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PHOTOGRAPHICALLY BASED KNOWLEDGE

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ABSTRACT

Pictures are a quintessential source of aesthetic pleasure. This makes it easy to forget that they are epistemically valuable no less than they are aesthetically so. Pictures are representations. As such, they may furnish us with knowledge of the objects they represent. In this article I provide an account of why photographs are of greater epistemic utility than handmade pictures. To do so, I use a novel approach: I seek to illuminate the epistemic utility of photographs by situating both photographs and handmade pictures among the sources of knowledge. This method yields an account of photography's epistemic utility that better connects the issue with related issues in epistemology and is relatively superior to other accounts. Moreover, it answers a foundational issue in the epistemology of pictorial representation: 'What kinds of knowledge do pictures furnish?' I argue that photographs have greater epistemic utility than handmade pictures because photographs are sources of perceptual knowledge, while handmade pictures are sources of testimonial knowledge.

1. THE EPISTEMIC UTILITY OF PHOTOGRAPHY

Pictures are a quintessential source of aesthetic pleasure, which makes it easy to forget that they are epistemically valuable no less than they are aesthetically so. Pictures are representations. As such, they may furnish us with knowledge of the objects they represent.

Photographic pictures (e.g. still photographs, film and video) are my main concern in this article. For these pictures have a unique epistemic utility. Photographs are 'evidence' of what they depict, in ways that so-called handmade pictures (e.g. drawings, paintings and etchings) are not. For instance, when Leland Stanford wanted to find out whether horses ever gallop with all four hoofs aloft, he rightly turned to the photographer Eadweard Muybridge, rather than to a sketch artist or painter. For Stanford no doubt knew that a photograph of a galloping horse would be (while a painting or sketch would not be) confirmation of how horses in fact gallop.

1 Previous versions of this article were presented to audiences at Mind Grad 2008 at the University of Warwick and the 2008 American Society of Aesthetics Annual Conference. I am grateful to my respondents, Hemdat Lerman and Patrick Maynard, for their comments. A more recent version was presented at the 2010 Episteme Annual Conference in Edinburgh, and to my colleagues at the University of St Andrews. Thanks to Maria Alvarez, Rob Hopkins, Keith Hossack, John Hyman, Rafe McGregor, Aaron Meskin, Mikael Pettersson and Dawn Wilson for written comments on earlier versions. This research was made possible by a British Society of Aesthetics PhD Studentship and a Royal Institute of Philosophy Jacobsen Fellowship.

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Our epistemic reliance on photographs is not limited to idiosyncratic circumstances. Journalism, medicine, tourism, surveillance, history, advertising, archaeology and estate agency are just a handful of the institutions, practices and intellectual modes of enquiry that would be severely impoverished, epistemically, without photography. Consider also the mass reproduction of visual artworks. Photography is the means by which most of us have access to the visual art world. For if one searches a book or the internet for a particular painting, one finds a photograph of that painting, rather than the painting itself or a painting of that painting. Moreover, for many of us, photographic pictures are likely to be the only means by which we have any idea what Brad Pitt, the Great Wall of China, or a duck-billed platypus, say, look like.

What about handmade pictures? One might be tempted to think that the reason why photography is more widely relied upon, when the goal is to produce a record of reality, is simply that it is much quicker and easier to photograph an object than it is to paint or draw an object. What this line of thought highlights is that it is all too easy to underestimate our epistemic dependence on handmade pictures. Courtroom sketches, ornithological drawings, hand-drawn maps and painted portraits are just a few types of handmade picture that can impart knowledge. Moreover, a child's illustrated alphabet book often does more than aid her learning of a language. Learning that 'a is for aardvark', in the presence of a sketch of an aardvark, can also teach the child how aardvarks look.

