

## Can Digital Pictures Qualify as Photographs?

Can digital pictures qualify as photographs? The commonsensical answer is that they can. We are happy to call a picture of a scene made with a digital camera a photograph. According to William Mitchell, however, we are wrong to do so. For Mitchell pictures made with digital cameras do not qualify as photographs because they lack a certain realism essential to classical, i.e., film-based, photography. In the following, I will first present two ways in which film-based photographs are realistic. Next, I discuss Mitchell's position that pictures made with digital cameras are not realistic and, consequently, not truly photographic. Finally, I argue—against Mitchell—that pictures made with digital cameras are realistic and, thus, *do* qualify as photographs.<sup>1</sup>

### I. PHOTOGRAPHIC REALISM

Many philosophers endorse the intuition that photography is a distinctly realistic medium of depiction.<sup>2</sup> Photographs would entertain an intimate relation with reality, lacked by other pictures. Roughly speaking, there are two definitions of photographic realism on the market: an epistemological one and an ontological one. I will briefly discuss both definitions and argue that they are intertwined.

Before I do so, a remark: When I speak of photographic realism, I do not use the word "realism" in its art-historical sense. I will not, in other words, speak about realism as the artistic style that aims to depict objects without abstraction or idealization. Realism in this artistic sense can apply to both photographic and nonphotographic pictures: paintings can depict all kinds of things—trees, houses, unicorns—in nonabstract and nonidealized ways. What I am after, however, is what makes photography special in comparison with other pictorial media. Therefore, I will specify in what sense photographic pictures, and these pictures alone, are realistic. The epistemological and ontological definitions of realism both highlight ways in which photography is uniquely realistic.

Photographs are epistemologically realistic because they are reliable informants about the visual properties of their *depicta*.<sup>3</sup> Whereas a judge is probably not interested in a drawing of a murder, she is likely to be interested in a photograph of it. This is due to photography's mirror-like reflection of reality. Like mirrors, photographs can only show real things and have limited possibilities to misrepresent them. In contrast to a painter, a photographer cannot decide to depict a black horse as purple. Emphasizing photography's objectivity, epistemological realists assign it the function of informing the viewer about the visual appearance of photographed things.

Photographs are also ontologically realistic because they are causally connected to their *depicta*.<sup>4</sup> This connection is an implication of how analog photographs are made: a chemical emulsion serves to capture rays of light reflecting from the *depictum*. The result can be compared with a footprint in the sand. The *depictum* has imprinted its visual appearance on the photographic material, just like the foot has imprinted its shape in the sand. Prints and

photographs are the result of causal interaction between sand and foot or photo paper and depictum.

Emphasizing this causal dimension of photography, ontological realists assign to it a relic-like function. We care for photographs because they are causal effects of their depicta. A photograph of my girlfriend, for example, matters to me in the same way as her lipstick marks at the end of a letter; not because of the informational content expressed, she could have expressed her love using conventional signs like "x x x," but because of the causal provenance of this content. I care for the lipstick marks because they are an effect of my girlfriend pushing her lips on the paper. Similarly, I do not care for my girlfriend's photograph as a source of information about her—as if I could forget what she looks like—but as a causal trace of her.

Epistemological and ontological realists agree that photographs have an intimate relation with reality. The former defines this relation as one of adequate reflection, whereas the latter defines it in terms of a causal connection. However different these definitions of photographic realism might be, they are intertwined: epistemological realism depends on ontological realism. Only because the informational content of the photograph is produced causally do we take it to be a supremely veracious reflection of the visual world.

We expect photographs to be reliable, not because of their visual features but because of the causal origin of these features. In principle, a painting and a photograph can have identical visual features. Suppose someone shows you a picture you understand to be a photograph of your house burning. The person showing you the picture sees your panic and reassures you it is not a photograph but an extremely detailed painting. Although you see the same picture—the knowledge that the markings on the picture's surface lack a causal origin does not change the picture—there is a shift in your experience: you now know the picture does not necessarily represent a state-of-affairs. Whereas paintings are produced by an intentional subject who can choose to portray reality and fiction, photographs, causal traces of actual things, cannot but reflect reality in a mirror like way.<sup>5</sup>

## II. DIGITAL PHOTOGRAPHY

Nowadays, many pictures are produced, not with film-based, analog cameras, but with digital ones. In *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, William Mitchell argues these digital pictures are not photographs. They would lack the realism typical of their analog predecessors as they are not the causal effect of reality imprinting itself on photosensitive material.<sup>6</sup> Digital cameras rather operate with a sensor sensitive to light. The scene in front of the lens is turned into a grid, consisting of a finite number of cells. Light sensitivity is measured for each of these cells. Next, each cell is assigned a code specifying a color and shade. Afterwards, this digital code is translated back into visual information, making the depicted scene re-emerge. The pictures created this way may look like photographs but, according to Mitchell, are something completely different:

