Graham, Stephen, »Public Space: Theme Park Archipelago: Architectural Simulacra and Urban Warfare.«, http://publicspace.org/es/texto-biblioteca/eng/b037-theme-park-archipelago-architectural-simulacra-and-urban-warfare (accessed May 19, 2017).
Groom, Nick, *The Forger's Shadow: How Forgery Changed the Course of Literature*, London, Picador, 2003.
Hammond, Stuart I., »Children's Early Helping in Action: Piagetian Developmental Theory and Early Prosocial Behavior«, *Frontiers in Psychology* 5, July 17, 2014. https://doi.org/10.3389/fpsyg.2014.00759 (accessed January 21, 2020).
Hartoonian, Gevork, and Kenneth Frampton, *Ontology of Construction: On Nihilism of Technology and Theories of Modern Architecture*, Cambridge, Cambridge University Press, 1997.
Hawthorne, Christopher, »Disneyland Meets Hogwarts at $700-Million USC Village,« *Los Angeles Times*, August 21, 2017, http://www.latimes.com/entertainment/arts/la-et-cm-usc-village-review-20170820-story.html (accessed May 19, 2017).
Hebborn, Eric, *Master Faker: The Forging of an Artist?: An Autobiography*, London, Pan, 1992.
Heller, Steven, »Duplitectural Marvels: Exploring China's Replica Western Cities«, *The Atlantic*, February 21, 2013, https://www.theatlantic.com/entertainment/archive/2013/02/duplitectural-marvels-exploring-chinas-replica-western-cities/273366/ (accessed May 19, 2017).
Herbert, G., »Facadism in Italian Architecture.« *Riba Journal* 68, no. 2 (1960): 75–80.
Herrmann, Wolfgang, J. Paul Getty Center for the History of Art and the Humanities (Santa Monica. *In What Style Should We Build?: The German Debate on Architectural Style?; Heinrich Hübsch, 1828, Rudolf Wiegmann, 1829, Carl Albert Rosenthal, 1844, Johann Heinrich Wolff, 1845, Carl Gottlieb Wilhelm Bötticher, 1846, Heinrich Hübsch, 1847*, Chicago/Ill., Univ. of Chicago Press, 1992.
Heyward, Michael, and Robert Hughes, *The Ern Malley Affair:* Introduction by Robert Hughes, London, Faber & Faber, 2003.
Hill, Jonathan, *Architecture: The Subject Is Matter*, London: Psychology Press, 2001.
Hoeller, Sophie-Claire, »11 Cities That China Ripped off from the Rest of the World«, *Business Insider*, http://www.businessinsider.com/cities-china-ripped-off-from-the-rest-of-the-world-2015-7 (accessed April 5, 2017).
Honderich, Ted, *The Oxford Companion to Philosophy*, Oxford, New York: Oxford University Press, 2005.
Hoving, Thomas. *False Impressions: The Hunt for Big-Time Art Fakes*. New York, Touchstone/Simon & Schuster, 1997.
Huxtable, Ada Louise, »Living with the Fake, and Liking It«, *The New York Times*, March 30, 1997,
sec. Arts, https://www.nytimes.com/1997/03/30/arts/living-with-the-fake-and-liking-it.html (accessed April 5, 2017).
Huxtable, Ada Louise, *Unreal America: Architecture and Illusion*, New York, W.W. Norton, 1999.
»Interview with James Wines: ›The Point Is to Attack Architecture!‹«, *ArchDaily*, March 9, 2016, http://www.archdaily.com/783491/interview-with-james-wines-the-point-is-to-attack-architecture (accessed May 1, 2017).
»Introducing Ai Weiwei's 258 Fake«, *Index Magazine*, http://magazine.harvardartmuseums.org/article/2015/02/25/introducing-ai-weiwei%E2%80%99s-258-fake (accessed May 1, 2017).