Nevertheless, the relative speed and ease with which photographs are produced explains little of their epistemic utility. No matter how quick and easy it might be for a super-humanly skilled artist to produce a painting of a horse with its hoofs aloft, it would still be more rational (all things being equal) for one to base one's beliefs about horse movement upon seeing a photograph of a moving horse. Moreover, while it is epistemically fortunate that we possess portraits of Marie Antoinette, William Shakespeare and Henry VIII, for example, there can also be little doubt that it would be far superior, from an epistemic perspective, to have photographs of these persons.

What explains photography's possession of greater epistemic utility than handmade pictures? Or, as the question is typically posed in the literature, what explains photography's distinctive *epistemic value*? Various answers have been proposed, the most well developed of which are: photographs are especially rich and reliable pictures (Abell 2010); photographs are a relatively undemanding source of information about the objects they depict (Cohen and Meskin 2004); photographs are 'traces' of the objects they depict (Currie 2004); photographs elicit pictorial experiences that are factive (Hopkins 2012); and photographs allow viewers to indirectly see the objects they depict (Walton 1984).[2] Moreover, it has variously been claimed that photographs are special because they are natural, non-intentional, belief-independent, mechanical, objective, automatic, etc.[3] Naturally, the relative 'pros' and 'cons' of these positions are issues of debate.[4]

2 Strictly speaking, Walton did not propose this theory to explain the epistemic value of photographs; rather, he proposed it in order to explain their realism. However, given that numerous commentators have interpreted Walton's project as an epistemic one, there is reason to think the view has *prima facie* explanatory power here, whether Walton recognizes it or not.

3 For a critical discussion of the appropriateness of applying such predicates to photographs, see Costello and Phillips (2009).

4 Notably, Abell (2010) argues against Cohen and Meskin (2004), Walton (1984) and elements of Hopkins (2012). Cohen and Meskin (2004) and Currie (1995) each argue against Walton (1984). The view in Cohen and Meskin (2004) has, in turn, drawn criticism from Cavedon-Taylor (2009) and Walden (2012).

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In this article I develop a new account of the epistemic value of photography. Although I do not directly address the debate between the above positions, in the final section I discuss the relative benefits that my approach has compared to others. My main focus is to answer a foundational epistemic question regarding photography that seems to have been overlooked: 'What kind of a source of knowledge is a photograph?' I call this the Source Question.

Why is answering the Source Question foundational for understanding photography's epistemic value? First, as Audi (2002, 71) points out, it is reasonable to think that knowledge can only be fully explicated in relation to sources. For example, if we have a knowledge-producing phenomenon that we wish to better understand, such as photographs, then a basic issue to be settled – and which will go at least some distance to illuminating the phenomenon's epistemic value – is what knowledge that phenomenon furnishes. Accordingly, if we desire a full and complete account of photography's epistemic value, and wish to understand why it (but not painting or drawing) occupies a particular role in our epistemic lives, we could do much worse than investigate what kind of source of knowledge we are dealing with when dealing with photographs. (Moreover, we will also want to know what kind of source of knowledge we are dealing with when dealing with handmade pictures.)

Secondly, I take answering the Source Question to be foundational for the epistemology of photography, since what kind of knowledge pictures furnish is a foundational (though similarly overlooked) issue in the epistemology of pictorial representation. However, whether or not one agrees that answering the Source Question is foundational for our epistemic understanding of photographs, pursuing an answer to this question at least provides a method for investigating photography's epistemic value that allows us to situate the issue relative to – and so allows us to draw upon – important issues and findings in epistemology. Until now, much of the debate between standing theories of photography's epistemic value has taken place at an arm's length from traditional epistemology. The method proposed here – answering the Source Question – looks to set this right.

I shall proceed as follows: in Section 2, I discuss and clarify the Source Question. In Section 3, I argue that photographs are not, but handmade pictures are, sources of testimonial knowledge. In Section 4, I discuss the nature of inferential and perceptual knowledge. In Section 5, I argue that photographs are sources of perceptual knowledge. I conclude that we can shed a great deal of light on why photographs are epistemically superior to handmade pictures by understanding photographs to be sources of perceptual knowledge and handmade pictures to be sources of testimonial knowledge.

