

### SPECIAL ISSUE OBSERVATION – INVITED CONTRIBUTION Observation as photography: A metaphor

### Hervé Laroche

ESCP Business School, Management Department, Paris, France

#### Abstract

From its invention in the middle of the 19th century to the present date, photography has generally been considered as a highly reliable means for capturing data about a wide range of objects and for a huge variety of purposes. Though debated, photography's relationship with reality is specific and powerful. Because of its long and rich history, photography has encountered many problems and challenges observation methods and practices in management studies. Taking photography as a metaphor for observation in general, this article explores the successive steps of a research project relying on observation. Taking photographs is capturing data; reading photographs is analyzing and interpreting data; and showing photographs is presenting the findings in publications. For each stage of the process, various issues are discussed, drawing on the scientific, forensic, artistic, or vernacular uses of photography. Particular attention is accorded to key examples in the history of photography. This article is an invitation to reflect on observational methods and practices in a non-demonstrative, heuristic manner.

Keywords: Observation; Photography; Methods; Publishing; Forensics; Art

hotography is roughly 200 years old. Henry Fox Talbot (1800–1877), one of its pioneers and inventors, called it the 'Pencil of Nature.' The French astronomer Jules Janssen pictured the photographic surface as the "scientist's retina" (cited in Geimer, 2018, p. 281). Photography was born as a process believed to produce a reliable capture of reality. It was thought to be far more reliable and informative than drawing, for instance. "When a zoologist makes a drawing, he only represents what he notices from his model, and, consequently, the picture drawn by his pencil only translates the more or less comprehensive idea that he has gathered about the thing to reproduce .... (...) A photographic image, when correctly made, provides not only what the author himself has seen and has wanted to represent, but also all that is really visible in the reproduced object." (Rousseau et Devéria, 1853; cited in Méaux, 2019, p. 7 – my translation). Of course, today, we are no longer so naively enthusiastic. We all know that photos can also hide or lie (or support lies). Yet photos are still considered as a powerful way to observe reality (all kinds of realities, including social ones) and to account for it. Photography, as an extension of human vision and as a device to retain what can be seen, is probably the archetypal instrument of observation. It often comes in spontaneous metaphors when an inquiry is presented or commented upon, whether the inquiry is scientific or not. And this is implicit in the most mundane uses of photos: when you send an Instagram picture of a marvelous dessert to your friends, you are relying on the trust that your friends have in the medium as a way to convey a 'true' account of what you have on your plate.

This article is an invitation to take photography as a metaphor for observation. Of course, many forms of inquiries truly use photographs as a tool for observation (for a discussion of some practices, see Royer, 2020). These inquiries will be included within the scope of this article, but I will not specifically focus on them. What I suggest is that we might benefit from heuristically considering any kind of observation as analogous to a photographic process.

To explore this idea, we will follow the standard process of a scientific inquiry using observation. First, there is the fieldwork: you have to capture the object of your inquiry and collect the data. In photography, this is the shooting part. Photography here is taken as a method, partly incorporated

\*Corresponding author: Hervé Laroche Email: laroche@escp.eu

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into the camera and partly implemented by the photographer. Second, you have to analyze and interpret the data. How do we read photographs? What do we see (or fail to see) in them? Third, you have to write about your findings, a doctoral thesis or a scientific article to be published (hopefully) in a well-ranked journal. Scientists using photography do exactly that. Artists show their work in exhibitions or publish books, trying to please their audiences or otherwise offer them an interesting experience. Ordinary people send pictures via social networks, hoping to share an emotion or spur a laugh. Scientists, artists, you, and me: we all want our photographs to be, in some way, convincing. Shooting (collecting data), reading (analyzing data), and showing (publishing) - but before we really start the metaphoric exploration of photography, we have to get back to the key issue of the realist assumption that infuses photography. As stated before, things are not that simple. Photos do not just appear: they are made, and this matters.

## Real of fake? The epistemology of observational data

### Real!

In photography, the confused war between positivism and constructivism also rages. As mentioned earlier, photography first appeared as the perfect witness of reality. Scientists marveled over this prosthetic eye blessed with far more abilities than the human eye. Painters used photos as documents to avoid the pains of traveling or paying models. Soon, reporters caught images of scenes never before seen by wide audiences: battlefields with scattered cannonballs (e.g., Crimea war by R. Fenton), destroyed houses, and dead bodies of soldiers (e.g., US Civil War by M. B. Brady). Successful press outlets developed around the publication of extensive photographic coverage of events all over the world (e.g., Life magazine). The police quickly relied on photos to document crimes and identify offenders. The military deciphered the capabilities and intentions of the enemy on the basis of aerial photographs. And everywhere people took snapshots to stall the passing of time and retain images of what once was. Even Roland Barthes, who worked hard to kill the referential illusion in literature, surprisingly took quite the opposite stance on photography. He saw the power of bringing the past into the present as the true nature of the photographic image (Barthes, 1980).

Photographs are traces of what is or was: this is called *indiciality*. The light that came from the object and struck the sensitive surface creates a direct link – a complex one, but a physical one – between the object and the image. This is why photos are 'true.' As noted in telling terms by the artist photographer Hiroshi Sugimoto, this truth draws the line between pictures and photographs: "A picture is a picture because it is

a fiction. A photograph is a photograph because it appears *not* to be a fiction.'' (Sugimoto, 2016, p. 4).

### Fake!

Sugimoto is famous for playing with the limits of the photographic medium. Depending on how you understand the ambiguous word 'appear,' his statement may also mean that photographs are, in fact, fictions that are mistaken for the truth. It is true that photons have traveled from an object to a light-sensitive surface that kept a trace of this event. Is this enough to take this trace as proof of the object? So, much else is involved in the making of a photograph: photographs are taken by photographers equipped with a complex apparatus and who have more or less clear purposes; photos are edited, published, and circulated through numerous media to different audiences; they are received and consumed by people who have varying degrees of cultural knowledge about images; etc. Thus, if a photograph appears not to be a fiction, it is only an appearance. For at least 50 years, most academics and critics have insisted on the socially constructed, coded, conventional, and artificial character of photographs. No photograph should be read without taking into account its social, economic, or ideological context. No photograph is innocent. So much for the 'Pencil of Nature.'

Eager to differentiate themselves from reporters and laypeople, artists proved highly receptive to this idea. Some claimed that photography was just another way to make pictures, just like painting or any other technique. They pushed the idea of 'truth' out of the picture with staged photographs or digital manipulations. Other artists turned to the exploration of the medium itself. The materiality of photographs became a focus of attention. Old, complex techniques became trendy. Finally, still another group of artists engaged in the philanthropic, moral, and political project of opening the eyes of the layperson about the illusion provided by photos. Emancipating the spectator implied displaying the ambiguities of photography. For instance, photographer Simon Vansteenwinckel described in his latest book as a 'documentary of fiction' (Vansteenwinckel, 2019).

#### It is complicated

This oxymoron can be applied to an important trend in contemporary photography: documenting various aspects of the world, mainly social and urban realities, by using the procedures, techniques, and codes of the documentary photography while simultaneously distancing oneself from any claim of 'truth' (Méaux, 2019). Rather than deliberately and ironically deceiving or confusing spectators, these 'new documentary' photographers open the black box of picture-making and side with spectators to help them reflect both on the results and on the process. They still have a long way to go, though. Unconscious of the conspiracy of conventions, people still take pictures at weddings and parties. Scientists analyze incredibly accurate photos of tiny cells or huge galaxies. While academics, artists, and critics endlessly debated whether photography was real or fake or in between, society at large ignored much of their questioning and stuck to a down-to-earth, positivist notion of photography as picturing what really is. Very convincing proof of this are the countless scandals and trials that have occurred over photographs in history (Girardin & Pirker, 2003). Scandals, fights, and trials would make no sense if people believed that photos do not matter. Today's obsessions with fake news and fake documents only emphasize this. There are fake photos because there are true photos.

