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## WITH AND WITHOUT WALLS Photographic Reproduction and the Art Museum

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According to Peter Walsh, we are in the era of the “post-photographic” museum, something we take so much for granted that we have to work to historically reconstruct the pre-photographic museum (2007, 23). Photography thoroughly mediates visitors’ experience of museums: from the publicity or educational material they encounter before their visit, on paper or online; to behind-the-scenes practices which employ photography for purposes of preservation, conservation, and documentation; to the snapshots that visitors take themselves and then circulate. Photographs are ubiquitous in contemporary exhibition contexts, to contextualize exhibits, and as artifacts in their own right. In this chapter, I do not plan to attempt to reconstruct the pre-photographic museum, but to show how photography has helped to shape the values that are commonly associated with modernism, such as artistic style, handling or facture, and originality. These aesthetic categories were naturalized by the post-photographic museum, even if it initially looked as if photography was a threat to them. They are associated with the privileging of certain kinds of attention in the museum. I want to suggest how our contemporary image culture can offer a different aesthetic model for museums, or more precisely, to use the French philosopher Jacques Rancière’s terminology, a different “distribution of the sensible” – that is, a different distribution of the sensory capacities associated with the different social classes, and with activity or passivity, work or leisure, criticism and consumption (Rancière 2009).

Photography is particularly important in this narrative, not least because many writers have argued that the use of photographs, both analogue and digital, to reproduce and disseminate art has produced new understandings of the original in relation to the reproduction, and distinctive ways of talking about, curating, and presenting art in the museum and outside. Photographic reproduction, in short, has been instrumental in the transformation of the art museum, in the development

of art history, and in ongoing changes in the ways in which audiences encounter art. But perhaps too much weight has been given to photographic reproduction. Is it really photography that has produced or even facilitated these changes? A number of writers have shown how other kinds of art reproduction, including wood engraving and lithography, continued to exist, and to flourish, well after the invention of photography in and around 1839. Between then and the distribution of photographically illustrated books in the late 1860s, “it was not photographs but wood-engravings that filled the pages of the illustrated magazines; intaglio work and lithography that crammed the print shop windows” (Fawcett 1986, 194). These other processes were increasingly mechanized. Wood-engraved reproductions of artworks were circulated internationally between publishers using the electrotyping process, which was invented between 1836 and 1838, very close to the invention of photography (Von Lintel 2012, 539). In 1839 new reducing machinery for bronze casting was introduced, which was so accurate that it “led to immediate comparison with the exactly contemporary daguerreotype” (Haskell and Penny 1981, 124).

Indeed, the notion that there is a technique for the reproduction and circulation of artworks that we could simply describe as photographic is questionable. Photography did not become a means for the wide circulation of prints until it could be combined with mechanical printing methods. It was only in the 1860s that photographically illustrated art books began to be published, although by then the market for photographs of artworks was an international business (Hamber 1995, 91–92). Photography lagged behind older print methods such as engraving and lithography until the invention of a series of new photomechanical processes in the 1870s and 1880s.<sup>1</sup> But photographic methods also transformed older techniques, being incorporated into lithography and as part of the process by which engraving or woodcuts could be duplicated, allowing for multiple blocks and longer print runs.

Painting and photography became entangled right from the start. Not only did nineteenth-century painters use the new medium as part of their process, but painting became integral to the production of the photographic print, which frequently involved retouching with inks by hand, correcting, manipulating, coloring, and generally making the photograph “print-ready.” Today, digital photography and digital painting have become almost indistinguishable: manual skills are used to move and alter pixels, “painting” and “retouching” using a mouse or stylus and applications like Adobe Photoshop; and high-end facsimile reproduction involves a combination of the manual and mechanical application of paint. Bruno Latour and Adam Lowe have described the facsimile of Veronese’s *Nozze di Cana* produced by Factum Arte in Madrid as “a painting, albeit produced through the intermediary of digital techniques” (2011, 276). The Veronese painting in the Louvre was scanned using a large-format CCD (i.e., the same kind of sensor that a digital camera uses) that responded to light that the device itself produced (much like a scanner, only with LED lights to reduce heat and ultraviolet), but more

conventional photography was also used, via a digital Hasselblad and ambient light. After the large number of images produced were combined and manipulated to produce a copy of the entire painting, the facsimile was printed “in pigment on gesso-coated canvas,” the canvas stitched together, and the joins “retouched by hand by a team of trained conservators” (Latour and Lowe 2011, 289–296). Though the technology used, and the specific combination of techniques, are very new and innovative, the hybrid painting-photograph is as old as photography itself.

And yet, in the early to mid-twentieth century, critics, curators, and academics identified photography, in particular, as having dramatically affected the art museum, and drew a sharp distinction between the (photographic) copy and the original (usually a painting). The most famous texts are Walter Benjamin’s essay “The Work of Art in the Age of Mechanical Reproduction,”<sup>2</sup> written and rewritten in the mid- to late 1930s, and Andre Malraux’s *Museum without Walls*, which was first published in 1947 (Benjamin (1936) 1992; Malraux (1947) 1967). Already, members of the early twentieth-century avant-garde combined painting and photography, but their advocates emphasized avant-garde photography’s potential as art on the grounds that it did not imitate painting, but “opposed” it (Brik [1926] 1989, 216–217). For instance, the Dada poet Tristan Tzara’s essay, which accompanied the publication of Man Ray’s “Rayographs” in the winter of 1922, argued that the cameraless photograph (photogram) had superseded painting, a now sterile and compromised medium:

Everything that bore the name of art had succumbed to paralysis; at which point the photographer lit his thousand-candlepower lamp, and gradually the light-sensitive paper absorbed the blackness of a few utilitarian objects. (Tzara [1924] 2002, 484)

During the late 1920s and early 1930s, in various art and culture journals, European photographers, writers, and curators debated the impact of photography on art, and especially painting (Phillips 1989; Benson and Forgács 2002). In the pages of the Hamburg journal *Der Kreis*, museum directors and curators initiated a debate about the difference between the experience of the original work of art and the experience of a reproduction or facsimile. What did this difference consist of, if the viewer was unable to distinguish one from the other?

Although the telegraphic transmission of photographs had been practiced by news organizations since around 1900, and the mass dissemination of photographs via photomechanical printing had existed since the 1860s, the preoccupation with the distinction between (static) original and (mobile) copy seems to have hindered the recognition that many of the “original” paintings in museums were born into, and inseparable from, the world of the mass copy. The French historian Michel Foucault has beautifully characterized the pervasive image culture that had emerged with technical reproduction and flourished in the late nineteenth century. In 1975 Foucault wrote a catalog essay for the painter Gérard Fromanger’s exhibition *Desire Is Everywhere*, in which he described “a new frenzy for images, which circulated

rapidly between camera and easel, between canvas and plate and paper,” from about 1860 until 1880. Technical reproduction enabled “a new freedom of transposition, displacement, and transformation, of resemblance and dissimulation, of reproduction, duplication and trickery of effect” (Foucault [1975] 1999, 83–84).