2. PHOTOGRAPHY AS A SOURCE OF KNOWLEDGE

Photographs are sources of knowledge about a variety of phenomena. For one, they are sources of knowledge about photograph*ers*, insofar as viewing another's photographs can inform you of whether they are a skilled or unskilled photographer. Moreover, photographs are sources of art-historical knowledge, insofar as viewing photographs from a particular period in history can inform you of the typical photographic materials from that period. The Source Question does not concern such knowledge,

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however. Rather, it concerns the knowledge that photographs furnish of the object(s) they are photographs of, i.e. their subjects.

Suppose that, after seeing a photograph of a police officer striking a protester, you form the true belief that the particular depicted protester was struck by the particular depicted police officer. Suppose further that your belief rises to the standard for knowledge (it is safe, or sensitive, or truth tracking, etc.). Your knowledge that a particular person was struck by another would thus be 'photographically based', insofar as the photograph is the *source* of that knowledge. The Source Question seeks to uncover what more basic epistemic source photographically based knowledge reduces to. In attempting to answer this question, I am implicitly rejecting the idea that photographs are a *sui generis* source of knowledge. While it cannot be ruled out *a priori* that photographs are an irreducible source of knowledge, I take it to be very unintuitive to hold that in addition to perception, memory, inference, etc., we must recognize 'photographs' as their own unique and basic epistemic source. While it is true that photographs are unusual artefacts, we still need special reason to multiply epistemic sources. The first step in analysing photographs in terms of sources of knowledge should be to investigate whether an analysis in terms of any extant, recognized source is up to the task.

Another point of clarification is that my concern here is with propositional knowledge (e.g. knowing *that* a protester was struck by a police officer) rather than, say, practical knowledge, or 'knowledge-how' as it is sometimes known. While it is plausible that photographs can be sources of practical knowledge, my focus here will be on the garden-variety propositions we come to learn about objects on the basis of seeing them in photographs (e.g. *that* Churchill smoked cigars).

Naturally, photographs are not always sources of knowledge. A non-veridical, excessively 'Photoshopped' photograph does not provide knowledge about the scene it depicts. But even perfectly veridical photographs might fail to be sources of knowledge if, for example, one doubts the photograph's veridicality. So, strictly speaking, the issue is: *when* photographs are a source of knowledge about the objects they depict, what source of knowledge are they? When I discuss 'the knowledge that photographs furnish' or talk of 'photographs as sources of knowledge' and 'photographically based knowledge', this should be read as shorthand for the knowledge that photographs furnish of the objects they are photographs of. I shall drop the 'when' qualification in what follows, since photographs are like any epistemic source in that the beliefs they furnish may, for any number of reasons, amount to less than knowledge. Moreover, I shall not say anything about the conditions one might take true belief to have to satisfy in order to rise to the standard for knowledge (e.g. that it be safe, or sensitive, or truth tracking, etc.). If one is sceptical of the claim that the beliefs we form on the basis of seeing photographs may rise to the standard for knowledge, one could parse talk of 'photographically based knowledge' as talk of 'photographically based belief'. But any view of knowledge that is worth its salt ought to allow that we acquire knowledge from photographs. For it is true that photographs may distort, and it is false that the camera never lies, but sources of knowledge are not infallible. In any case, I assume that no one would deny knowing that Churchill smoked a cigar, that Jupiter's spot is red and that the duck-billed platypus really does have a bill (assuming that one is familiar with photographs of such objects).

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3. TESTIMONY

There are three likely answers to the Source Question: photographically based knowledge is either inferentially, perceptually or testimonially based knowledge.[5] One might think the answer is obvious: photographically based knowledge is knowledge acquired by undergoing pictorial experience and, accordingly, by perceiving photographs. Therefore photographs must furnish perceptually based knowledge.