We might choose to regard the digitally encoded image as simply a new, nonchemical form of photograph, just as the automobile was initially seen as a horseless carriage .... But such metaphors obscure the importance of this new information format and its far-reaching consequences for visual culture. Although a digital image may look just like a photograph when it is published in a newspaper, it actually differs as profoundly from the traditional photographs as does a photograph from a painting.<sup>7</sup>

Mitchell is not the last to wonder whether pictures made with digital cameras are photographs. In a recent paper on photography in *Nous*, Robert Hopkins asks if the properties we typically ascribe to photographs—epistemic reliability and a sense of contact with the depicted object—can apply to pictures made with digital cameras.<sup>8</sup> It should also be noted that questions regarding the realism of digital pictures are very much alive in nonacademic contexts. When Osama Bin Laden was killed, and digital pictures of his body appeared in the media, questions were asked about the reliability and authenticity of these representations. Unlike the analog photograph, the digital one was not accepted directly as proof of Bin Laden's death.<sup>9</sup> In the following, I will present two ways in which pictures made with digital cameras challenge a traditional, realistic understanding.

Pictures made with digital cameras would, first of all, not be realistic because they are often not reliable carriers of information. They can be easily manipulated. According to Barbara Savedoff, this is a consequence of their code-based origin.<sup>10</sup> When I take a digital picture of a thing, its visible features are translated into digital code. This code can be altered, effecting changes in the way the depictum is represented. Subsequently, digital photographs can misrepresent things; for example, as green instead of black. Hence, pictures made with digital cameras do not in all cases reflect the photographed scene.

Does the existence of certain digital pictures, which misrepresent their depictum, present us with a knock-down argument against a realistic understanding of digital photography? For three reasons, I think it does not:

First, all manipulation requires realistic originals which are altered *a posteriori*. Only because there is an epistemologically realistic original digital picture on which a horse is black, can I produce a picture—using a computer program like Photoshop—on which it is green. The possibility of manipulation is no argument against digital photography's realism, as manipulation requires realism.

Second, manipulated photographs are often reliable informants about many aspects of the photographed things. Consider a photograph of the pyramids at Giza on the cover of *National Geographic*.<sup>11</sup> In order to fit all three pyramids on the narrow front-page, the magazine adjusted the position of the pyramids, placing them slightly closer to another. Still, we are probably comfortable to admit that this picture is a photograph of the pyramids at Giza and that it can teach us a lot about the pyramids. It provides, for example, reliable information about their color and shape. We will only suffer disappointment if we intend to find out about their proximity.

Third, it has been argued that digital photographs are unrealistic because they can depict things that never were the case.<sup>12</sup> There is, for example, a picture of a meeting between Tom Cruise and Dustin Hoffman that, in reality, never took place. Two digital pictures of the actors were merged to make it appear as if they had met. This, however, is not an argument against the epistemological realism of the digital photograph either, because the picture in question is not a photograph. It is rather a collage which draws on epistemologically realistic photographic elements to produce a picture which is not itself a photograph. Photographic elements are used to depict a fiction. Of course, the picture is not photographically realistic, but since it is not a photograph, its existence does not prove that digital pictures are (epistemologically) unrealistic.

In sum: That some pictures made with digital cameras are *de facto* manipulated is not an argument against the realism of pictures made with digital cameras. Mitchell argues, however, that there is a more fundamental challenge. This challenge is connected to the mere possibility of manipulation. In the case of a digital picture we can, just like when we are looking at a painting, never be sure whether it depicts reality or fiction. Since we cannot be certain whether it really is causally linked to the thing it depicts (even when it, *de facto*, is) we have no choice other than to

be agnostic about the relation of the digitally produced picture to reality:

Potentially, a digital "photograph" stands at any point along the spectrum from algorithmic to intentional. The traditional origin narrative by which automatically captured shaded perspective images are made to seem causal things of nature rather than products of human artifice, no longer has the power to convince us.<sup>13</sup>