#### 'The raw materials of truth'

A good summary of the current situation can be found, I think, in the following quote:

"There was a time where one no doubt made excessive use of the 'indiciality' criteria and of the barthesian 'it-once-was': each time one looked at a photograph, ontology was brought in, without any mention of the specific formal procedures of this medium. But falling into the diametrically opposite viewpoint amounts to trading all for nothing. It means losing sight of true photographic power and of the point – a problematic one, it goes without saying – where the picture *touches the real.*" (Didi-Huberman, cited in Geimer, 2018, p. 320 – my translation – emphasis in the original).

Now, how exactly does photography "touch the real?" This is 'problematic,' yes. Suspicion is required. Yet, photographer Wright Morris wrote on an exhibition's wall:

"Although we might describe this as the photographic century, the nature and singularity of the photographic image still eludes us. In the face of all evidence of the contrary, we persist in feeling, if not in believing that facts are what photographs give us, and that however much they lie, they do so with the raw materials of truth." (Morris, 2019).

The raw materials of truth: is not this what good observation provides, what good data are made of? As researchers, it is up to us, then, to extract, interpret, and arrange these raw materials as truth – even if we do not all agree on what the truth is, we certainly do not want to lie.

### Shooting: Collecting observational data

Collecting data through observation implies solving many problems. Ideally, I want to capture all relevant data and certainly not miss any. This is all the more difficult when I only have a vague idea of what exactly 'relevant' means, because I am not sure yet about what I am really looking for... so, I might try to collect a lot of data and sort them out later. More numerous data are better, and more detailed data are also better. When this problem arises, photography seems to be the perfect instrument. It provides both width and depth. It records everything, even what you have not seen. Moreover, you can focus on details, go deeper into the exploration of what you have recorded. If you cannot see clearly, just enlarge or zoom. It is all in there!

Forensic photography will help us to illustrate the relevance problem. Scientific photography, along with conceptual and vernacular photography, will provide material to discuss the detail problem and its pitfalls.

#### The crime scene

At the end of the 19th century, it occurred to some people that police work could benefit a lot from methods inspired by various scientific fields. Photography appeared to be a most interesting tool. Alphonse Bertillon (1853–1914) is considered as the pioneer of forensic photography. He designed and developed a whole methodology for documenting crime scenes (Lebart, 2015a). What is striking in Bertillon's method is the aspiration for metric rigor and exhaustiveness (Figure 1). Crime scenes contain crucial clues along with myriad details that are insignificant. Photography is conceived as a tool that will retain relevant clues until they are sifted out from irrelevant details. The ideal way of doing this is capturing as much data as possible in such a way that at any time in the investigation process, it is possible to get back to the crime scene photographs to make sense of one particular detail. It is important, also when taking photos, that no detail should be given a particular salience. The photograph should present all details in the same neutral way. Bertillon thus designed special photographic devices (camera, lenses, lighting, etc.). Operated through a very thorough protocol, they produced a bird's eye (or god's eye) view of the scene. Standardized scales and abacuses enabled investigators to turn the picture into a strictly defined geometrical space, where anything (object, distances, etc.) could be precisely measured.

As a result, the photos taken with Bertillon's method never reflect the view of a human observer. In fact, they carefully depart from any human point of view. The photographic eye becomes much more than a way to retain what the human eye sees but is unable to record except in the fleeting, messy, and unreliable storage device of human memory. It is rather an all-seeing eye: flawless, distracted by nothing, and focused on everything. It is a mathematical eye or at least an eye that fully abides by the laws of physics. In short, it is closest to an objective eye. In the words of Sandberg and Tsoukas (2020), Bertillon's photographic eye is the paradigmatic example of the *detached*, *representational* position. Of course, this eye does not see by itself. It equips the investigator by replacing the





Figure 1. Alphonse Bertillon. Metric photographs of crime scenes. Source: Lebart (2015a).

investigator's limited and unreliable human eye, thereby enabling him to access this detached position that is necessary for the search for truth (or so it is believed).

The underlying conception of police work is, obviously, very different from what popular descriptions suggest (e.g., think of Simenon's *Maigret* or Chandler's *Marlowe*). At the time, it was indeed in strong contrast with usual police practices, which were mostly tricks of the trade, often implying a close proximity between policemen and criminals, and in any case requiring a much more engaged position from the investigators: gathering clues from informers, surveilling places, tailing suspects, confronting them in interrogations, etc. These traditional police practices did not disappear. Still, with the use of photography, Bertillon had successfully promoted an ideal conception of police investigation, based on a very specific type of observation and data collection.

There is undoubtedly a strong flavor of positivism in Bertillon's method. It is grounded in observation without any observer and replication of the object in an artifact that can be retained and manipulated at will. In many ways, it is what spontaneously comes to mind when we design or discuss an observation protocol. Who does not secretly dream of a device or method so powerful that it would do the job by itself and provide such a reliable replica of the object? Digital technologies repeatedly offer opportunities to revive this dream. Even when we are more skeptical, Bertillon's ideal still provides the template against which we compare our methods and outline their flaws (and then try hard and make them acceptable).

Bertillon's ideas received much attention outside France. One of his disciples was the Swiss Rodolphe Reiss, who wrote the first comprehensive book on forensics. Just like his master, Reiss stressed the importance of exhaustive observation and accumulation of details through thorough photographic practices. Yet he also advocated a progressive, narrative approach (Figure 2). Photographs should first set the scene from a distance, as it appears to the investigator arriving on the premises. Varied views should be taken, gradually progressing toward the crime scene, still following the investigator's steps. Only then should close-ups be taken, focusing on specific details that could carry some importance (Lebart, 2015b; Méaux, 2019). Just as in Bertillon's method, Reiss used photography to collect and retain a maximum amount of data. Yet the profusion of data is also a profusion of documents, angles, scales, and levels. The analytical work that is left to the investigator's eye (and brain) is not so much a kind of calculus from a geometric, abstract space, as an interpretive work combining different kinds of data through undefined cognitive processes.

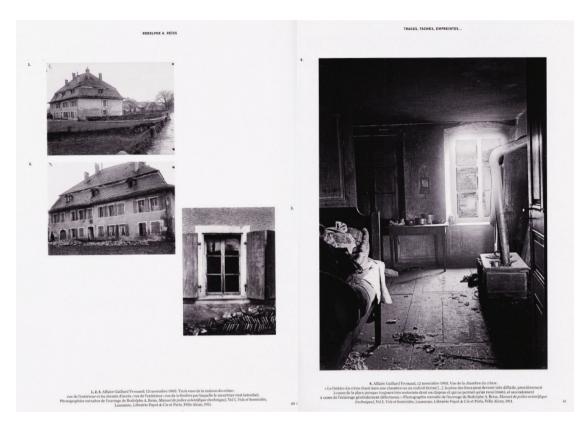


Figure 2. Rodolphe A. Reiss. Photographs of a crime scene. Source: Lebart (2015b).