This line of reasoning is too quick. It is true that perception is causally involved in the acquisition of photographically based knowledge, but this is also true of the acquisition of testimonially based knowledge. Testimonially based knowledge involves either the aural perception of sounds (e.g. speech) or the visual perception of marks on a surface (e.g. text). But testimonially based knowledge, whatever properties it shares with perceptually based knowledge, does not reduce to perceptually based knowledge. So if photographically based knowledge reduces to perceptually based knowledge, this will not be because it is knowledge acquired by perceiving photographs.

Let us start with testimony. Might photographs be sources of testimonially based knowledge? There are at least three reasons for rejecting this possibility.[6] First, testimony is a so-called transmissive source of knowledge: it disseminates already known truths. Crucially, unlike perception and inference, testimony is not a means of producing knowledge; it is not a 'generative' source of knowledge. Pithily, testimony is a means of increasing the number of *knowers* of a given proposition and not a means of increasing the number of *propositions* known (Audi 2006, 43).

Photographs can certainly increase the number of knowers of a proposition (e.g. when they are printed in newspapers, reproduced on the internet, etc.). So they can clearly transmit knowledge. However, photographs are unlike testimony in that they can also generate knowledge. They can enlarge the number of propositions that are collectively known, as Muybridge's photographs of animal movement and photographs from the Hubble Telescope illustrate. These photographs informed us of previously unknown facts. Therefore photography can be a tool of discovery, in both scientific and everyday contexts, in ways that testimony cannot. What you testify to me may be news to me, but it is not news to *you*, whereas what a photograph depicts can be news to everyone, even the photographer.[7]

It has recently been argued that this traditional view of testimony is wrong, and that testimony may generate, as well as transmit, knowledge (Lackey 2008). If that is right, then the fact that photographs are generative sources of knowledge is compatible with them being testimonially based sources of knowledge.

Like many, I am sceptical of the idea that testimony can generate knowledge. But I do not wish to get sidetracked by this debate. It suffices to mention that there are two other features of testimony that make it problematic to regard photographically based

5 Doubtless there are other sources of knowledge (e.g. memory, introspection, *a priori* intuition and so on), but none of these seem appropriate candidates for answering the Source Question.

6 The view that photographs furnish testimonially based knowledge has been defended, albeit in passing, by Pritchard (2004, 330) and Young (2001, 67).

7 This is a lesson well taught by the film *Blow-Up*, in which a photographer discovers a corpse in the park by examining photographs they took in the park at an earlier time. The example is discussed in Currie (2004, 68) and Moran (2005, 10).

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knowledge as testimonially based knowledge. So, those few who reject the traditional view of testimony as a merely transmissive source of knowledge may be unpersuaded so far.

The second reason to reject the possibility that photographs are sources of testimonially based knowledge is that 'to testify' is not a factive verb, while 'to photograph' is. Suppose you want to know whether Peter has ever been to Paris. One way you may come to know that Peter has been to Paris is by testimony. Someone might tell you that Peter has been to Paris. Another way you may come to know that Peter has been to Paris is on the basis of seeing a photograph someone took of Peter while he was in Paris (e.g. stood before the Eiffel Tower). The difference I wish to focus on is this: someone's telling you that Peter has been to Paris does not cease to be testimony if you discover that Peter has never been to Paris. False or misleading testimony is still testimony. However, someone's photographing Peter in Paris depends upon Peter's having, in fact, been to Paris. If it transpires that Peter has never been to Paris, then it transpires that he was not photographed in Paris.

Consider a photograph of an empty Parisian street into which Peter's image from another photograph is then 'Photoshopped'. One might argue that the resulting composite image is a photograph of Peter in Paris. If that is correct, then I am mistaken in claiming that 'to photograph' is a factive verb. Instead, 'to photograph' turns out to be non-factive, like 'to testify'. If so, then I have failed to show that 'to photograph' differs from 'to testify' in the relevant respect, and have thereby failed to rule out the possibility that photographs are testimonies of their subjects.