Foucault’s ability to vividly reimagine this late nineteenth-century culture of images was facilitated by his interest in heterogeneity, madness, prisons, and sexual transgression. In his account, media attempt to imprison images, which slip away. He writes:

In those days images travelled the world under false identities. To them there was nothing more hateful than to remain captive, self-identical, in *one* painting, *one* photograph, *one* engraving, under the aegis of *one* author. No medium, no language, no syntax could contain them; from birth to last resting place they could always escape through new techniques of transposition. (Foucault [1975] 1999, 84–85)

The mobility of images ca. 1860 to 1880 has something in common with the mobility, diversity, and lack of fixity of sexual identities, “with their migration and perversion, their transvestitism, their disguised difference” (83–84). Foucault abolishes distinctions between original and copy, along with the old conception of a medium as something that merely delivered images to a receptive audience.

## The cult of originality

To understand the post-photographic museum means situating museums in the play of images. We can start by questioning the idea that museums are the resting places of the originals from which reproductions emanate, since it disregards the role that facsimiles and reproductions have played in the history of museums. The idea of the museum as a place where you went to encounter “the thing itself” has not always held sway. If, as some claim, the “museum age” really only begins with the inauguration of the Louvre in the late eighteenth century, then the fascination with the facsimile and the reproduction precedes it. In the eighteenth century, casts and replicas in a wide range of materials were sold as ornaments and collectables, and there were galleries of plaster-cast facsimiles of antiquities throughout Europe.<sup>3</sup> In Britain, Peter Walsh has argued, the Victoria and Albert Museum established itself as a prototype of a new type of museum, willing to use reproductions instead of originals to enable it to include as much as possible of the world’s artworks (2007, 24). From very early on, it included a photography collection and also used photography within the museum. The museum’s photographer, Thurston Thompson, photographed the famous Raphael cartoons, and these photographs were described as “all but as valuable as the originals” in the *Athenaeum* literary magazine of 1859, which concluded that “Great works of Art are now, when once photographed, imperishable” (quoted in Fawcett 1986, 192). In the

United States, some museums modeled themselves on the South Kensington Museum, happily exhibiting reproductions where the originals were too expensive or rare (Walsh 2007, 28). Reproductions were also reproducible: in 1914 a catalog of photographs of Brucciani's Covent Garden collection of plaster casts of Byzantine, Gothic, and Renaissance works was published for use in schools (Haskell and Penny 1981, 117).

The flipside of this was that the original was effectively devalued. In exactly the same year as the *Athenaeum* described art as "imperishable," American essayist and poet Oliver Wendell Holmes had anticipated what would happen if a viewing public felt that reproductions were an adequate or satisfactory substitute, and he quipped: "Give us a few negatives of a thing worth seeing, taken from different points of view, and that is all we want of it. Pull it down or burn it up, if you please" (Holmes 1859).

To participants in the 1920s and 1930s discussions of photographic reproduction in European journals such as *Der Kreis*, *Der Stijl*, and *internationale revue*, photomechanical reproduction appeared as a threat, because it effaced the labor of the photographer so effectively that it was difficult to tell the difference between a copy and an original art object. In 1929 Max Sauerlandt, director of the Art and Craft Museum in Hamburg, launched an attack in *Der Kreis* on the collection of plaster casts put together by Carl G. Heise, director of St. Annen-Kloster in Lübeck (and responsible for one of the first major exhibitions of photography in that year). The discussion soon turned to photography because Alexander Dorner, director of the Landesmuseum in Hanover, had exhibited 35 artworks on paper alongside their printed facsimiles in May 1929. Dorner challenged viewers to identify the difference, and over 100 laypeople and experts were equally confounded (Márkus 2007, 357).

Some writers in *Der Kreis* were appalled by the notion that the reproduction might take the place of the artwork. In November 1929 Kurt Karl Eberlein, an art historian and onetime director of the Kunsthalle in Karlsruhe, wrote that all facsimiles were forgeries and that, even if 99 percent of the viewing public could not tell the difference between them and the original artwork, this did not make them the same. Eberlein argued that technical reproduction provided only "falsifying surrogates" for art (Eberlein [1929] 1989, 146). In his view, mechanical reproductions were imposters, unable to substitute for the experience of the original, since each original is "a unique, intellectually shaped physical expression of art's essence" (149). The photomechanical reproduction of an artwork was supposed to complement and promote the artwork itself, but instead, for Eberlein, it followed what Jacques Derrida described, half a century later, as the "logic of the supplement":

The supplement adds itself, it is a surplus, a plenitude enriching another plenitude, the fullest measure of presence ... But the supplement supplements. It adds only to replace. It intervenes or insinuates itself in-the-place-of; if it fills, it is as if one fills a void. (Derrida 1976, 145)

According to Eberlein,

Every explanation of why the mysterious, magical, biological “aura” of a work of art cannot be forged – even though 99 percent of the viewers don’t notice the difference – is an offence against the sovereignty of art. (Eberlein [1929] 1989, 148)

Today we tend to associate the concept of aura with Benjamin’s essay, written six years later, but Eberlein’s comment suggests that in 1929 it was already being used to characterize the “essence” of art. Dorner responded by pointing out that there would never be agreement between the advocates of facsimile reproduction and its detractors, because people like Eberlein felt that

ancient works of art can only be experienced at first hand, with a fingertip sense of the cracks in the surface. Indeed, for them the arduous pilgrimage to the work of art is part of the artistic experience; they want the old work of art to stand isolated from contemporary life. (Dorner [1930] 1989, 153)

By contrast, the advocates wanted to put the past to use in the present. So the dispute also involved competing understandings of museums – one view took the museum to be the place you would go to experience the work of art in its full “presence”; the other saw the role of the museum as bringing museums into “the stream of contemporary life.” Yet, as Dorner noted, museums had already torn paintings and sculptures and other works of art from their original contexts and in the process entirely transformed them. Museums and facsimiles serve similar functions, “generated by the interests and needs of the present” and are “incomprehensible apart from those interests and needs” (Dorner [1930] 1989, 152). The present absorbed the past, circulated its images, and put them to new uses for a modern mass audience.