Let us not make Reiss a precursor in post-qualitative inquiry (St. Pierre, 2018), though. He still insisted on rigor, accuracy, and analytic clarity. Yet his work provides an interesting metaphoric alternative to the abstract, ideal model of observation that Bertillon proposed. Reiss was deeply aware of the cognitive limitations of the investigator. He wrote:

"It is necessary to retain the image of the observed scene not only to correct interpretations due to errors and oversight, but also to repair a purely psychological process. It is obvious that a member of the judiciary called for a forensic examination will very quickly form his opinion about the nature of the crime or accident, etc. Once he has formed his opinion, he will carry out his investigation on the premises in the same direction. He will naturally look for typical clues, often without worrying about other little details. He does not even see them because he does not want to see them. Here again, the camera sees everything and records everything." (Reiss, 1903, cited in Méaux, p. 194 – my translation).

This is a strikingly acute description of the 'confirmation bias' that psychologists consider as one of the most pervasive of cognitive biases (Nickerson, 1998). Reiss conceived photography as a way to counter this bias, rather than an instrument prone to favor such a bias.

It is only ironic that, despite his obsession with rigor, Bertillon stubbornly supported the accusation of Captain Dreyfuss,

ignoring obvious contradictions in his own analysis of the handwritten note that was at the heart of the case (Mercier & Sperber, 2017). Bertillon himself was also an exemplary case of analytical failure and confirmation bias. This failure was not about a photograph, but nor is it very comforting.

### Definition

Photography, it is believed, records everything and any detail can be picked up from the photo and enlarged for deeper examination. Stunning discoveries can be made this way, unveiling unsuspected aspects of reality. Antonioni's award-winning movie Blow Up (1966) precisely puts this idea to the test. A professional photographer wanders into an almost deserted London park and takes pictures of what looks like a charming couple meeting for a romantic affair. But the woman loudly resents his photographing. To calm her down, he gives her a roll of film - only not the one he shot. Later, when printing the views, the photographer is puzzled by some aspects of the woman's behavior. After more printing and searching, on one of the enlarged prints, he spots a man armed with a gun, hiding in the bushes. On another print appears what looks like a body lying on the ground behind a tree. At night, the reporter goes back to the park and finds the dead body of the man he photographed a few hours

earlier. The love story he witnessed has turned into a trap: the woman was luring her lover toward the bushes where a killer was hiding. When the reporter gets back home, the negatives have disappeared, as well as the prints, except one, a fully blown up image of the body. He shows it to a friend who fails to see anything more than spots of various shades of grey. In the morning, the reporter goes back to the park again. The dead body has disappeared.

Photography does not record everything and cannot provide details on everything. This is partly a technical issue. The digital camera that Antonioni's reporter would use today instead of his semi-automatic reflex with black and white film would probably offer a better definition and thus, greater details. Sophisticated equipment, such as the devices used in astronomy, for instance, can pick up incredibly small details. Still, there is another more important side to this. What photography and Blow Up suggest is that an observation method, however powerful, has some degree of optimal definition that should be thought about (or designed) in accordance with the object and purpose of the research. Beyond this limit, what was information turns into noise. Note that it is not a matter of separating information from noise (as we previously examined with forensic photography). On the contrary, in the Blow Up story, noise and information are built from the same material. Changing scale, or trying to grasp multiple scales, is risky and perhaps pointless. If a method is designed to study an object (e.g., romantic encounters in public parks), its reliability for a different (e.g., 'smaller') object is questionable, even if the objects are strongly related (i.e., there is a continuity between them).

Let us push the issue even further: going beyond the limits of a method may produce artifacts that will be confused with information about the object. One key point is that these limits are unclear. A fascinating illustration of this point is provided by conceptual artist Hugo Mulas (Chéroux & Ziebinska-Lewandowska, 2015). Mulas photographed a perfectly blue sky in black and white. He then printed the negative up to the size where the photographic grain (the tiny light-sensitive silver crystals that compose a film) became visible. Finally, he took a picture of a small portion of this print and blew it up into a huge print of a 100 times the size of the portion he photographed. What he ended up with was a picture where the piece of sky had turned into what looked like a wall but was in fact a picture of nothing.

### Artifacts

Scientists marveling at photography in the 19th century encountered similar problems, only they were unaware of them. On the one hand, photographic processes at that time were complex and unreliable. They often failed for unclear reasons. Pictures often showed patent flaws or weird artifacts (Geimer, 2018). On the other hand, unsuspected physical phenomena, like X-rays, had been serendipitously revealed by photography. The photographic process had proven able to "see" the invisible. As what is invisible obviously cannot be identified before it appears on photos, there was considerable confusion when some strange form showed up on a photo: was it an insignificant artifact of the process itself? Or was it the trace of a mysterious reality? Discoveries like X-rays strongly suggested that many other fluids may float unnoticed around us. After all, X-rays were not light, at least not ordinary light, and yet they had an effect on photographic plates. It was quite plausible that photographic plates were able to detect not only light but also other kinds of fluids. It was not unreasonable to suspect that thinking, for instance, produced some sort of invisible fluids that could be registered on photographic plates (Geimer, 2018). Spirits and ghosts being a popular fad among the well-educated population, a host of photographers produced pictures of nebulous forms (Chéroux, 2003). The infamous Turin Shroud was photographed and analyzed in a great depth (Geimer, 2018; Lebart, 2015c) (Figure 3). Very serious forensic physicians tried to analyze pictures of victims' retinas in the hope that their eyes had retained the last picture of their murderer (Dufour, 2015). It was unclear that what kind of invisibility could be made visible.

Photography thus proved to be a marvelous instrument for seeing what you wished to see (for additional development of this idea, see Morris, 2011). Its power works both ways: seeing what exists that you did not know about (like X-rays) and seeing what you know about but does not exist (like ghosts). Epistemic implications for observation methods are obvious: if the method is not fully reliable (which one is?) or if the



**Figure 3.** The Shroud of Turin and the photographer Secondo Pia in 1898.

observer is not aware that the method is not fully reliable (and in which way), artifacts can be mistaken for significant data.

### High dynamic range

Seeing too much in overly detailed pictures is an issue. The reverse is also true. The abundance of details can blur the vision. Again, we generally take it for granted that more information (more details) is good for research, provided that we have the time and resources to analyze the data. Photographers also tend to favor very high definition (asking for ever more pixels, for instance, on the captors of their digital camera). Yet counter-examples invite us to moderate our eagerness for more details. High dynamic range (HDR) provides a first one. Not to be confused with the academic French diploma of Habilitation à Diriger des Recherches, HDR is short for high dynamic range. This function is now a standard feature not only of digital cameras in the 'expert' categories but also of many smartphones. Its purpose is to remedy a tricky problem of photographic devices. Indeed, in many respects, cameras do worse than the standard human eye. The human eye is extremely apt at simultaneously dealing with light and obscurity. Plus, we have a brain that is incredibly good at picking up shapes and forms from a few details. Cameras, in comparison, have a very limited ability to withstand high contrasts ('dynamic range' in the photographic parlance). When part of a scene is in the dark and another part is in the light, usually the photographer cannot hope to obtain a detailed image of both areas. He has to make a choice: if the bright zone is correctly exposed (thus giving a detailed image), the dark zone will be almost black (thus hiding details); conversely, if the dark zone is correctly exposed, the bright zone will be 'burnt,' that is, white as a flashlight. Making correct choices used to be a significant part of photographic skills (and a significant part of photographic failures). Modern, automatic cameras can, of course, make the choice instead of the photographer. But this is still a choice and the outcome will be less detailed than what the eye perceives.

This changed recently. Today's cameras, which are in fact computers with lenses, are equipped with powerful software. The HDR system, when activated, instructs the camera to take a series of pictures of the scene (e.g., 10 pictures very quickly) with, for each picture, a different choice of exposure. On a given picture, some parts are correctly exposed and show many details, while others are left in the dark or are violently white. The software then picks up the best parts of each photo and combines these parts to produce a well-exposed, highly detailed picture of the scene.