Jones, Mark, *Why Fakes Matter: Essays on Problems of Authenticity*, Published for the Trustees of the British Museum by British Museum Press, 1992.
Jones, Mark, P. T. Craddock, and Nicolas Barker, *Fake?: The Art of Deception*, London: Published for the Trustees of the British Museum by British Museum Publications, 1990.
Kajetán Paavo, *Ai Weiwei: The Fake Case. Documentary 2013*, https://www.youtube.com/-watch?v=GE70RYlpPno (accessed May 1, 2017).

Keats, Jonathon, *Forged: Why Fakes Are the Great Art of Our Age*, Oxford, Oxford University Press, 2013.
Keyes, Ralph, *The Post-Truth Era: Dishonesty and Deception in Contemporary Life*, New York, St. Martin's Press, 2004.
Kimmelman, Michael, »In Berlin, Rebuilding the Hohenzollern Stadtschloss may have become a Grand Blunder«, *The New York Times*, December 31, 2008, sec. Art & Design, https://www.nytimes.com/2009/01/01/arts/design/01abroad.html (accessed May 1, 2017).
Klotz, Heinrich, and Volker Fischer, *Postmodern Visions: Drawings, Paintings, and Models by Contemporary Architects*, New York, Abbeville Press, 1985, http://books.google.com/-books?id=rvlPAAAAMAAJ.
Kögel, Eduard, and Weiwei Ai, *Ai Weiwei Beijing: Fake Design in the Village*, Berlin: Aedes, 2007.
Konody, P. G., »From the Observer Archive, 21 April 1912: Venice Sees Its Campanile Reborn«, *The Guardian*, April 20, 2013, http://www.theguardian.com/news/2013/apr/21/observer-archive-venice-campanile-rebuilt (accessed May 1, 2017).
Kooijman, Jaap, *Fabricating the Absolute Fake: America in Contemporary Pop Culture*, revised edition, Amsterdam, Amsterdam University Press, 2014.
Koolhaas, Rem, Stefano Boeri, Sanford Kwinter, Nadia Tazi, Hans Ulrich Obrist, »Harvard Project on the City, and Arc en rêve centre d'architecture«, eds., *Mutations: Rem Koolhaas, Harvard Project on the City*, New York, ACTAR, 2000.
Leach, Neil, *The Anaesthetics of Architecture*, Cambridge, Mass., MIT Press, 1999.
»Lights On But Nobody Home: Behind the Fake Buildings That Power Chicago«, *Messy Nessy Chic* (blog), December 13, 2013, http://www.messynessychic.com/2013/12/13/lights-on-but-nobody-home-behind-the-fake-buildings-that-power-chicago/ (Accessed May 1, 2017).
Lobe, Adrian, »Donald Trump: Gebäude Wie Stinkefinger«, *Die Zeit*, December 10, 2016, sec. Kultur, http://www.zeit.de/kultur/2016-12/donald-trumps-gebaeude-architektur-tower-new-york?print (accessed May 1, 2017).
Maas, Winy, Felix Madrazo, and Bernard Hulsman, *Copy Paste. Bad Ass Copy Guide,* Rotterdam, NAI, 2014.
MacCannell, Dean, *The Ethics of Sightseeing*, Berkeley, Calif., University of California Press, 2011.
Mako, Vladimir, Marta Vukotic Lazar, and Mirjana Roter Blagojevi?, *Architecture and Ideology*, Cambridge: Cambridge Scholars Publishing, 2014.
Mancini, Enrico, »A Fake Vatican In Africa. Find The Difference«, *Positive Magazine* (blog), January 25, 2014, http://www.positive-magazine.com/a-fake-vatican-in-africa-whats-the-difference/.
Mann, Thomas, *Confessions of Felix Krull, Confidence Man: Thomas Mann*, New York, Knopf, 1955.