My first response is that it is far from clear that the resulting composite image is, strictly speaking, a photograph, rather than a photomontage. Photomontages are collages made with photographs, and collages are plausibly regarded as a 'hybrid' art form, comprising elements of photographic and handmade methods of picture making (Levinson 1984). If that is right, then the above 'photograph' of Peter in Paris is really an impure or mixed picture, rather than a proper photograph; as such, it does not pose a challenge to any claim I make about photographs. However, suppose this is incorrect and that such a picture is to be regarded as a *bona fide* photograph. Now I can grant that this is indeed the case, if need be, because the objection under consideration misses the point. I claim only that 'to photograph' is, while 'to testify' is not, a factive verb. The example of a 'Photoshopped' picture of Peter in Paris would pose a challenge had I claimed that '*P* is a photograph of *A*' is a factive expression that therefore requires the truth of *A*. But that is not my claim. The claim that 'to photograph' is a factive verb is neutral on whether '*P* is a photograph of *A*' is factive. How? Well, it might be that photographing *A* is not the only way to make a photograph of *A*, which is what the objection under consideration in fact requires. The objection relies on it being the case that one can make a photograph that depicts Peter in Paris without having to photograph Peter in Paris, but rather by 'Photoshopping' together two distinct photographs. But this in fact helps me, since if the resulting composite image is to be considered a photograph, then, since it was not produced by photographing Peter in Paris, it cannot – for that very reason – be a counterexample to the factivity of 'to photograph'.[8]

A third reason for thinking that photographically based knowledge does not reduce to testimonially based knowledge is that the conditions under which it is rational to believe

8 Another possible way one can make a photograph of an object without photographing that object is by laboriously coding a digital photograph from scratch. This was suggested to me by Aaron Meskin (though Meskin tells me he is unsure whether the result should in fact count as a photograph).

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the content of another's testimony are stricter than those under which it is rational to believe the content of another's photograph. At a minimum, it is only rational to believe the words of another insofar as (1) one possesses no counterevidence as to the reliability or sincerity of the testifier (i.e. one has no 'undefeated defeaters') and (2) one is aware that the testifier's words are being presented as a true, factual account, rather than something said in jest, in irony or in rehearsal for a play, say.[9]

The relevant contrast with beliefs that are formed on the basis of another's photographs is that there is no analogue of requirement (2). There are circumstances in which it is rational to believe the content of a photograph whether or not the photographer presents it as a true, factual account, since it can be rational to believe the content of photographs that are not 'presented' by anyone in the first place. For instance, if one comes across a photograph that depicts *A*, then it is rationally permissible for one to believe *A* (in the absence of counterevidence). If you come across a photograph of a general fraternizing with the enemy, then it is epistemically permissible for you to believe that the general fraternized with the enemy, even if no one intended that you (or anyone else) believe that he or she did so. You may have stumbled across the photograph in a secret document or file, say. Moran (2005, 11) makes a similar point when, writing of a photograph taken in a park, he points out that 'if we learn that the photographer is not, in fact, presenting his photograph as a true record of what occurred in the park, the photograph as document retains all the epistemic value for us it ever had'. So while it is rational for us to believe the words of others only if we are aware that those words are being presented as a true, factual account, we may rely on the photographs of others whether or not they 'present' their photographs at all.