The trick is a delight for many photographers and offers opportunities for abundant technical advice in specialized publications. In one of these, however, we read this unexpected statement: "(...) in practice one can end up with pictures that look very artificial and resemble a painting much more than a photo... The paradox is that, with its nearly two centuries of history, photography has taught our eye to adapt to the overly short dynamic range of photographic outcomes and to the esthetics they have produced." (Réponses Photo, 2017, p. 38 – my translation).

In other words, a photographically educated eye is happy to see less than it can see. When the photo provides all the details, it usually sees by itself, it does not seem realistic. When I look at a photo, I expect reality to look different from what I expect when I see it with my own eyes.

### More is less

Two other examples (or, rather, counter-examples) caution against the abundance of details. Ugo Mulas, again, comments on a double picture of Victor-Emmanuel II, King of Italy (from 1861 to 1878) (Figure 4). The photographers used a camera with two lenses. It simultaneously took two images. This was a trick (in some way, a primitive ancestor of the HDR system) that allowed two different exposures, so as to have a bigger chance of obtaining a good photograph. Again, in the 19th century, reliability was low. The photographers probably did not want to detain their royal model for too long. In fact, the two photos are technically correct. They are almost identical, with only a slight difference in lighting and a slight difference of angle (because of the two lenses photographing from close yet different spots). However limited, Mulas notes, the differences result in two completely different pictures. On the first one, we see a king in full apparatus, a true picture of majesty and power. In the second one, we see an old, tired man in uniform (Chéroux & Ziebinska-Lewandowska, 2015, pp. 148–149).

As a researcher, would you really be pleased with having this second picture in addition of the first one? It might seem a



Figure 4. Victor-Emmanuel II – Fratelli Alinari. Source: Chéroux & Ziebinska-Lewandowska, (2015).

good idea to have multiple 'takes.' This sounds like a good method that would please the reviewers. Only, the second take, rather than confirming or complementing the first one, provides information that is not consistent. Had you only the original, you would be happy with the result, you would know what to make out of it, and you could move on to the next step. Now you have a serious problem: which one is telling the truth? Can you pick one and decide that the other is nonsignificant? Should you tell the reviewers? Too much detail can cause confusion.

Finally, too much detail can simply prevent you from seeing. The German artist Thomas Ruff went on a crusade against the commonsense idea about photographic portraits (and, historically, their usual artistic purpose) that they opened up the 'true' personality of people. He thus took a series of portraits of people of the most ordinary kind with blank facial expressions (Figure 5). He did this with a camera that provided an extremely high definition (in plain words: very detailed photos), and he printed these high-quality pictures in a huge format. The spectator can thus see all there is to see about the portrayed persons. Yet they give no clue as to who these people are or what they feel or do (Méaux, 2019). We see everything, yet we see nothing. Lost in detail, all we see is a blank face



Figure 5. Portrait (Ruff, 1987).

devoid of expression. The photos are meaningless in psychological or sociological terms. We are unable to draw any kind of generalizing inference (whether a theory or an opinion) from this abundance of analytic data.

More numerous data are better. More detailed data are also better. Yes, to some extent. Photography reminds us that, however powerful, an instrument only gathers data, and gathers only data. Put differently: an eye needs a brain to see what the eye captures.

### **Reading: Interpreting observational data**

The earlier examples about disturbing details are, of course, a case of analyzing data as well as a problem of capturing data. Most of the time, collecting often implies making choices that require some kind of quick pre-analysis. I have to orient my collecting strategy, select targets, points of views, etc. Complementary strategies are welcome, but they are costly (Journé, 2005). I will come back on the detail issue and examine the importance of salient details in the interpretation of data, firstly for making choices about which data to collect and secondly for a more detached interpretation of data. I will then turn to the importance of non-salient details. Reading photographs may require an educated eye to extract significant details and confer meaning to the pictures. Educated eyes still only see what they have been educated to see. At the end of the day, how do we, researchers, navigate between the attraction of salient details and the discretion of silent ones?

#### The uncommon detail

Choosing what to shoot supposes that I make choices regarding not only the target but also key parameters (frame, distance, depth, light, etc.) that will determine what data will be available in the end. I have to make up my mind about what might be interesting. This means I have to anticipate the analysis by means of an interpretation, however cursory, of the scene.

Let us take an example. Stephen Shore is a world-famous photographer and an artist. His most acclaimed series, 'Uncommon Places' (Shore, 2004), documents ordinary US urban spaces in the 1970s: mostly in small- or middle-sized cities or at the periphery of big cities (Figure 6). Most of the pictures are devoid of human figures. The carefully composed, detailed pictures systematically avoid any picturesque element, any chance of a possible story. They discard salient details in favor of a general, distanced view.

On one of the pictures in the series (Shore, 2017), taken in Seattle in 1974, I noticed a car of an unusual type: among the huge, square-shaped, American cars, was a Renault 16 (Figure 7). The odds of coming across an R16 in the American streets in those years were extremely low. Finding one on Shore's pictures is a true event in statistical terms. Of course, it is an event only



Figure 6. Uncommon places (Shore, 2004).



Figure 7. Shore, S. (2017), Pine Street, Seattle, Washington, August 27, 1974. The Selected Works 1973–1981. Aperture.

for those who are able to notice it, that is, the very few people interested in old cars *and* American photography. For those people, this tiny detail gives a specific meaning to the picture. For me, the plate is no longer a photo of a Seattle junction; it is a photo of an R16 at a Seattle junction. If I try my best to 'un-notice' the detail, perhaps I can make it a photo of a San Francisco junction with an R16 (more likely, *the* photo of a Seattle junction with an R16). In any event, the photo has turned into something else than the intended picture, all by the power of one single detail. Just like with the duplicate of King Victor-Emmanuel II, the salient detail is disturbing. Note that it is not salient in itself: *I* made it salient (but I cannot help it).

Let us suppose now that I am Stephen Shore when he took this picture. My project is in all aspects identical to Shore's. The only difference between Shore and me is that I like foreign



**Figure 8.** President Raymond Poincaré 'The man who laughs in graveyards'. Source: Humanité, (1917).

cars. I install my big camera on the tripod, pick up a frame, and decide on the settings. Then I spot the RI6. I go and check it, perhaps take a picture with my Leica. Then I get back to the tripod and wonder: should I change the framing so that the funny little French car is not visible? At first sight, why bother? It is likely that nobody will notice it, and my project is to record reality. But what if someone does notice it? I do not wish to provoke any subtle analysis from some critic, going into wild theorizing about the small uncommon detail that gives all its meaning to the picture, then generalizing this brilliant idea to the series with multiple examples of marginal-yet-significant details that demonstrate my intentions and my genius (and, incidentally, his). You never know how people, especially educated ones, may interpret your pictures. So, to be on the safe side, I take my tripod a few yards aside and change the framing.

Changing the meaning of a picture with a single detail is a basic technique of propaganda and manipulation. In 1917, President Raymond Poincaré was vilified as 'The man who laughs in graveyards' (Figure 8). During a ceremony in a cemetery, Poincaré was photographed with a strange facial expression, probably due to too much sunlight. Published in *L'Humanit*é with the caption 'The laughing man', the photo caused a scandal.