Miller, By Daniel, »Chinese Fakeaway: How the World's Most Famous Buildings – and Even Whole Cities – Are Being Cloned in the Far East«, *Mail Online*, January 8, 2013, http://www.dailymail.co.uk/news/article-2258975/Chinese-fakeaway-How-worlds-famous-buildings--cities--cloned.html (accessed May 1, 2017).
Mitnick, Keith, *Artificial Light: A Narrative Inquiry into the Nature of Abstraction, Immediacy, and Other Architectural Fictions*, New York, Princeton Architectural Press, 2008.
Montefiore, Simon Sebag, *Potemkin: Catherine The Great's Imperial Partner*, New York, Vintage Books, 2005.
Moore, Rowan, *Why We Build: Power and Desire in Architecture*, Harperdesign, 2014.
Morin, Jill J., *Better Make It Real: Creating Authenticity in an Increasingly Fake World: Creating Authenticity in an Increasingly Fake World*, Santa Barbara, Calif., ABC-CLIO, 2010.
Neumeyer, Fritz, and Mark Jarzombek, *Artless Word: Mies Van Der Rohe on the Building Art*, Cambridge, Mass., MIT Press, 1994.
»Never Meant to Copy, Only to Surpass: Plagiarism Versus Innovation in Architectural Imitation«, *Archinect*, https://archinect.com/features/article/150002511/never-meant-to-copy-only-to-surpass-plagiarism-versus-innovation-in-architectural-imitation (accessed April 4, 2018).
Osnos, Evan, *Age of Ambition: Chasing Fortune, Truth, and Faith in the New China*, New York, Farrar, Straus and Giroux, 2014.
Pardo, Alona, Elias Redstone, and Barbican Art Gallery, *Constructing Worlds: Photography and Architecture in the Modern Age; on the Occasion of the Exhibition »Constructing Worlds: Photography and Architecture in the Modern Age«, 25. September 2014–11 January 2015, Barbican Gallery, London*. Munich, Prestel, 2014.

Peterson, Spencer. »This Small African Town Has a Replica of St. Peter's Basilica«, *Curbed*, January 15, 2014, https://www.curbed.com/2014/1/15/10154326/photo-via-gizmodo (accessed April 4, 2018).
Pithers, Ellie. »Forging Ahead«, *British Vogue*, http://www.vogue.co.uk/article/fake-designer-goods-counterfeit-pieces (accessed April 6, 2018).
Posner, Roland, and Herbert Ernst Wiegand, *Semiotics*, Berlin, Walter de Gruyter, 2004.
»Post-Truth? It's Pure Nonsense«, *The Spectator*, June 10, 2017, https://www.spectator.co.uk/2017/06/post-truth-its-pure-nonsense/ (accessed April 6, 2018).
»Public Space: Theme Park Archipelago: Architectural Simulacra and Urban Warfare«, http://public-space.org/es/texto-biblioteca/eng/b037-theme-park-archipelago-architectural-simulacra-and-urban-warfare (accessed June 8, 2018).
Ratti, Carlo, and Matthew Claudel, *Open Source Architecture*, London, Thames & Hudson, 2015.
Rendell, L., R. Boyd, D. Cownden, M. Enquist, K. Eriksson, M. W. Feldman, L. Fogarty, S. Ghirlanda, T. Lillicrap, and K. N. Laland, »Why Copy Others? Insights from the Social Learning Strategies Tournament«, *Science (New York, N.Y).* 328, no. 5975 (April 9, 2010): pp. 208–213. https://doi.org/10.1126/science.1184719).
Richards, Jonathan, *Facadism*, London, Psychology Press, 1994.
Roberts B, and Roberts B., »Competing Authenticities«, *Future Anterior Future Anterior* 12, no. 2 (2015), pp. 1–11.
Ruthven, K. K., *Faking Literature*, Cambridge; New York, Cambridge University Press, 2001.
Rybczynski, Witold, »When Architects Plagiarize«, *Slate*, September 14, 2005.
http://www.slate.com/articles/arts/architecture/2005/09/when_architects_plagiarize.html (accessed June 8, 2018).