The art museum’s act of detaching objects from their context is something that we find in all kinds of museums. It is something Barbara Kirshenblatt-Gimblett describes as key to ethnographic museums, “an essentially surgical issue ... Where do we make the cut?” (1998, 18). She argues that all ethnographic objects are fragments, pieces of the world produced by active choices about where to cut, which are guided by ideas about the singularity of the object and its separability from its place in the world. The art museum makes the most radical cut since, as Hilde Hein pithily describes it, “aesthetic interest inducts an object into a realm of privileged inutility” (2000, 128). Yet, if art museums produce the original as singular by detaching it, they can never quite rid themselves of the possibility that by making the cut they have damaged the object. Latour and Lowe compare their elaborate facsimile of Veronese’s *Nozze di Cana*, mentioned earlier, *in situ* in Palladio’s refectory on the island of San Giorgio where the Veronese painting had first hung, to the painting that Napoleon had stolen from there and taken as booty to the Louvre. In the Louvre the painting is inappropriately framed, hung too low, the meaning changed

and the balance of the composition altered (Latour and Lowe 2011, 276–277). For Latour and Lowe the recontextualizing of paintings by the museum undermines the concept of a pure “original,” but to argue this they simply replace one notion of authenticity (the thing itself), with another (the original situation, prior to the cut).

The concept of the museum as a place in which we encounter the “original” is also complicated by the fact that the material object is not frozen in time but is always in a process of subtle, slow transformation. The museum actively intervenes in this process through restoration, conservation, and climate control. Latour and Lowe begin their essay with a viewer who encounters Hans Holbein’s *Ambassadors* at the National Gallery in London (Figure 25.1), but finds it too “garish” and “exaggerated”: restored, it takes on the appearance of a “cheap copy” (2011, 275–276). Holbein’s painting is a good example since its restoration history has been documented – it had been altered in the eighteenth century, again in the 1890s, then again in the 1990s (with minor repairs in the intervening century). Martin Wyld wrote in the *National Gallery Technical Bulletin* after the 1990s restoration: “the image of the picture which is so familiar today is not that which was seen by the gallery’s visitors in 1890” (1998, 9). The implicit distinction between the “image of the picture” and the picture itself is very telling. What is “the original” if not the thing we see before us? Does each restoration produce a new “image of



**FIGURE 25.1** Hans Holbein the Younger, *The Ambassadors*, 1533. Note the famous distorted skull in the foreground of the picture.  
By permission of the National Gallery, London.

the picture” in the eyes or minds of the visitors? If so, what is the distinction between this “image” and a copy?

The 1990s restoration involved cleaning off varnish from 1891 but also removing nineteenth-century painting and then repainting areas. The restoration process incorporated reproductive imaging technologies: x-rays and digital imaging. The nose bone of the famous distorted (anamorphic) skull presented particular problems because the x-rays revealed Holbein’s own paint as missing beneath the nineteenth-century paint. Digital imaging techniques were used to convert the anamorphic image to a conventional one, and this, along with various images of different skulls, was used as guidance for “a tentative reconstruction of the nose bone and the end of the lower jaw” despite “ethical reservations” and bearing in mind the “question of how the Gallery’s visitor’s might react if an image as famous as Holbein’s skull were to be displayed incomplete” (Wyld 1998, 25). The “image” – as remembered by visitors and circulated through reproductions – determines the production of a new nose bone, a copy, not simply of Holbein’s painting, but of other, actual, skulls. Only through this arduous process can the museum attempt to isolate the picture from the flow of contemporary experience, and yet, at the same time, it is the images circulating in the minds and reproductions of contemporary society that shape the restoration.

## Forms of attention

Benjamin saw, as Dorner did, the facsimile reproduction as the next stage in the democratization of art begun by the public art museum. Unlike Eberlein (who wanted art to remain an elite experience), Benjamin sees this as a necessary and politicized process but, like Eberlein, he does not see facsimiles as harmless to the “aura” of the original. Benjamin argues in “The Work of Art in the Age of Mechanical Reproduction” that photomechanical reproduction gives art back an active social and political role which it had lost when it entered the museum. But Eberlein and Benjamin have one thing in common: they disagree with the advocates of facsimile reproduction who believe it will leave intact the “aura” of the work of art. Today we use “aura” to refer to some kind of ineffable aesthetic value. Benjamin sees it more precisely, as an effect of a certain social convention, a certain way of looking at art that had become the norm among a certain class of people in the nineteenth-century museum. For Benjamin, technical reproduction didn’t simply damage the value or mystique of the artwork; it attacked the social norm of receptive contemplation that was associated with the encounter with the original art object in the museum, so that seeing the “original” would never be the same again. The post-photographic museum is a museum in which a certain kind of aesthetic contemplation has started to decay.

The kind of contemplation Benjamin had in mind was rooted in the idea of communion with the artwork and institutionalized in the art museum, which



provided a secular substitute for religious experience in front of paintings that were once altarpieces, statues that were once gods. This is the kind of aesthetic experience expected and experienced by, for instance, the painter and physician Carl Gustav Carus in 1857. Carus had seen Raphael's Sistine Madonna in its new chapel-like installation at the Royal Gallery of Paintings in Dresden and effused that the painting "presented itself ever more radiantly and in its full significance to my soul" (quoted in Belting 2001, 61). This quasi-religious experience of the artwork in the museum is particularly associated with the Romantic belief in the autonomy of art. The Romantics conceived of both art and nature in terms of a reciprocated gaze. From this perspective, artworks were not mute objects or merely expressive of the artist and the culture, but autonomous and able to generate their own meanings to the receptive and sensitive viewer (see Stoljar 1997, 10–11).

"Insofar as the age of technical reproduction separated art from its basis in cult, all semblance of art's autonomy disappeared forever" (Benjamin [1936] 2002, 109). The effect of this is to let loose the artwork, sending it spinning into the hands of the mass audience. This audience grasps at the image, with the hand as much as the eye, because it has been trained, by cinema and mass culture, toward a new kind of attention. Like other German writers of the period, Benjamin characterizes this as "distraction" (*Zerstreuung* – sometimes also translated as "diversion"); unlike them, he represents this new kind of receptiveness as active, not passive. Frederic Schwartz summarizes it like this:

Distraction is a hypothetical mode of visual attention, one described as routine, active and not absorbed, one representing a mode of technical problem-solving and not aesthetic enjoyment, one addressing bits and pieces from the inside and not unified wholes from a distance. (2005, 62)

Traditional aesthetic enjoyment was overturned, but in its place were new pleasures. As Schwartz points out, Benjamin was very familiar with Moholy-Nagy's book *Painting, Photography, Film*, which spoke of meditation and immersion being replaced by participation, by art forms in which the observer is able "to participate, to seize instantly upon new moments of vital insight" (Moholy-Nagy, quoted in Schwartz 2005, 54). The new form of attention is grasping, tactile, instantaneous, urgent, and active but also habitual and almost automatic – and it belongs principally to the working class; it is very different from the older attention "of the savoring bourgeoisie" (Tschichold, quoted in Schwartz 2005, 55). For Benjamin and these artists of the avant-garde, these debates were political, and their aspirations were that photographic technology could be put to use in overturning the class system. Although the larger political claims they made for this new kind of attention do not stand up to scrutiny in retrospect, the notion that the technology of mass reproduction might be associated with a change in the museum audience and a transformation of the experience of "original" works of art is crucial for understanding the practices and potential of art museums today.