Analyzing a more recent exhibition of smiles in the presence of dead people, Erroll Morris gives a powerful demonstration of the subtle use of this effect (Morris, 2011). Among



Figure 9. Abou Graib, 2003. Source: Morris, (2011).

the many shocking pictures taken by soldiers at the infamous Abu Ghraib prison in Irag after the 2003 invasion by US forces, one shows a young woman bending over a dead body with a wide smile (Figure 9). The woman is a soldier from the Military Police (MP), guarding the prison, and the dead body is one of the prisoners. The picture was published in the US press with the caption 'The Ghoul.' In his investigation, Morris notes: "We don't understand what the photograph means, nor what it is about. Instead of asking: 'Who is that man?' 'Who killed him?' the question becomes: 'Why is this woman smiling?" (Morris, 2011, p. 118). The Military Police soldier was just supposed to take care of the body, a very ordinary task for MPs at Abu Ghraib. She had been told that the prisoner had had a heart attack. In fact, he had been tortured to death by special agency investigators. Though she herself participated in maltreatment of prisoners (and was later sentenced to 6 months), she was never involved in the torturing or disposing of prisoners. Indeed, that night, suspecting the cause of the prisoner's death, she conducted a private, covert investigation, because she felt bad about the generalized deviance happening in the prison. As for the smile, which in any case is not in itself a maltreatment, the analysis of the facial muscles shows that it was not a 'genuine' smile, a smile of pleasure, but a social smile, the one everybody puts on their face when photographed by a friend or a colleague. Morris suspects the US government of having released this picture to divert public attention away from torture and killings committed by the CIA (Central Intelligence Agency) and other agencies in Abu Ghraib toward marginal misconduct by low-ranking servicemen and servicewomen.

The R16 is a tiny detail that would go unnoticed by most, whereas the soldier's smile is so salient nobody can miss it. In both cases, though, they exert an influence on the reading of the photo – the researcher's reading, firstly, and the spectator's reading, secondly. I will develop the second point later. Before that, I will turn to quite the opposite problem: how to extract significant details from the undifferentiated mass of information?

### The educated eye

Observation is one of the methods used in the military to collect information about the enemy, especially at war. When photography became reliable enough and cameras relatively easy to operate, the armed forces adopted the medium. During World War I, they sent photographers up in air balloons and, later, in planes, to collect intelligence on a variety of topics: how many troops, guns, tanks, and planes?; where were they?; how were they protected? the states of roads, bridges, and railways; etc. Damage assessment was also a key concern: if you bombed trenches, for instance, you wanted to know if you hit the targets and how badly you hit them. On the prints, though, people like you and me would see little more than various shades of grey (Figure 10). No troops, no guns, etc., and even less damage to things you cannot see in the first place. It took specially trained experts to decipher significant information amidst this sea of grey (Petiteau, 2015).

Though today's technology is incomparably more powerful, the need for experts remains. In February 2003, at the United Nations, Secretary of State General Colin Powell exhibited photos that supposedly identified sites of weapons of massive destruction (WMD) in Iraq (Figure 11). They came from satellites and sophisticated aircrafts, yet they were the same kind of pictures that observers took from planes made from canvas and wood almost a century earlier. Similarly, the rough prints would have shown nothing to the UN diplomats if experts had not heavily underlined some details, turning them into easily recognizable shapes, and adding telling captions. It turned out that the captions were wrong, which only demonstrates the magnitude of the issue at stake: in most circumstances, reading observation data requires an educated eye.

Educating the eye is demanding and sometimes means overcoming unpleasant emotions. In 1882, Etienne-Jules Marey, equipped with a 'photographic gun' of his own invention, photographed an ordinary man saying 'Je vous aime' ('I love you'). At that time, no one had seen a human face talking and frozen into a picture. Usually, when being photographed, people were instructed to stop talking and stay still. Marey's 20 photographs are strange, ugly, unpleasant pictures of a deformed face (Geimer, 2018) (Figure 12). The spectator has to accept the fact that it takes a monstrous face to say 'I love you.' Seemingly, inhuman acts produce the most human act.

A few years later, in England, where there were paintings of horses in almost every house, Eadweard Muybridge produced incredible pictures of galloping horses (Figure 13). They showed



Figure 10. 1914 – The war from the sky. Before and after a bombing. Source: Petiteau, (2015).



Figure 11. Colin Powell's evidence of WMD at the UN, 2003. Source: https://www.cbsnews.com/pictures/powells-photos/2/

that there was never a moment when all four hooves left the ground. The implication was that most paintings depicting galloping horses were wrong. It must be remembered that, in those times, long before Picasso, paintings were supposed to be strongly rooted in reality. Photographers won the day and eyes became educated: ever since, no realist painter has portrayed a horse flying above the ground.

Later again, in 1908, Arthur Worthington took pictures of a drop of milk bursting into an elegant corolla when it hit the surface of a bowl full of water (Figure 14). Nobody had seen this before. Nobody has since, except on pictures, but everybody knows. Similar images have even been used as a trademark for a dairy company (Geimer, 2018). Everybody's eye has become educated. "Photography is right: the eye still has to learn what the camera already knows. The image provided by the camera – even if its information seems implausible and puzzling – is consequently closer to the nature of things than ordinary, sensory perception." (Geimer, 2018, p. 274 – my translation).

When our eyes are uneducated, they may be lured by salient details (a smile – Figure 9), miss the point (damage assessment – Figure 10), or refuse to believe what they are seeing (horses galloping – Figure 14). When they are irrelevantly educated, they may pay attention to irrelevant details (the R16 – Figure 7). Educating the eye is key. Educating the observer is key.Traps abound.

And we management researchers, how are we educated? Just as experts in damage assessment or in forensic

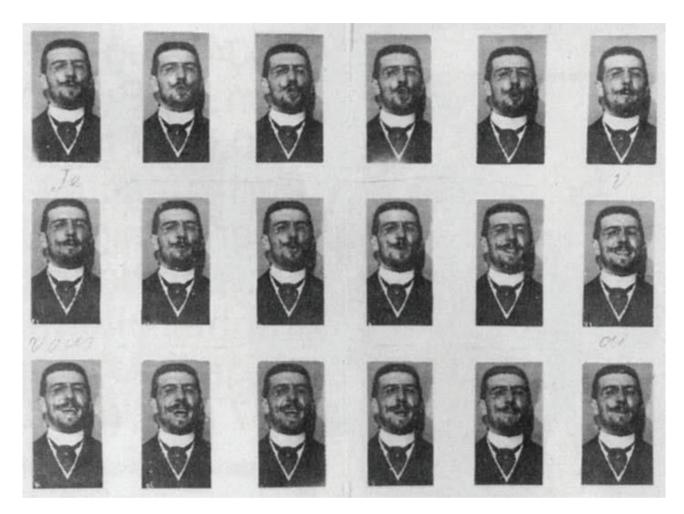


Figure 12. I love you – Etienne-Jules Marey, 1882. Source: Geimer; 2018: 244

photography are trained to see what an ordinary eye would not see, we are trained to point our gaze in specific directions, onto specific objects. Graduate school, Ph.D. thesis, seminars, and tons of readings train our eye, so we can see the visible that uneducated eyes (outside our field) cannot see. This is a real accomplishment, certainly, but our job as academics is to do more. We are supposed to unveil what is invisible to our peers' educated eyes. This is how we can make a contribution to knowledge. The interesting question, then, is how the invisible *in our field* can become visible. In other words, how do we expand the visible? There are several sides to this question, and most of them will be addressed in the last section of this article (*Showing*). Here, I will examine the empirical level only: how do we make empirical objects visible to ourselves?