So we have three reasons for denying that photographically based knowledge reduces to testimonially based knowledge. However, we have three reasons for affirming that the knowledge furnished by handmade pictures does so reduce. First, handmade pictures are a transmissive, rather than generative, epistemic source. That is why Muybridge photographed, rather than sketched, horses to discover facts about their movement. Drawing and painting are, among other things, a means of spreading knowledge among a community; they are not, while photography is, a tool of discovery that may potentially add to our total stock of knowledge.[10] Secondly, just as one can testify to Peter's being in Paris when he has never been, there is no question that one can paint or draw Peter's being in Paris when he has never been to Paris. The truth of '*S* paints *A*' and '*S* draws *A*', like '*S* testifies *A*' (but unlike '*S* photographs *A*'), is not put into doubt by the discovery that *A* is not the case. Thirdly, just as it is only rational to assent to another's words if, at a minimum, one has reason to think those words are to be taken as a true, factual account of

9 These are minimal conditions on the rationality of believing the testimony of another. In particular, they are neutral on whether testimonially based knowledge reduces to inference. Testimonial non-reductionists hold that these minimal conditions are sufficient conditions (see Graham 2006, 84–5). Testimonial reductionists complain that condition (1), while necessary, is too weak. Aside from the absence of counterevidence, they argue one must also possess positive reasons for thinking the testifier reliable, sincere or otherwise creditworthy (see Fricker 1994, 148).

10 It has been put to me that there are exceptions, in which handmade pictures can generate knowledge. I remain sceptical. But even assuming this to be true, it is important to note that Stanford could not have relied upon a sketch artist to discover the relevant facts about horse movement, and that he had to employ a photographer. So even if one believes handmade pictures may, in some circumstances, generate knowledge, there remains something epistemically special about photographs in this respect.

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a given matter, it is only rational to assent to the content of a handmade picture if one has reason to think the picture's content is meant to be taken as a true, factual account. Believing *A* simply on the basis of seeing a drawing that depicts *A* – absent a reason for thinking the picture is meant to be taken as a true, factual account of *A* – is epistemically irresponsible. The picture could have been made simply to refine artistic technique, or it may have been an absent-minded doodle.[11] Moreover, it would be epistemically reckless to continue to believe the content of an artist's painting of a scene in a park upon learning that the painter is not presenting their picture as a true, factual account of what occurred in the park. Equally, it would be epistemically reckless to continue to believe the content of someone's utterance about an occurrence in the park upon learning that they are not, in fact, presenting that utterance as a true, factual account of an occurrence in the park. The upshot is that while photographs cannot be regarded as sources of testimonial knowledge, handmade pictures very well can.

4. INFERENCE AND PERCEPTION

Having discarded the possibility that photographically based knowledge reduces to testimonially based knowledge, we arrive at the disjunction that such knowledge is either inferentially or perceptually based.

The relationship between perceptually and inferentially based knowledge is notoriously thorny. The difference is typically said to be that the former is comprised of belief that has been formed in a manner that is psychologically immediate, uncritical or spontaneous. As Millar (2000, 73–4) puts it: 'If you know perceptually that something is a bottle of milk then it simply strikes you that this is so... You do not infer that it is so from an assumption to the effect that it looks a certain way'. Hossack (2007, 244) similarly writes: '[W]e are not normally conscious of any inference in perception. When we know by seeing, usually the only mental act that occurs is the visual experience itself'. However, perception and inference cross paths in at least two ways that are relevant for my purposes.[12]

First, the boundary between perception and inference is highly variable. One person in circumstance *C* may have perceptual knowledge of *A*, while another person in *C* may have to reason at length in order to know *A*. For instance, McDowell (1979) claims that the virtuous can know the moral facts of a situation by perception. Not all of us are virtuous, however. Sometimes the right thing to do is not 'open to view', but requires a significant amount of reflection to be known. Moreover, the boundary between perception and inference can vary for the same subject at different times. For instance, Cassam (2007, ch 5)

11 How we assess whether a handmade picture is meant to be taken as a true, factual account of the scene it depicts is a good question, especially when such pictures are typically encountered in the absence of their makers. Sometimes the clue is given by the context in which the picture is displayed. The picture may be published somewhere, such as a newspaper or instructional manual, the entirety of which we are to take as presented as true. Sometimes handmade pictures that are presented as a true, factual account are made in a characteristic style or have a characteristic subject, such as courtroom, anatomical, ornithological and police sketches.