In the case of a digitally produced picture, so Mitchell argues, we can never be sure it depicts reality.<sup>14</sup> As the picture could have been altered by the picture-maker, with a computer program like Photoshop, the causal connection between the picture and the depicted scene could always be absent. Barbara Savedoff argues that, in the age of digital manipulation, our general attitude toward photographic pictures will change. We can never be sure that a picture that looks like a photographic representation of a scene really is a reliable representation. Therefore, we will, in time, not trust photographs any more than paintings or drawings. In the eyes of the public, no pictorial representations will have an especially realistic status any more.<sup>15</sup> In her paper on digital photography, which has the working title "Escaping Reality," Savedoff writes that due to the rise of digital photography:

our faith in the credibility of photographs will inevitably, if slowly and painfully, weaken, and one of the major differences in our conceptions of paintings and photographs could disappear.<sup>16</sup>

If such a development will take place is not for the philosopher to decide. This is, rather, an empirical matter. But even if it would take place, it is not an argument against the realism of pictures made with digital cameras. Imagine looking at twenty letters with lipstick marks on them. In nineteen of these letters, the marks are not the effect of someone pushing her lips on the paper. Rather, they were drawn by an artist. In one of the twenty letters, however, the marks are the effect of a woman pushing her lips against the paper. You are, simply by looking at the letters, unable to tell which marks count as genuine lips-marks and which ones do not. But that does not mean that none of the marks are genuine. One set of marks is genuine, i.e., caused by a woman pushing her lips against the paper. My inability to identify them as genuine does not alter this. Similarly, being unable to tell which pictures are causally linked to the scenes they depict and which ones are not, does not mean that some representations have causal origins and, consequently, are genuinely photographic. A thing does not have to be recognized as *x* to be, in fact, *x*. Questions about our capacity to identify causal pictures as such are independent from questions about the existence of such pictures.

I have discussed two ways in which pictures made with digital cameras challenges a realistic understanding. First, there are digital pictures which *de facto* misrepresent their depictum. Second, there is the ever present *possibility* that pictures which look like photographs lack a causal connection to their depictum. I have argued that neither challenge is serious. This paves the way the way for a realistic interpretation of digital photography.

### III. DIGITAL REALISM

In this section, I argue that pictures made with digital cameras are, in principle, just as realistic—in the ontological and therefore also in the epistemological sense—as their analog predecessors. I defend the intuition that pictures made with digital cameras are photographs and do not differ fundamentally from pictures made with analog cameras.

How will I argue for this "digital realism"? Remember that ontological realists ascribe to photographs a relic-like function, based on their causal connection with the depictum. Now, if it is true that pictures made with digital cameras lack the realism so typical of analog photography, one can reasonably expect that they cannot perform this relic-like function. In the following, however, I will discuss two cases in which digital photographs do function as relics. This is already an indication that digital photography is more like its analog counterpart than Mitchell wants us to believe. Toward the end of the paper, I use my examples to develop an argument for digital photography's realism.

**(Case 1)** Suppose that I keep a photograph of a deceased friend in my wallet. This picture is not merely there to inform me about my friend's appearance. It rather serves to stay in touch with him. His photograph can perform this function because it is the effect of physical interaction between my late friend and the photo paper. In this sense, his photograph has a similar meaning to me as, for example, a baseball cap that belonged to my friend and was passed on to me after his death. I care for the cap because my friend touched it; because there was physical contact between the cap and my friend. Both in the cap and in the photograph, something of my friend seems to be present, not in a supernatural way but simply because they were physically connected. The baseball cap and the photograph have a history of causal interaction with my friend.

If pictures made with digital cameras lack realism, we can expect them to be unable to function as relics. Still, they are very much able to perform this typical photographic function. Consider a digital picture of my friend used as wallpaper (i.e., as a background image) on my mobile phone. Is this digital picture there to inform me about the visual appearance of my friend? Probably not. It rather serves to keep in touch, i.e., to sustain my contact with him. Thus, digital photographs can also serve as relics; a function which is traditionally attributed to analog photographs.

**(Case 2)** Whereas the first example serves as an indication that digital photography is more realistic than Mitchell assumes, a second one offers a springboard for an argument in favor of this conclusion. I first introduce this example and subsequently use it to make an argument against the claim that digital photographs are not realistic in the photographic sense.

Consider again the example of the deceased friend. As I have no photographs of him, I ask his brother to e-mail me one, which he does. Some days later, I run into my friend's brother and thank him for e-mailing me the picture. To my surprise, however, the brother admits that the picture he sent me was not a digital photograph, but a pure simulation: His hard drive crashed and he lost all his photographs, so he decided to reconstruct his brother's visual appearance out of raw code. The result is an apparently photographic picture of him. Although I can see that it adequately represents my friend's appearance, I am probably disappointed. In an ideal world, I would have chosen a picture made with a digital camera over a mere simulation. In comparison with a simulation, which lacks any origin in reality, the picture made with the digital camera suddenly appears to be ontologically intimate with its depictum. Whereas the simulation is the product of the intentions of a human subject, the camera-produced picture displays a depictum that was in front of a lens and caused certain constellations of digital code in the camera. These codes would not have been formed, and no image would have arisen from them, if my friend had not been in front of the camera to cause them.