We have seen how Foucault connected the technologically facilitated circulation of images with a kind of playfulness. Benjamin, too, connected the new technologies of mass image production with an increase in play (in the double sense of extension and amusement). In the early versions of the “Work of Art” essay, he argued that the origin of the technology of the machine age “lies ... in play” (Benjamin [1936] 2002, 107). In the footnotes he wrote that the machine age, by liberating people from drudgery, increased the “scope for play [*Spielraum*].” This means, not just increased leisure time, but an expanded “field of action” (124). Art had always involved play, but in traditional aesthetics emphasis had been placed on “beautiful semblance” at the expense of play. Now, as new mechanical reproductive technologies take precedence, the possibilities for play increase: “that which is lost in the withering of semblance and the decay of the aura in works of art is matched by a huge gain in the scope for play” (127). One kind of pleasure (critical, contemplative) was replaced by another (playful, irreverent), and it belonged to the mass audience.

## The invention of facture

Just as much as photography and technical reproduction can be said to have contributed to the decline of aura, they can also, simultaneously, be said to have been necessary both to the development of the cult of originality and to an increased interest in certain kinds of detail and texture in the art object. The value attached to the original, as against the copy, is largely post-photographic. The sociologist Gordon Fyfe makes this point in a discussion of engraving. Line engraving was a skilled craft, practiced in the eighteenth century by craftsmen organized into guilds, who commanded a near monopoly over the trade in reproductions. As Fyfe summarizes:

In the service of patrons they reproduced the material culture of patrimonial power; they disseminated images of antiquity and they serviced the trade in reproductions of antiquities. Engravings spread news of royal, aristocratic and institutional collections and formed a part of the visual propaganda machines of European states and their rulers. (2004, 57)

In Fyfe’s account, the hegemony of engraving was destroyed both by the maneuvers of art institutions, and transformations in the organization of labor during the industrial revolution, in which the guilds were replaced by capitalist relations of employment, and engravers cast as either employers or laborers (2004, 58). In capitalist society, culture is part of the market, and the destruction of the craft workshop and the guild was part of the process of creating a free flow of cultural capital.

The “visual propaganda” of the eighteenth-century engraving was the means by which aristocratic and bourgeois individuals were educated about art objects

and antiquities which they had not seen in the original, but it also produced them as an audience that was discerning about the quality of the engraver's interpretation. In this period, the production of copies was not an anonymous and invisible practice. On the contrary, the skill and style of the master engraver was supposed to be evident and legible in the print. Engravers saw their task as to communicate certain classical ideals such as those of harmony and proportion. Line engraving emphasized composition and iconography, and engravers transposed paintings and statuary using a set of very specific conventions developed in the seventeenth century, a "syntax" or repertoire of cross-hatching, lines, and dots (Fyfe 2004, 54).<sup>4</sup> As William M. Ivins, Jr., print curator at the Metropolitan Museum of Art in New York in the mid-twentieth century, had noted, the suitability of an artwork for translation into the engraving's "net of rationality" was a criterion for its selection for reproduction (Ivins 1953; Pinson 1998, 155).

Engraving was undermined by photomechanical reproduction, not simply because the new technology was more efficient or effective than the older one, but because it accompanied and reinforced a new set of values: "Engravers fought to retain a place within the cultural apparatus, but the fight was conducted on a terrain that was increasingly defined by a photographic way of seeing" (Fyfe 2004, 59).<sup>5</sup> Just as engraving had influenced the canon, so artwork photography was shaping the public taste for art, but it was also shaping a distinctive new approach to seeing (and seeing through) reproductions. The photographic series which cataloged and documented exhibitions and collections, and which were sold throughout Europe, also transmitted a new kind of appreciation, which privileges the individual authorship of the artist and the authority of the original artwork while rendering the process of interpretation through reproduction increasingly invisible. For the new way of seeing, which emerged and developed with photography, an ideal reproduction would be one that effaced itself, which allowed the viewer to feel they simply looked through it to the artwork. The photograph's direct, chemical-mechanical reproduction of objects and lack of explicit syntax gave the impression of transparency.

By the 1860s, distinctions were being made between interpretive prints of an artist's work and "facsimiles" – surrogates or exact copies which stood in for the original. While photographs would be described as facsimiles, certain nonphotographic prints would be too, as Stephen C. Pinson has shown. An 1873 *catalogue raisonné* of Delacroix's work described Robaut's very precise manual copies of the drawings as "facsimiles." Yet, in the same catalog, other prints made "after Delacroix" were treated as original works in their own right, presumably because they were seen to demonstrate more interpretive freedom or stylistic distinctiveness (Pinson 1998, 160–163). But, increasingly, copying in general was becoming an anonymous and secondary practice, shifting toward the production of precise facsimiles.

The photographer who reproduced the paintings that illustrated books and catalogs was almost invariably anonymous. Their authorship is suppressed, not just in the absence of a photo credit, but more importantly in the absence of any

evident “style” that shows the mark of an author. The photograph “created the illusion of communication without mediation; it brought the work of art and the signs of its making into the presence of the viewer whilst it suppressed the incorporated practices of print-making which made that presence possible” (Fyfe 2004, 52). The photograph seemed to be able to communicate or convey the unique handling and expression of an individual artist by reproducing tone and texture as well as line, composition, and iconography. Engraving had flourished in a world where art was still understood as largely collective, traditional, and convention-bound, but the developing modern culture of art valorized the individual and expressive mark.