Savi, Vittorio, Josep M Montaner, and Colegio de Arquitectos de Cataluña, *Less is more: minimalisme en arquitectura i d'altres arts = minimalism in architecture and the other arts*. Barcelona: Collegi d'Arquitectes de Catalunya, ACTAR, 1996.
Schmitt, Gerhard, *Information Architecture: Basics and Future of Caad*, Springer Science & Business Media, 1999.
Schulz, Eberhard, *Zwischen Glashaus und Wohnfabrik; Ein Leitfaden durch die zeitgenössische Baukunst,* Bremen, Schünemann, 1959. http://hdl.handle.net/2027/uc1.b4481804.
Schumacher, Thomas L., »›Facadism‹ Returns, or the Advent of the ›Duck-Orated Shed‹«, *Journal of Architectural Education* 63, no. 2 (2010): pp. 128–37.
Schwartz, Hillel, *Culture of the Copy: Striking Likenesses, Unreasonable Facsimiles*, New York, Zone Books, 2014.
Scrinis, Gyorgy, *Nutritionism: The Science and Politics of Dietary Advice*, New York, Columbia University Press, 2013.
Scruton, Roger, »High Culture Is Being Corrupted by a Culture of Fakes«, *The Guardian*, December 19, 2012, sec. Opinion, http://www.theguardian.com/commentisfree/2012/dec/19/high-culture-fake (accessed June 8, 2018).
Seymour, Mike, »Black Panther: Building Wakanda«, *Fxguide* (blog), February 25, 2018. https://www.fxguide.com/featured/black-panther-building-wakanda/ (accessed June 8, 2018).
Silber, John, *Architecture of the Absurd: How »Genius« Disfigured a Practical Art*, New York, Quantuck Lane Press: Distributed by W.W. Norton & Co., 2007.
Simons, Marlise, »Fungus Once Again Threatens French Cave Paintings«, *The New York Times*, December 9, 2007, http://www.nytimes.com/2007/12/09/world/europe/09cave.html (accessed June 8, 2018).
Standish, Dominic. *Venice in Environmental Peril?: Myth and Reality*, Lanham, MD, University Press of America, 2012.
Steins, Chris, »Urban Taxidermy: When Authenticity and Artificiality Collide«, *Planetizen: The Urban Planning, Design, and Development Network*, 2016, 2016–07.
Stille, Alexander, *The Future of the Past*, New York, N.Y: Picador, 2003.
Sullivan, Sharon, and Richard Mackay, *Archaeological Sites: Conservation and Management*, Getty Publications, 2012.
»Sunday Fun: Spot the Real Architectural Icon Amidst the Fakes«, *Planetizen,* https://www.planetizen.com/node/92042/sunday-fun-spot-real-architectural-icon-amidst-fakes (accessed April 5, 2017).
»›The Parthenon of Books‹, Marta Minujín, 1983«. Tate, http://www.tate.org.uk/art/artworks/minujin-the-parthenon-of-books-t14343 (accessed March 14, 2018).

»The Copycat Hype: Learning from a Saint Peter Replica — Failed Architecture«, https://www.failedarchitecture.com/the-copycat-hype-learning-from-a-saint-peter-replica/ (accessed May 12, 2017).
»The Ironic Loss of the Postmodern BEST Store Façades — Failed Architecture«, https://www.failedarchitecture.com/the-ironic-loss-of-the-postmodern-best-store-façades/ (accessed February 20, 2018).
»The Red House and Lebanon's Vanishing Heritage«, https://www.aljazeera.com/news/2016/03/red-house-lebanon-vanishing-heritage-160313113523851.html (Accessed July 23, 2018).