### Where is the forum?

Forensics provides a good starting point to discuss how the invisible may emerge from the visible. Weizman describes

the process in the following terms: forensic practices organize the presentation of 'fields' in 'forums' (Weizman, 2015c). A field is typically an event setting (e.g., a crime scene, with all objects attached to it). A forum is a place where the investigation is presented and discussed (e.g., a court of justice). A 'translator' has the mission to 'translate the language of things' that come from the field to the members of the forum. This is a form of *prosopopeia*; according to Weizman: "When presented to the forum, objects are talked about and animated as if they were human subjects. (...). The field is not an isolated, distinct, independent object; neither it is the neutral background on which or against which human action occurs. On the contrary, it forms a dense fabric of corollary links, associations and causal chains between material things, vast environments, individuals and collective actions." (Weizman, 2015c, p. 233). Causalities are not linear but multiple and simultaneous.

Speaking the language of things can be surprising. Investigating a drone attack in Waziristan (Pakistan) in 2013

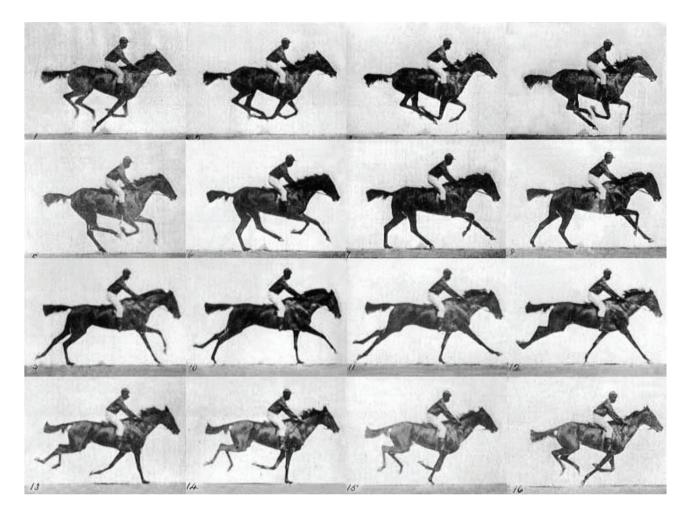


Figure 13. Galloping horses – Eadweard Muybridge.

required careful analysis of amateur video footage for a thorough reconstitution of the location where the (alleged) missile struck (Weizman, 2015b). What was at stake here was to demonstrate that the damage could be attributed to a missile and that the strike had killed innocent people. Stills were extracted from the video. Maps of the premises were produced. Damage was assessed. What appears on the pictures is this: behind the hole in the ceiling, walls are dotted with impacts from fragments of the missile (Figure 15). There are no human bodies. Victims appear as uncertain, phantom areas where no fragment hits the wall, because the bodies absorbed the fragments. The investigation was later presented at the United Nations.

What one needs to look at is where there is nothing to look at. Observation can reveal what it does not show.

Observation in management studies often produces huge quantities of data that need to be analyzed with proportionally huge efforts. In this sense, observation is the constitution of 'fields,' just like in forensics. It is, however, striking that the data are mostly left to analysis by a single person, the researcher who collected the data. Our publication practices guarantee, in principle, that the analysis will be thoroughly examined. Yet the data themselves are entirely left to the researcher (seldom assisted by coauthors). There is no forum to discuss the data, to "translate the language of things," whatever these things may be. It is true that reviewers and editors (and supervisors) are not shy about searching for all kinds of biases that may have plagued the analysis. In our perspective, biases are only a secondary issue, though. What matters first is did the author really manage to get the best out of the data? In forensics, forums are primarily about this issue, though preventing biases is obviously also a concern. The organizational and institutional arrangements that structure our behavior in management studies leave almost no place for forums. We discuss many things, but not data, except when "rigor" is at stake in the late phases of the research project. What is made visible in the data is thus, primarily, what appeared to a single pair of eyes (or only a few pairs).

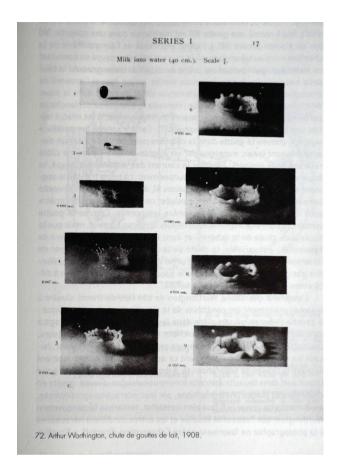


Figure 14. Splash of a drop of milk. Arthur Worthington, 1908. Source: Geimar, 2018: 305.

Mentioning reviewers and editors means that we have arrived at the last step of the process: showing the outcomes of our observation.

#### Showing: Presenting observational data

You have observed. You have analyzed your data and found something new and interesting. You have ideas about how it can support a theoretical contribution. You are now ready to write an article and submit it. You will have to demonstrate that you have successfully seen something that was previously invisible and that it is worth being made visible. You will have to convince the editor, the reviewer, and, in the end, the reader. As a management scholar, you have to draft a paper and submit it. If you were a photographer, you would have to convince a curator to organize an exhibition or a publisher to publish a book. The photographic metaphor suggests three complementary strategies to be convincing with observation data: (1) visualize your data so that they look good; (2) nip any methodological objection in the bud by making your methods transparent; (3) prepare the reader for the invisible by structuring obscurity.

#### **Visualizing data**

Remember how 19th-century scientists saw the difference between drawing and photographing. In fact, the difference went much further than retaining "not only what the author himself has seen and has wanted to represent, but also all that is really visible in the reproduced object" (Rousseau & Devéria, 1853, cited in Méaux, 2019, p. 7). When drawing an object (e.g., an unknown animal), scientific observers did not seek to draw an exact picture of the real object. They were not interested in the specific specimen they had in front of them. They more likely aimed at rendering a typical specimen (Figure 16). Of course, they did not know what 'typical' meant exactly. To know that, they would have had to observe a great number of animals, analyzed the similarities and differences, and built a 'theory' (or at least an abstract representation) of what the typical animal might look like. Instead, they relied on their abilities to imagine the typical animal from the real, imperfect, perhaps fleetingly and partially visible animals they had observed (or the dead ones). "Seeing – and moreover drawing - was altogether an act of esthetic appreciation, of selection and of accentuation. These images were created to serve an ideal of truth - and often also of beauty - not an ideal of objectivity, which did not exist yet." (Daston & Galison, cited in Quintard, 2018, p. 69). In short, these scientists had a specific visualizing strategy to present their observation data in the best possible way.

We still do that, except that today we have to abide by an ideal of objectivity. Put differently, we face a general suspicion of biased subjectivity (if not of deliberate forgery). We have to explain and justify what we show and how we selected the specific data that we show. Offering the reader, a 'typical' object is still a good choice in most cases. Of course, the 'typifying' process also applies to immaterial objects, like scenes, conversations, episodes, etc. Contrary to early zoologists, we have to pick up an object that has been truly observed and is now rendered in a realistic way. And we have to explain why this particular object is typical as compared with other objects we could have picked up as well.

A photograph, at first sight, is deprived of typicality. It is something somewhere sometime. It can be given an exemplary power, a generalized status, and it even has fantastic potential for typicality, but this requires specific operations and circumstances. Typicality can be achieved in two different ways. The easiest and most common way is to pick up an object that is typical in a statistical sense, and argue that all similar objects look more or less the same. The other kind of typicality is not only much stronger but also much harder to obtain and to impose. Walker Evans, who was at the origin of the 'documentary style,' is famous for his photos of vernacular objects and ordinary places (Figure 17). The framing is frontal, the light is direct and natural, and the pictures are stripped of any artifice.