12 As suggested by Hossack's remark, 'inference' is to be understood here as a mental action, and so I will understand it to pick out a personal-level occurrence. When one acquires perceptual knowledge, one's visual system may be described by the psychological sciences as performing inferences, but that is another matter.

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claims that one way we can know another's mental states is by seeing those states, rather than inferring them from bodily features. But as Cassam is keen to stress, he does not mean to be taken as claiming that *none* of our knowledge of others' minds is inferential, since it is undeniable that we must sometimes rely on reasoning in order to work out what another is thinking or feeling.

The idea that we can have perceptual knowledge of moral and mental facts is controversial. But the variability of the boundary between perception and inference, for different subjects at the same time and for the same subject at different times, can be illustrated in other ways. For instance, both an adult and a child can know that the fork is to the left of the dinner plate. The adult knows this by sight, however, whereas the child, who (let us suppose) does not yet know their left from their right, may run through the following steps: (1) they rehearse the mnemonic that they 'write with their right hand', (2) they see that the fork is not on the same side of the plate as their writing hand and so (3) they *infer* from (1) and (2) that the fork is to the left of the plate.

Perception and inference also cross paths insofar as when our perceptual knowledge reports are challenged, we sometimes seek to establish our epistemic credentials by turning to inference. For instance, suppose a hiker informs their companion that the tree they are approaching is an elm. Doubtful, the companion asks the hiker how they know this. The hiker can recognize elm trees, and so has perceptually based knowledge. But rather than unhelpfully reply 'Well, I can just see it is an elm – can't you?' she may draw her companion's attention to the shape of the leaves and the fissure of the bark, and prompt the companion to compare these with the description of an elm in their tour guide. In doing so, she causes her companion to know, by inference, that the tree before them is an elm. The inference that the tree is an elm based on the shape of its leaves and bark in conjunction with the description of an elm given in a tour guide, is, as Brandom puts it, 'safer' than a perceptual report with the same content, insofar as we are more reliable at seeing the shape of leaves and bark than we are at seeing that something is an elm. However, as Brandom (2002, 97) also points out:

> The practice of justifying a challenged report by retreating to a safer one, from which the original claim can then be derived inferentially, should not (certainly *need* not) be taken to indicate that the original report was itself covertly the product of a process of inference.

That is to say, the hiker's ability to establish that she knows the tree before them to be an elm, by leading her companion through an inference to the conclusion that this is so, does not show that the hiker's original report failed to express *perceptually* based knowledge.

The conclusion I wish to draw from this section is that perception and inference need not compete with one another for the 'exclusive rights' to some knowledge-furnishing process or phenomenon. Often, it is the case that when one knows *A* perceptually (e.g. that the object before one is an elm, or that the fork is to the left of the plate), one could instead have come to know *A* inferentially. Overdetermination is a ubiquitous feature of our epistemic lives.[13]

13 This point is well made by Graham (2006, 93–4).

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Returning to photographs, we sometimes perform inferences when trying to work out what a photograph depicts. Consider a photograph taken from an unfamiliar angle or in extreme close-up, like Minor White's *Ritual Branch*. It may take familiarity with other of Minor White's photographs, or photographs of similar subjects, for one to grasp that what one sees in the photograph is crystals of frost on a windowpane. This encourages the thought that photographically based knowledge is, at least on some occasions, inferential. But this does not follow. What is at issue is not whether one performs inferences in order to grasp a photograph's content. Rather, the question is whether we do any inferential work before assenting to a photograph's content, once that content has been grasped. For there is a difference between merely comprehending a content on the one hand, and comprehending that content, coupled with subsequently assenting to it, on the other. For instance, consider the debate over whether testimonially based knowledge reduces to inferentially based knowledge. Testimonial non-reductionists, who answer this question negatively, argue that the minimal conditions I discussed above for it to be rational to assent to another's testimony are sufficient conditions. They argue that once you comprehend the content of someone's utterance and are aware that the content is being presented as a true, factual account, it is rationally permissible for you to believe that content (absent any counterevidence) without having to perform any further reasoning. Crucially, testimonial non-reductionists do not question whether inferences must be performed to first comprehend the content of our interlocutors' testimonial utterances. This view of testimonially based knowledge models the uptake of testimonial content on the uptake of perceptual content; the default mode of assent is characterized as psychologically immediate and spontaneous. But this view leaves open the question of whether the prior comprehension of that content was psychologically immediate.