One of the contributors to *Der Kreis* recognized that the value being placed on the material presence of the original – by both the supporters and detractors of photomechanical reproduction – was a peculiarly modern phenomenon. This was the art historian Erwin Panofsky, whose 1930 essay “Original and Facsimile Reproduction” pointed out that earlier conceptions of art, deriving from Aristotelian ideas and from Neoplatonism, had seen the materiality of the object as secondary, a passive carrier for ideas (Panofsky [1930] 2010). In the nineteenth century, the technology of photography appeared to realize the classical belief that the form is separate and distinct from its physical substrate, insofar as it seemed to separate images from their material place in the world. For instance, Oliver Wendell Holmes writes about photography as if it is a form of taxidermy, stripping reality of its outward “skin”: “Men will hunt all curious, beautiful, grand objects, as they hunt the cattle in South America, for their skins, and leave the carcasses as of little worth” (Holmes 1859).

The increased emphasis on the handmade, the textural and material presence of paintings, both by painters and by writers on painting, was partly a response to this notion of photography as stripping away the surface appearance. Not only was photography unable to reproduce this physicality, but it had practically none of its own. In 1927 an article by Ernő Kállai in *internationale revue* argued that the difference between painting and photography is not about form and imitation, but is a difference of materiality. A painting or drawing is also “a physical substance with a tension and consistency of its own” (Kállai [1927] 2002, 685). By contrast, “photography is not capable of this degree of materiality and objecthood” and therefore an “emotional substrate” is hardly present. “There is no facture,” declared Kállai, which means “no optically perceptible tension between the substance of the image and the image itself” (686).

Facture refers to the artist’s expressive handling of their materials, the mark-making, and the sensuous materiality of the object evident in its texture and physical qualities: all those qualities that the reproduction could not possess. Yet, Dorner’s exhibit showed how insensitive visitors, even expert ones, were to facture. People had to learn to see facture and, to do so, they had first to see paintings through photography: to see that the photograph itself did not possess facture. Panofsky concluded that the more faithful reproductions became the more

viewers would become adept at seeing nuanced differences ([1930] 2010). But, also, photographs conveyed facture when other kinds of reproduction did not. Black and white photographs, in particular, reinforced a modern way of seeing art by drawing attention to the mark-making and texture of paintings, and by emphasizing tone and mass over line and composition.

To an extent, the museum had already begun the process of drawing attention to material presence by removing objects from their original social context. The modern Western category of art developed out of the process of divesting art objects of their representational function: as Malraux noted in *Museum without Walls*, the museum

does away with the significance of Palladium, of saint and Savior; rules out associations of sanctity, qualities of adornment and possession, of likeness or imagination; and presents the viewer with images of things, differing from the things themselves, and drawing their *raison d'être* from this very difference. ([1947] 1967, 10)

Malraux, too, notices how photography contributes to this change. By beating painting at the game of illusionistic representation, it destroys the value of spectacular techniques of illusion and *trompe l'oeil*, which had dominated Baroque painting: “these spectacles ceased to be spectacle. They did not again become apparitions, but became pictures, in the sense in which we understand that word today” (Malraux [1947] 1967, 31).

The museum and photography, together, made facture conceivable. So when, in the 1920s, writers defended the handmade artifact against the mechanical facsimile, they were using a conception of the essence of art which had only relatively recently been formulated, and which had only gained prominence as reproductions and facsimiles increased their circulation.

## Style

Kállai's point about the absence of facture in photography is echoed in a 1942 essay by Beaumont Newhall, the curator of a series of groundbreaking photography shows at the Museum of Modern Art, New York, during the late 1930s and 1940s. Proposing that photography be treated more widely as a topic of study within art history, Newhall acknowledged that “Art historians, accustomed to dealing with “auto-graphic” works of art, may find it difficult to evaluate photographs. Facture, draftsmanship and other marks of the individual hand are absent” (Newhall 1942, 86). Yet, while Kállai used the absence of facture to argue for the absence of emotion, Newhall emphasized the ways in which the nonmechanical and nonobjective aspects of photography enable the photograph to embody a particular vision of the world. The marks of the individual hand only get in the way of this deeper distinctiveness of style rooted in unique visual perception, so that “this apparent

loss is at once a gain; it enables us to grasp the vision of an individual, of an epoch, of a people in the most direct and immediate way” (Newhall 1942, 86).

Newhall emphasized, first, the way photography gives us direct access to “vision” and, through this, style; second, human control over the medium. He distinguished the artistic control of the medium from the snapshotter who simply presses the button on a Kodak Brownie, and challenged the perception of it as a mechanical, objective medium. For Newhall, photographs have style and it is only the art historians’ ignorance about photography that makes them unable to distinguish differences between photographic styles, differences that depend on technology but are driven by the photographer’s unique vision. Even in the case of the photographic reproduction of paintings and sculptures (the principal use that photography had at the time for the art museum and the art historian), Newhall felt that photography was more than merely mechanical. In the best examples, Newhall argued, the photograph constitutes a piece of art criticism or interpretation:

Too many of the photographs of paintings which are used to instruct students and to illustrate textbooks are the work of unthinking journeymen, devoid of natural taste and completely incapable of recognizing the qualities which should be brought out on the print. In the case of sculpture, photography can be a direct form of criticism. (Newhall 1942, 87)

Even reproductive photographs can be judged in terms of the quality of authorship. Yet this is the authorship of the critic. Newhall cannot restore to the photographer the status and authorial role of the engraver. For Newhall, the photographer reproducing art must still bring out what is “there” and needs to exercise connoisseurship, not to translate into a new syntax.

The idea of style allowed photographs to be admitted as artworks. But it is also possible to argue that style itself had become a dominant category for art history as a result of photographic reproduction. For example, the art historian Heinrich Wölfflin’s famous distinction between the painterly (Baroque) and the linear (Renaissance) styles was based in a practice of close formal comparison between paintings – in reproduction. Late nineteenth-century art history in Germany tended toward historical surveys, but Wölfflin’s lectures and books posited a different kind of art historical practice attuned to style: through comparative, formal study students should develop a “feeling” for style, an ability to recognize and distinguish styles from one another (Adler 2004, 439).

Wölfflin placed great emphasis on the experience of the artwork but this experience was conjured through the magical technology of the lantern slideshow. His lectures were deliberately populist and spectacular, using slide projections to make historically and geographically distant works of art present and immediate to the students in the lecture theater. His signature technique was to show two slides alongside one another for comparison (using two projectors), and to accompany this with a charismatic, mesmerizing presentation style. This was described by his

biographer and student Landsberger in 1924: “Wölfflin considers the work in silence, draws near to it, following Schopenhauer’s advice, as one draws near to a prince, waiting for the art to speak to him. His sentences come slowly, almost hesitatingly” (quoted in Nelson 2000, 419). The lecturer’s performance, the darkened space, and the illuminated screen all heightened the sense of presence. As in cinema, projection served to dematerialize the image and to immerse the observer, isolating them from other distractions.