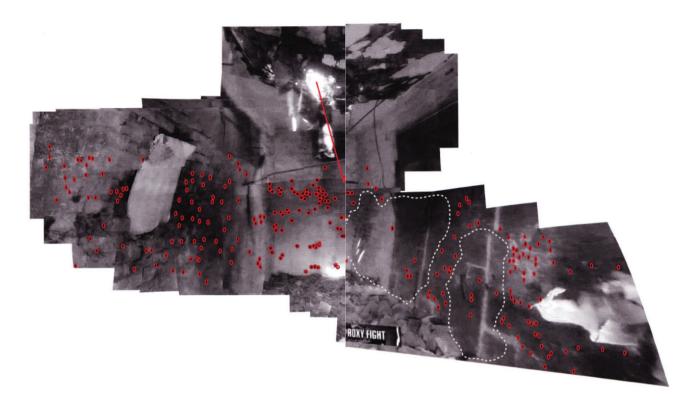


Figure 15. Drone attack at Miranshah, Pakistan, March 30, 2012. Source: Weizman, (2015b)



**Figure 16.** Copperplate engraving of a drawing by Charles-Alexandre Lesueur, made during his voyage in the southern lands in 1800. Source: Quintard, (2018).

His aim is to reach the 'transcendence of things' in his own words (Evans, 2017). His photograph of the interior of a poor family's house is not typical of poor families' houses because it looks ordinary and dull. It becomes typical because it is so



Figure 17. Kitchen Corner, Tenant Farmhouse, Hale County, 1936. Walker Evans (1903–1975).

strong a picture, one that speaks for itself. The photo makes the object singular and typical at the same time.

'Typifying' is just an option. More generally, the researcher's question is which data do I show and how, so that they are convincing? As opposed to 'typifying', photographs often use an accumulation strategy. Photos are piled up so that they develop a persuasive strength by their sheer number. In 2009, the Palestine Authority produced a document counting thousands of photos of destroyed buildings in Gaza, as testimony to the destruction caused by the Israeli forces (Weizman, 2015a) (Figure 18). Ruins upon ruins: the invisible becomes visible by its accumulation.

Others also drown the reader with photos but organize them to illustrate similarities and differences, as does the conceptual artist Hans Eijkelboom in his sociologically oriented commentary on globalization (Eijkelboom, 2014) (Figure 19). Variation is what makes the invisible visible here: everywhere, we all dress alike, though slightly differently.

Sometimes the invisible is truly what there is to see. The point is to show that something is missing, to prove the presence of something by its elusiveness. In their investigation into the so-called tax heavens, Woods, Galimberti and Shaxson (2015) faced the challenge of photographing something that was carefully hidden (and, in addition, often plain immaterial). They had to make this absence, this void, visible. The photographic style became a key part of the process, with an exacerbated neutrality that underlined the artificiality of these places (Figure 20) (for another example of this strategy, see Royer, 2020).

At other times, the researcher just builds a fictitious narrative – fictitious, yet with the 'raw materials of truth.' When Arthur Worthington published the beautiful sequence of pictures of a bursting drop of milk (Figure 14), he assembled photos for different drops, because his complex device could take only one picture per drop (Geimer, 2018). The reader believes he sees the same drop falling and bursting – after all, what resembles a drop of milk more than another drop of milk? Yet he is actually seeing nine different drops. Worthington was not only a very clever experimenter but also a very clever storyteller.

The strategies we have just examined are only examples. The key point is that making the (empirically) invisible visible in a convincing way requires a visualization strategy. For observations that do not use photos or films or drawings, the researcher has to develop similar strategies. Interestingly, visualization can be a strategy even for data of a nonvisual nature (Langley & Ravasi, 2019). In this respect, management studies are a very favorable academic field. Journals welcome tables and figures of all sorts. Turning the nonvisual into a visual is therefore an opportunity and, often, a requirement.

### Methodological transparency

Ultimately, methodology has the task of guaranteeing that: (1) what has been observed is 'true' in some acceptable way; (2) data have been analyzed in such a way that the meanings attached to them are acceptable. In the language of the photographic metaphor: (1) something exists in the invisible that should be integrated into the visible; (2) this something can be given a new name.

Famous photo reporters or street photographers cared little about explaining how they proceeded to take their pictures. They were endowed with an aura of honesty. War photographers who risked their lives thought that they should be taken on trust, or rather, that their pictures should. Most of the time, they let the pictures speak for themselves. In the suspicious spirit of the late 20th century, though, many famous pictures were proven to be more or less fabricated or deceptive in some way (e.g., Capa's falling soldier [Lavoie, 2017] [Figure 21]).

However, since roughly the turn of the century, a renewed practice of documentary photography has developed (Méaux, 2019). Most of these photographers carry out carefully delimited investigations into social and urban topics (e.g., Mathieu & Stofleh, 2012) or crime stories with social or political aspects (e.g., Sternfeld, 1997 – Figure 22). Deliberately avoiding the photo reporter's spectacular style as well as the sober yet seductive formal perfection of Walker Evans' documentary style, their works are often purposefully dull.

Interestingly, these photographers often find inspiration in social sciences, not only for their topics but also for their methods. Most of them define a 'protocol' determining key variables for the pictures (e.g., framing) and for the making of the pictures (e.g., choices of places and timing, active participation of subjects). This protocol is explained in detail. It is conceived as a part of the work. In other words, the work does not amount to a series of photos: it is at once the photos (the outcomes) and the protocol that produced them (the methods). In many cases, the photographer becomes the instrument of the protocol rather than the classical figure of the inspired artist. The methods are given the real power of agency. Because they share contemporary suspicions about photos, they claim that they want to engage with the spectators and give them the ability to reproduce or at least relive the process that led to the images. This, in their view, will enable spectators to make up their own mind about the pictures, in a democratic or at least participatory process. Most of them, though, do not take the approach too seriously. They see it as a game they invite spectators to play (Méaux, 2019).

Except for the game part, this strikingly echoes the strong focus on methods that we are currently experiencing in



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N3003-118 Quartier: Jaboliya Nord; volsinage: As-Salam; date de destruction: 9 janvier 2009; méthode de destruction: bulldezer; date d'Inspection: 5 mai 2009; état du biliment: ruines.



N3003-121 Quartier: Jabaliya Nosd; voisinage: As-Salam; date de destruction: 9 janvier 2009; méthode de destruction: bulldozer; date/l'inspection: 6 mai 2009; état du bâtiment: ruines.



N2003-122 Quartier: Jabaliya Nord; voisinage: Al-Salam; date de destruction: 9 junvier 2009; méthode de destruction: buildozer; date d'inspection: 6 mai 2009; état du bâtiment; ruines.



N3003-122 Quartier: Jabaliya Nord; voisiitage: Al-Salam; date de destruction: 9 janvier 2009; méthode de destruction: buildozer; date d'inspection: 6 mai 2009; état du bâtiment; ruincs.



N3DO3-13D Quartier: Jabaliya Nord; voisinage: As-Salam; date de destruction: 9 januier 2009; méthode de destruction: bulldoner; date d'inspection: 7 mai 2009; état du bétiment : ruines.



N2003-130 Quartier; Jabaliya Nord; volsinage: Al-Salam; date de destruction: 9 janvier 2009; méthode de destruction: bulldozer; date d'Inspection; 7 maj 2009; état du báliment: ruines.



N3004-93 Quartier: Jaballya Nord; voisinsgo: As-Salam; date de destruction: 15 jarvier 2009; méthode de destruction: buildozer; date d'inspection; 29 avril 2009; état du bitiment; ruines.



N3004-94 Quartier: Jahaliya Nord; voisinage: Al-Salam; date de destruction: 15 janvier 2009; méthode de destruction: bombardement; date d'inspection: 29 avril 2009; état du bâtiment; ruinos.



N3004-99 Quartier: Jabaliya Nord; voisinage:/; date de destruction: 8 jauvier 2009; méthode de destruction: bomhardement; date d'inspection: 29 avril 2009; état du bâtiment: mines.