This example highlights the causal nature of digital photography: only when a thing with certain visual features is really in front of the lens, a particular constellation of codes is formed in the digital camera. These codes can subsequently be translated back to the visual appearance of the depictum. In contrast to the pure simulation, constructed from scratch out of raw code, the digital camera produces its code in an entirely causal, nonintentional manner. Consequently, ontological realism is a feature of digital photography too: the depictum causes certain codes, these codes cause markings on the picture's surface, and these markings allow me to see the

depictum in the photograph. Of course, this causal chain differs from the one leading up to an analog photograph—no chemical emulsion or photo-negatives are involved—but it is still a physical process in which reality creates its own picture.

#### IV. DIGITAL REALISM REALIZED

Although analog and digital photography are undeniably different, this difference is a matter of degree rather than categorical. In both cases there is—under normal circumstances—a causal relation between the photograph and depictum. In the case of digital photography there is a causal connection between the appearance of the photographed thing and the codes generated in the camera. There is also a causal link between this code and the marks on the picture's surface. Finally, there is a causal link between the marks on this surface and the thing (horse, girlfriend, etc.) that can be seen in them. Like their analog predecessors, digital photographs are ultimately caused by the things in front of the lens. Consequently, they are just as realistic as analog photographs. Analog and digital photography do not differ as profoundly as Mitchell believes. The basic procedures in both analog and digital photography are exactly the same: information about the visual properties of a scene is preserved in a purely causal process. If a photograph, or any aspect of it, lacks this connection, then this picture, or an aspect of it, is not photographic.

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<sup>1</sup> I would like to thank the two anonymous reviewers at ASAGE for their helpful comments. I also would like to thank Quentin Sutton and Robert Hopkins for their comments on earlier versions of this paper, presented at the conferences of the American and European Societies for Aesthetics.

<sup>2</sup> Examples of realistic theories of photographic pictures are, amongst others, Kendall Walton, "Transparent Pictures: On the Nature of Photographic Realism," *Critical Inquiry* 11 (1984): 246–277; Susan Sontag, *On Photography* (London: Penguin Classics 2002); and Roland Barthes, *La Chambre Claire: Note sur la Photographie* (Paris: Gallimard, 1980).

<sup>3</sup> An exemplary epistemologically realistic approach is Walton (1984). With the term "depicta," I describe the object, events, or states-of-affairs represented by pictures. In other words: their subject.

<sup>4</sup> An exemplary ontologically realistic approach is Barthes (1982).

<sup>5</sup> I place the question whether photographs are literally like mirrors between brackets. This would lead us into the difficult discussion as to whether photographs are transparent, i.e., whether or not we literally see the photographed objects through them. In this paper, I remain agnostic on this point. The transparency thesis is defended in Walton (1984).

<sup>6</sup> William Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era* (Cambridge, MA: MIT Press, 1992).

<sup>7</sup> *Ibid.*, 4.

<sup>8</sup> Robert Hopkins, "Factive Pictorial Experience: What is Special about Photographs?" in *Nous* (2010), <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0068.2010.00800.x/abstract>.

<sup>9</sup> See the following article: <http://abcnews.go.com/Politics/WorldNews/conspiracy-theories-proof-bin-ladens-death/story?id=13508746#.TruWdUP6Bpw>. The ethics of digital photography and imaging

techniques are discussed in Tom Wheeler's *Phototruth or Photofiction? Ethics and Media Imagery in the Digital Age* (Mahwah, New Jersey: Lawrence Erlbaum Associates, 2002).

<sup>10</sup> Barbara Savedoff, "Escaping Reality: Digital Imagery and the Resources of Photography," *The Journal of Aesthetics and Art Criticism* 55 (1997): 210.

<sup>11</sup> Mitchell, *The Reconfigured Eye*, 16. Here, Mitchell specifically discussed the example of the pyramids and its implications for the reliability of digital pictures.

<sup>12</sup> Savedoff, "Escaping Reality," 211.

<sup>13</sup> Mitchell, *The Reconfigured Eye*, 31.

<sup>14</sup> *Ibid.*, 51.

<sup>15</sup> A similar position is defined in Antonia Bardis, "Digital Photography and the Question of Realism," *Journal of Visual Art Practice* 3 (2004): 209–18.

<sup>16</sup> Savedoff, "Escaping Reality," 212.

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