Benjamin witnessed Wölfflin’s presentation style, and privately criticized it. In exalting the artwork (via the slide), Wölfflin made the student’s relationship to it one of “moral obligation” (Benjamin, quoted in Foster 1996, 116). More recent commentators have argued that, indeed, Wölfflin’s method was meant to inculcate certain “spiritual values”; like several other German-speaking academics at the turn of the twentieth century, he felt that the increasing secularization of education had led to a neglect of students’ moral and spiritual education (Adler 2004, 433). Wölfflin emphasized the importance of students becoming “cultivated,” which in the context of his formalist art history involved “a mysterious, dynamic and intuitive process of visualization” (Adler 2004, 445–456). The student experienced learning art history in terms of the transformation of their perceptual experience: “each lecture was a new adventure in ‘seeing’” (Born 1945, 46). In this way, Wölfflin’s interpretation seemed to be self-evident: revealed through experience and in the encounter with the essence of art.

In Germany at the time of World War I, the concept of style was linked to notions of national culture and *zeitgeist*, most famously in Spengler’s misguided and influential *Decline of the West* (1918–1923). Wölfflin resisted simplistic attempts to see art as a straightforward expression of the mood or mentality of an age or a generation, but he did take the view that forms were connected to feeling and psychology, and that style originates in changing ideas about the human body and different kinds of movement and deportment. In his early writing this allowed him to connect the form of the Gothic three-pointed shoe to the architecture of the Gothic cathedral (Schwartz 2005, 1–18).

Wölfflin did not recognize his concept of style as dependent on reproduction. In fact, he argued that style was primarily a premodern phenomenon, something much more significant than the rapid changes of contemporary fashion (Schwartz 2005, 27). André Malraux drew on Wölfflin’s theory of style but recognized more explicitly that this was something made perceptible by photographic reproduction. He famously noted how reproductions of art created relationships of equivalence – affinities – between disparate objects, by rendering objects of different sizes at the same scale, and by making them monochrome. Malraux was clear that the affinities that appear between objects in the museum without walls are actually products of photography itself:

Black and white photography imparts a family likeness to objects that have actually but slight affinity. When reproduced on the same page, such widely differing objects as a tapestry, an illuminated manuscript, a painting, a statue, or a medieval

stained-glass window lose their colors, their textures and dimensions (the sculpture also loses something of its volume), and it is their common style that benefits. (Malraux [1947] 1967, 84)

He saw how small and ancient objects, such as belt buckles and amulets, coins and seals, appeared surprisingly modern in reproduction, because their minute scale necessitated a simplicity of form: “The unfinished quality of the execution, resulting from the very small scale of these objects, now becomes a style, free and modern in its accent” (Malraux [1947] 1967, 86). He also noticed how the faces of sculptures were lit for photographs using the same techniques as the lighting of film stars’ faces, with the result that a new expressiveness and vivacity became apparent (82).

Malraux imagined a relatively benign world of reproductions, which expands human capacities and accelerates artistic progress. In the stylistic equivalences it produced between objects of very different scale, photography played a key role in changing the hierarchy of the arts, enabling the “minor arts” to rival the major ones and producing a great expansion of the canon (Malraux [1947] 1967, 79, 94). Photographic reproduction enlarged the range of historical artworks to which artists and audiences could refer, transforming not only the perception of individual artifacts, but also the canon of art itself. In a sense, this was not new. It is only since the advent of photographic reproduction that we have been able to see more clearly how the practice of engraving had played a role in producing the existing canon of masterpieces. The discipline of art history produced and maintained the canon in a process that relied on reproductions, whether engraved or photographic. To enter or to remain within the canon of great works, art objects have to be circulated through reproduction, but they also need to be repeatedly subject to new interpretations, to reframing and recontextualizations, those practices that seem to bring new life to old works. Latour and Lowe argue that “a work of art grows in originality in proportion to the quality and abundance of its copies” (2011, 279). However, as feminist art historians have shown, the selection criteria for canonicity are not reducible either to notions of aesthetic value or to the pragmatics of reproducibility, and are part and parcel of the reproduction of existing social hierarchies (Parker and Pollock 1981; Pollock 1988). Malraux ignored the way in which museums as powerful institutions work to produce and reinforce ideologies of genius and greatness. For him, the museum acted as a resource of great culture, and the museum without walls expanded this out into the world, producing a rich repertoire of images and styles. The French title of *Museum without Walls* is *Musée imaginaire*, and Malraux’s originality lay in the way he conceived of mass reproduction as shaping the imaginations and image repertoires of artists and museum visitors, expanding the range of art that was familiar to them, and enabling new qualities of that art to become perceptible for the first time. For Malraux, photography made visible the definitive or essential core of a body of work:

In art every resurrection has a way of beginning step by step. Reproduction, because of the mass of works it sets before us, frees us from the necessity of this tentative



approach; by revealing a style in its entirety – just as it displays an artist’s work in its entirety – it forces each to rely on its basic significance. (Malraux [1947] 1967, 77)

In Malraux’s hands, as in Wölfflin’s, style gains a moral force. According to John Darzins, an early reviewer of the English edition of Malraux’s *Voices of Silence* (of which *Museum without Walls* was one volume), Malraux’s emphasis on style was grounded in his vision of the artist as a demonic figure on a quest to “reshape the world,” an urge which “ensures the perpetual metamorphosis of styles and establishes a dialogue between exemplary creations” (Darzins 1957, 108). The imaginary museum accelerates this process of metamorphosis and heightens this dialogue, by giving the modern artist the ability to perceive the modern qualities in historical or non-Western art.

Like Dorner and Benjamin, Malraux saw the museum without walls as continuing a process begun by the museum. By enabling comparison between artworks, the museum made it possible to engage with art as something more than simple visual pleasure, developing “an awareness of art’s impassioned quest, of a recreation of the universe, confronting the Creation” (Malraux [1947] 1967, 10, 82). As Darzins (1957) indicates, Malraux saw art in terms of a masculine human sovereignty. He envisaged the artist as a tragic-heroic and solitary figure, working against the grain of mass society, pitting his art against a declining West and a sham mass culture, and asserting art’s autonomy. Ironically, this is made possible, first, by the museum and then by mass reproduction, which enables and accelerates the metamorphosis of style crucial to artistic progress and development.