Thompson, Damian, *Counterknowledge: How We Surrendered to Conspiracy Theories, Quack Medicine, Bogus Science and Fake History*, London, Atlantic, 2008. Till, Jeremy, »Reality in the Balance«, *Places Journal*, January 24, 2017. https://doi.org/10.22269/170124.
van Toorn, Roemer, Berlage Instituut, Biennale di Venezia, and International Architectural Exhibition, *Hunch: Beyond Mapping: Projecting the City*, Rotterdam, Berlage Institute, 2006. van Toorn, Roemer, and Ole Bouman, *The Invisible in Architecture*, London, 1st edition, Wiley, 1994.
van Zanten, David, »Félix Duban and the Buildings of the Ecole Des Beaux-Arts, 1832–1840«, *Journal of the Society of Architectural Historians / Society of Architectural Historians.*, 1978, pp. 161–174.
Varela, Francisco J., and J. P. Dupuy, *Understanding Origins: Contemporary Views on the Origins of Life, Mind and Society*, Springer Science & Business Media, 2013.
Varela, Francisco J, and Jean-Pierre Dupuy, eds., *Understanding Origins: Contemporary Views on the Origin of Life, Mind, and Society*, Dordrecht; Boston, Kluwer Academic Publishers, 1992.
Varnelis, Kazys, »Architecture After the Event Horizon«, *Volume* (blog), http://volumeproject.org/architecture-after-the-event-horizon/ (accessed May 12, 2017).
Venturi, Robert, »The Duck and the Decorated Shed«, *Postmodernism: A Reader / ed. by Thomas Docherty*, New York, Columbia University Press, 1993.
Verlichak, Victoria, »Marta Minujín: Irreverent«. *Art Nexus* 8, no. 75 (February 12, 2009), pp. 66–71.
http://ezproxywit.flo.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aft&AN=505276417&site=eds-live&scope=site. (accessed May 7, 2018).
Vesely, Dalibor, *Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production*, Cambridge, Mass.; London, MIT, 2006.
Vidler, Anthony, »The Idea of Type: The Transformation of the Academic Ideal, 1750–1830», *Oppositions/ Publ. by the Institute for Architecture and Urban Studies.*, 1977, pp. 94–115.
Wagner, Kate, »Architecture, Aesthetic Moralism, and the Crisis of Urban Housing«, *Common Edge*, http://commonedge.org/architecture-aesthetic-moralism-and-the-crisis-of-urban-housing/ (accessed May 7, 2018).
Weiwei, Ai, »Ai Weiwei: China Excluded Its People from the Olympics. London Is Different«, *The Guardian*, July 25, 2012, sec. Art and design. http://www.theguardian.com/artanddesign/2012/jul/25/china-olympics-london-ai-weiwei (accessed May 7, 2018).
Weizman, Ines, »Architectural Doppelgangers«, *AA FILES*, no. 65 (2012), pp. 19–24.
Weizman, Ines, *Architecture and the Paradox of Dissidence*, London: Routledge, 2014.
http://site.ebrary.com/id/10835814.
Wenzel, Fritz, *Berichte vom Wiederaufbau der Frauenkirche zu Dresden: Konstruktion des Steinbaus und Integration der Ruine*, KIT Scientific Publishing, 2007.
»What Makes a Copy-Cat a Copy-Cat? The Complex Case of Architectural Copyright«, *ArchDaily*, April 20, 2014, http://www.archdaily.com/497568/what-makes-a-copy-cat-a-copy-cat-the-complex-case-of-architectural-copyright/, (Accessed May 7, 2018).
»Why the Pop-up Hype Isn't Going to Save Our Cities — Failed Architecture«, https://www.failed-architecture.com/why-the-pop-up-hype-isnt-going-to-save-our-cities/, (accessed May 12, 2017).
Wohlleben, Marion, and Georg Mörsch, *Georg Dehio und Alois Riegl – Konservieren, nicht restaurieren.: Streitschriften zur Denkmalpflege um 1900*, Basel, Birkhäuser, 2014.