N3004-99 Quartier: Jabaliya Nord; volsinnge:/; date de destruction: 8 janvier 2009; méthode de destruction: bomberdement; date d'inspection: 29 avril 2009; état du bâtiment: ruines.

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Figure 18. A verification of building-destruction resulting from attacks by the Israeli occupation, published by the Palestinian Authority in 2009. Source: Weizman, (2015a).



Figure 19. People of the 21st century. Source: Eijkelboom, (2014).



Figure 20. The heavens. Woods, Galimberti & Shaxson, (2015).

management studies. A common criticism is that methodological rigor takes precedence over relevance and novelty. Would that be because we are not too sure about the knowledge we produce, just like documentary photographers are unsure about the realism of their pictures?

The most interesting lesson from the new documentary photography, though, is probably a difference rather than a similarity. Photographers intend to draw the spectator into the making of the pictures. We researchers only pretend to do that. We claim that we are transparent about the methods to enable deep understanding and, possibly, replication. Only what we really want is to kill criticism. In articles, the method section, rather than an exercise in transparency, is a defensive endeavor aiming at deterring or at least containing objections. Which brings us back to photo reporters and street photographers: some things are better left in the dark, says Elliott Erwitt: "But, to preserve the mystery of our trade, and also to avoid showing our weaknesses, our contact sheets must remain as confidential as what you say to your therapist or in confession." (Erwitt, cited in Lavoie, 2017, p. 90). The most famous of all photographers, Henri Cartier-Bresson, concurs in his stiff manner: "An exhibition or a book is an invitation for dinner and it is not our habit to have guests put their nose into the cooking pans and even less into the buckets full of peelings." (Cartier-Bresson, cited in Lavoie, 2017, p. 90 - my translation). We researchers have less latitude, but we make sure we clean the pans and empty the buckets before we submit a paper. Methodological transparency is a strategic transparency.

#### Structuring obscurity

Yes, scientific photography makes the invisible visible. Yet, as we have seen, confusion reigns at the uncertain frontier between the visible and the invisible. The invisible does not just happen. For some objects to be admitted across the frontier, a social process is involved. The invisible has to be



Figure 21. The Falling Soldier: Source: Capa, (1936).



Figure 22. Pensacola Women's Medical Services, 4400 Bayou Boulevard, Cordova Square, Pensacola, Florida, August 1993. Source: Sternfeld, – on this site, 2012

acknowledged as visible and somehow integrated into the visible world. Analyzing early scientific photography, Geimer writes: "The preceding 'invisible' was not nothingness, it was a kind of structured obscurity; though undecipherable, it was full of experiences, expectations or imaginary representations." (Geimer, 2018, p. 247).

In social sciences and in management studies, the sign that the invisible has been integrated into the visible is when it has been given a name "coined" into a concept or a construct. Whoever sees something new has to convince others that it has to be moved from the invisible to the visible and baptized accordingly. In fact, this 'something' will exist in the invisible only retrospectively, after it has been 'moved' into the visible. For this to happen, the reader's eye (and the brain attached to it) has to be prepared. It has to be told what to expect. In other words, the reader's eye has to be told something about what the invisible looks like.

In the social process of scientific production, a presentation of previous research on the topic is the main tool for preparing and educating the reader's eye. It defines the visible (the already known) and draws the contours of the invisible (it 'structures obscurity,' in Geimer's words). What should the reader expect to see (and first of all, the reviewer, the editor)? What should the reader not see (because it is deception, false appearances)? Framing expectations about the visible and the invisible is what we do when we draft the literature review or the 'theoretical background' section of our papers. The 'theoretical background' not only establishes the visible but also prepares for the unveiling of the invisible. Its emergence is carefully announced and prepared by establishing some form of continuity between the visible and the (still) invisible. In the social sciences, even more than in the 'exact' sciences, the sudden, brutal revelation of the invisible is a high-risk strategy. The invisible is welcome as long as it expands the visible. When the author claims to offer a new visible that discards or obscures the previous one, the editor argues that their eye is better educated than the author's. Most of the time, then, possible discontinuity is leveled down to a form of continuity.

Pushing the photographic metaphor may help here, perhaps. Photographs (just like our human vision) are always taken from an angle, leaving parts of the object unseen (Geimer, 2018). What is unseen, though, is 'not visible,' rather than invisible in the sense that we used earlier. The dark side of the moon is not visible, yet nobody expects it to be, say, red hot with flames. The continuity between what is visible and what is not visible is firmly established in the mind. The truly invisible is of a different nature: it is discontinuous. Again, to be acknowledged, this discontinuity has to be outlined in some way. In other words, it has to be 'reduced' or 'tamed' into a lesser form of continuity.

However, the reverse process is also conceivable. The unseen can be 'sexed up' into an invisible. In the social sciences, what is currently unseen (empirically unexplored) on a given topic is much less circumscribed than the parts of an object that are left in the dark on a photograph. Observation, though, reveals a good deal of what has stayed unseen up to the present day. This may well make an empirical contribution, but empirical contributions do not get you into print. Similarly, documentary photographers and reporters are not published if they just add to the huge amount of available pictures by documenting another place on earth. Something more is needed. Researchers practicing observation should ask themselves: did I capture something of the unseen or something of the invisible? As there is no clear frontier, it might be tempting, sincerely or not, or somewhere in between, to frame the visible and the invisible ('structure obscurity') in such a way that the data reveal the fascinating invisible rather than the less exciting unseen.

Research articles are like exhibitions. They are curated, policed, and disciplined. They are costly and rare. Like exhibitions, they are, sadly, no fun. Walker Evans graciously laments: "Grunts, sighs, shouts, laughter and imprecations ought to be heard in a museum room. Precisely the place where these are usually suppressed. So, some of the values of pictures may be suppressed too, or plain lost, in formal exhibition. (...) I suggest that true religious feeling is sometimes to be had even at church, and perhaps art can be seen and felt on a museum wall, with luck." (Evans, 1971). The Evans retrospective exhibition at the Centre Pompidou in Paris (Evans, 2017) was remarkably rich. It was stiff and boring, though, despite the fact that the curators had the earlier quote printed on a wall.

### Conclusion

We began this exploration of photography as a metaphor for observation with 19th-century scientists comparing drawings and photographs. Photographs are better than drawings, they said, because photographs see more than what the scientist sees. Things might be a little more complex, but in the end, photography is certainly 'more' than a drawing in some profound sense. Photography is "an event happening. It goes without saying that this event does not happen without having been deliberately prompted, planned or staged. But, at the same time, most photographs escape their initiators' total control (...)." (Geimer, 2018, p. 318 my translation). As far as management studies and observation are concerned, do we really let this event happen? Obsessed - for understandable reasons - by the reception of our future exhibition (i.e., the publication of our paper), we try so hard to control the outcome that true events have little chance of happening. Narrowing down the scope of our observations, polishing our methods for more transparency, and carefully prefiguring the invisible to manage doubts, we leave no place for anything to be revealed by accident. Our articles are closer to drawings than to photos. And this is what is expected from us: perfectly controlled and controllable products that look like photos but are, in fact, perfectly executed drawings.

Not that drawings are bad in themselves. Only, we can do better. This is what photography tells us, whatever observation methods one prefers. For decades, photographer Keizo Kitajima has relentlessly walked the streets of towns all over the world and taken pictures of thousands of people walking by him (Figure 23). He published a 750-page book, which encompasses only a portion of these pictures. The title is 'The Joy of Portraits.' (Kitajima, 2009).



Figure 23. Keizo Kitajima, 2009

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