## The play of images

In 1980 the American art historian Douglas Crimp read Malraux’s *Museum without Walls* as an unconscious parody, which treats style as “the ultimate homogenizing principle” in which photography “reduces the now even vaster heterogeneity [of art objects] to a single perfect similitude” (Crimp 1980, 50). Malraux does not celebrate a multiple, diverse visual culture in the form of the imaginary museum, but reduces it to a repetitive sameness via the concept of style. It is also possible that repeated copying empties the object of significance by rendering it ubiquitous: is it possible to even see the *Mona Lisa* or the Eiffel Tower anymore? They have become reduced to ciphers. Or, pulled out of the canon by their ubiquity, they have become toys. For Latour and Lowe, originality grows in relation to the number and *quality* of copies, but what happens when the copies are poor, trash, kitsch even, as in the many copies of the *Mona Lisa* collected by Robert A. Baron (1999)? Is the “original” under threat? Or did she disappear a long time ago, as exhibition designer Calum Storrie writes in his book *The Delirious Museum*. Storrie uses the theft and return of the *Mona Lisa* in 1911 to think about the nomadism of the work of art. The painting, initially thought to have been taken to be photographed, when it was stolen, was recovered and returned to Paris after being displayed in



**FIGURE 25.2** Officials gather around Leonardo da Vinci's *Mona Lisa* on its return to Paris, January 4, 1914. It was stolen from the Musée du Louvre by Vincenzo Peruggia in 1911, and has only just been recovered.

Photo: Paul Thompson/FPG/Archive Photos/Getty Images.

various Italian cities (Figure 25.2), but, Storrie suggests, it was never the same *Mona Lisa* again:

In a sense it was “removed for photography” to be endlessly reproduced mechanically. “*Mona Lisa*” was packed up and concealed and instead of being an object fixed in place both on the wall and in the imagination, it became nomadic. It may never have returned. Now the painting is impossible to see. The space that “*Mona Lisa*” occupied on the morning of 22 August 1911 is taken up by a glass box and a crowd of people ... How many photographs taken by these museum visitors show nothing but the reflection of the photographer or the camera’s white flash? (Storrie 2006, 15)

*Mona Lisa* is missing and in her place there are “poor images.” The artist Hito Steyerl uses this term to describe degraded, substandard, heavily compressed digital copies “in motion” (2009, 1). Steyerl argues that poor images, often circulated illicitly, are the by-products of “the rampant privatization of intellectual content, along with online marketing and commodification” (6). Poor images include “former masterpieces of cinema and video art”:

After being kicked out of the protected and often protectionist arena of national culture, discarded from commercial circulation, these works have become travelers

in a digital no-man's land, constantly shifting their resolution and format, speed and media, sometimes even losing names and credits along the way ... [the poor image] is about defiance and appropriation just as it is about conformism and exploitation. (Steyerl 2009, 8)

It is possible to conceive of a different *musée imaginaire* which encompasses high-quality copies, "poor images" and half-remembered ones, parodies and tourist souvenirs; and which builds on Malraux's recognition that, after the museum dislocates objects and pictures from their original context, photography (and now networked digital technology) releases images into the world to such an extent that the resource of mental images (as well as reproductions) is greatly expanded. According to the art historian Hans Belting, when we see pictures we transform them into

remembered images that henceforth become part of the archive of our memory. When external pictures are re-embodied as our own images, we substitute for their fabricated medium our own body, which, when it serves this capacity, turns into a living or natural medium. (2011, 16)

Belting understands the medium as "that which conveys or hosts an image, making it visible, turning it into a picture" (2011, 18). The images held in minds and memory are ephemeral, but we pass them on to one another, and they become part of a shared cultural memory that is "the common storehouse in which images lead their own lives" (39). Our bodies become the media through which we experience mental images, and images are nomadic: "they migrate across the boundaries that separate one culture from another, taking up residence in the media of one historical place and time and then moving on to the next, like desert-wanderers setting up temporary camps" (21).

This anthropomorphic account is reminiscent of the way in which Foucault describes the transgressively plural and wandering image. It is also reminiscent of recent anthropological writing in which the "social life of things" has been used to understand the values and commodity exchange practices of cultures (Appadurai 1986). Latour and Lowe use this notion too, to challenge the distinction between an original and a copy: "A work of art – no matter the material of which it is made – has a trajectory or, to use another expression popularized by anthropologists, a career" (2011, 278). This model is more linear than Foucault's free play of images though, and retains the idea of one-way traffic, from the original to the multiple copies it spawns.

For Foucault, however, the promiscuous circulation of the image between paintings and photographs, to print and lantern slide, belongs specifically to the early period of 1860 to 1880. Foucault senses the loss of this in his own period, and his essay is on one level a rejection of the dominance of abstraction in painting which destroys the image "while claiming to have freed itself from it" (Foucault [1975] 1999, 88). Foucault wanted to "recover the games of the past," to set free the sheer pleasure of playing with images, "to put images into circulation, to convey

them, disguise them, deform them, heat them red hot, freeze them, multiply them” (89). As Adrian Rifkin suggests, “Read afresh today, it [Foucault’s essay] evokes as much the present and future world of electronic communication as the aporias of modernism in the 1970s” (1999, 41).

Foucault and Belting are describing the movements of the “virtual” image. As several writers have argued, the “virtual” is not specifically a property of digital or electronic media, but is a term used since the seventeenth century to understand images seen through lenses or in mirrors which, although they do have materiality, appear to us as immaterial and able to be transferred from one surface or support to another (Friedberg 2006, 8–12). Belting writes:

In the modern age, the museum has become a refuge for pictures that have lost their locus in the world and exchanged it for a locus in the world of art. But this secondary link to a place is now also dissolving, giving up its physicality as images enter the world of high speed, ephemeral, pictorial media. (2011, 40)

With digital photographic reproduction, storage, and retrieval of images, the movement from artifact to virtual image is facilitated, so that “technological images have shifted the relationship between artifact and imagination in favor of imagination, creating fluid transitions for the free play of the mental images of their beholders” (Belting 2011, 41).

Twenty years ago, writers and curators anticipated the impact of the combination of computers and telephone technology for the dissemination of images, but they could not foresee the ways in which mobile phones equipped with cameras and apps such as Instagram, Flickr, and Facebook would contribute to making image sharing such a common cultural practice. Only recently has the discussion of the digital image shifted toward an interest in the cultural and philosophical consequences of practices of transmitting, sharing, and transforming images as they pass between different kinds of devices and from one medium to another. These practices even affect the act of spectatorship in the museum as people take out their camera phones, take pictures, and post them online. These images go to their Flickr stream, to Instagram and Tumblr: some of the brand names evoke a kind of play – tumbling, simultaneous, spontaneous, instant.

It is tempting to imagine the post-photographic museum as the playful museum, as the alternative to the museum as the house of originals. Against the doomsayers who cite the short amount of time spent in front of each painting at the Louvre as some sign of cultural decline, we could see this fleeting attention as part of the flickering, active, and yet distracted attention which early twentieth-century commentators posited as a radical and collective substitute for bourgeois individualist attention. Mobile handheld media enable the variously reverent and irreverent ways in which people take and share souvenirs of their visits. Increasingly museums feel unable to prevent the use of camera phones, despite concerns regarding the impact of this on visitor attention (on the change in policy at the National



**FIGURE 25.3** Matti Braun's *Gost Log* at Arnolfini, Bristol, UK, 2012.  
Mobile phone photo: Michelle Henning. Reproduced by permission of Arnolfini.

Gallery, London, see Bland 2014; Malvern 2014; Williams 2014). While many museums and galleries discourage, or at best tolerate, visitor photography, some encourage it – for example, in 2012, Arnolfini, in Bristol in the United Kingdom, encouraged visitors to take personal photographs of their Matti Braun exhibition *Gost Log* (Figure 25.3), inviting them to share them via Twitter, Facebook, and Instagram. There are also activist interventions using networked art, augmented reality, and mobile handheld media. These activities set the image into unruly circulation again and permit us to see playful possibilities in the art museum. Peter Samis (2008), associate curator of interpretation at San Francisco Museum of Modern Art describes this in terms of the “exploded museum,” and Haidee Wasson (in Chapter 26 in this volume) in terms of “elasticity”. The space for play – *Spielraum* – is also the expanded and networked field of action.

Samis uses the example of students visiting the Museum of Modern Art, New York, in 2005 with digital recorders and creating irreverent “guerrilla podcasts.” In Chapter 20 in this volume, Beryl Graham writes of augmented reality media art projects that use visitor’s mobile phones to undercut the official narrative of the museum. Storrie’s “delirious museum” develops from the argument that “museums should be a continuation of the street,” resisting their tendency to order and control. Storrie is attracted to museums that have a “messy vitality,” that spill over into the everyday (2006, 2–3).

However, the history of the art museum is to a great extent the history of the institutionalization of an idea of private, contemplative aesthetic experience that is at odds with the collective, participatory, communicative but also commodified aesthetic pleasures that underpin these new practices (Hein 2000, 132; Klonk 2009, 16, 129). As numerous blockbuster exhibitions demonstrate, we are still in thrall to the thing itself, to the original artwork as an expression of individual genius, even in cases where the artworks themselves seem to militate against such a reading. Here is the Tate Modern website on its Roy Lichtenstein retrospective: “Room after room will pay tribute to his extraordinary oeuvre, celebrating the visual power and intellectual rigour of Roy Lichtenstein’s work” (Tate 2013). Even video art, developed from a tradition which set out to challenge the ways in which museums separate art from everyday life, can end up reproducing or reinforcing the isolation of the individual spectator from collective experience. While other commentators see new media as damaging the private contemplative space of the gallery (see, e.g., Bland 2014), the art historian Charlotte Klonk sees new media installations, particularly video art, as on the whole reinforcing it with dark cinematic spaces:

The introduction of the bodiless, lost-to-the-world cinema spectator into the art gallery does away with the last public space in which cultural reception can take place as an engaged process together with others ... Unlike Boris Groys (and many others), I do not fear the introduction of new media into the art gallery because they represent a threat to the gallery as a space of contemplation. Rather, it is the disappearance of what is – potentially at least – a space of public interaction and communication that I would regret. (Klonk 2009, 223)

We might also want to question the model that proposes digital, computer-based, and mobile media as harmlessly “playful” and the skittish, superficial, glancing attention associated with computing as a viable alternative to deep contemplation. Parallel processing – the computer’s ability to keep several programs running at the same time – trained computer users to hop between tasks, something that is glossed as a superior ability via the term “multitasking” but which can equally be understood in terms of “the increased expectations of 24/7 productivity” and increasingly targeted marketing (Friedberg 2006, 235). In this context, close, sustained attention, with an eye for nuance and detail, might be a luxury with a critical edge, and the social, collective experience of new media may not be so sociable after all (Turkle 2011). In this context, solitary contemplation can be associated with freedom: to lose oneself in a work of art or have it “speak to your soul” is something to treasure. Producing this possibility can be a political practice, as Rancière suggests: “Constructing a place for solitude, an ‘aesthetic’ place, appears to be a task for committed art” (2009, 53).

On the other hand, the possibility that play can become labor, that attention can be harnessed economically, should not force us to abandon it as a model for thinking about the art museum in a culture of digital and electronic reproduction.

Digital media offer possibilities for control, but also for relinquishing control. This is not about the “gamification” of museums (i.e., the use of games and the harnessing of the pleasures of play to engage visitors and increase visitor numbers). It is about a model of play that involves aesthetic pleasure, participation, and collective engagement, a “delirious” loss of control and uncontainability – extending endlessly beyond the walls of the museum, into everyday experience, across media and bodies, and back again.

## Notes

- 1 The lead Woodburytype, the Stanotype, and the collotype are examples of processes used in the late 1870s. In the 1880s came the introduction of the mechanical halftone process which translated the continuous tone of the photograph into dots with the use of a screen.
- 2 This is the title by which the essay tends to be known to English speakers, as it is that of the first English translation, by Harry Zohn, which was published in 1969 in Arendt’s collection of Benjamin’s writings, *Illuminations*. However, in this chapter I quote from the translation published in the *Selected Writings* under the less elegant title “The Work of Art in the Age of Its Technological Reproducibility” (Benjamin [1936] 2002).
- 3 There were cast galleries at the French Academy and the Palazzo Sacchetti in Rome, the Palazzo Farsetti in Venice, at Mannheim and Charlottenburg, and in Peter the Great’s Imperial Academy of Fine Arts in Russia – to name just a few of those listed in Haskell and Penny (1981).
- 4 The term is Ivins’s: “painstakingly as Durer might copy a real rabbit ... in his own syntax, when it came to copying a print by Mantegna he refused to follow Mantegna’s syntax, and retold the story, as he thought, in his own syntax” (Ivins 1953, 61, quoted in Fyfe 2004, 54). The syntax developed by engravers was systematic and linear, a “net of rationality” as Ivins termed it, into which the visual language of the work of art was translated (Ivins 1953; Pinson 1998).
- 5 Amy Von Lintel (2012) has argued that wood engraving, in particular, not only survived after photomechanical reproduction but was a more popular (because it was less expensive) way in which reproductions of art circulated to nonacademic audiences, general readers, and for self-instruction. In formal education contexts, however, photomechanical reproduction was being used, for instance, in the “picture study” of nineteenth-century American schools (Stankiewicz 1985).

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