Accordingly, the question of whether photographically based knowledge reduces to that of inference is a question about whether we do any inferential work once we comprehend the content of a photograph (*if* it is comprehended), or whether we instead assent to the content of photographs in a psychologically immediate and spontaneous manner, as with perception and testimony (according to the testimonial non-reductionist, at least). The fact that we sometimes perform inferences when working out the content of a photograph is itself no reason to believe that photographically based knowledge is inferential in nature.

Despite rejecting the above argument for the inferential nature of photographically based knowledge, the claim that we acquire inferential knowledge from photographs, on at least some occasions, is doubtless correct. This is revealed by the fact that assent to a photograph's content can occur in a far from spontaneous manner. For instance, suppose you encounter a photograph that has a content that conflicts with a deeply held belief. In that case you will likely suspend belief in, or perhaps *dis*believe, the photograph's content. Further evidence, however, might lead you to change your mind and assent to the photograph's content. If so, you come to believe *A* by inferring *A* on the basis of seeing a photograph with the content *A* along with awareness of some further fact. Here is a Gricean example of such a case (see Grice 1957, 382–3): suppose you see a photograph that depicts two people kissing. You believe one of the depicted persons, Andy, to be a devoted husband. You know him and his wife very well. The other depicted person is unknown to you. Because you believe one of the depicted persons to be a devoted husband, you are sceptical of the photograph's content and disbelieve it. You might believe

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the picture to be a skilfully made 'Photoshopped' composite image of two separate photographs. But if Roger tells you that he took the photograph, then this might make you change your mind. You know that Roger lacks the technical know-how to make such a composite image. Now that this fact about the photograph's origin has come to light, you may come to believe the content of the photograph, and so come to believe that Andy kissed someone who is not his wife. But you would do so on the basis of *inferring* this from seeing a photograph that depicts Andy kissing someone who is not his wife, in conjunction with beliefs about the (lack of) technical skills of the person who took the photograph. If this photographically based belief goes on to satisfy the conditions that a belief must in order to rise to the standard for knowledge (if it is safe, or sensitive, or truth tracking, etc.), then you possess photographically based knowledge . But this knowledge would ultimately reduce to that of inference.

I argued in the previous section that if some process or phenomenon furnishes inferential knowledge, then that does not preclude it from also furnishing perceptual knowledge. So does photographically based knowledge always reduce to inferentially based knowledge? Based on the first-person experience of acquiring knowledge from photographs, it seems the answer is 'no'. Photography is so well integrated into our lives that our epistemic reliance on it is often automatic and unthinking. We are so familiar with exploiting photographs for epistemic ends that we regularly acquire beliefs from them about the things they depict in a non-inferential manner. Testimonial non-reductionists, we have seen, claim that testimonially based belief is similarly acquired in a non-inferential manner. But we have rejected the possibility that photographically based knowledge is testimonially based knowledge. This gives us reason to think that when we acquire beliefs from photographs about the objects they depict in a non-inferential manner, and when those beliefs rise to the standard for knowledge (when they are safe, or sensitive, or truth tracking, etc.), those beliefs are constituents of *perceptually* based knowledge.

Consider watching a sporting event on live television. The first-person experience of assenting to the content of these photographic pictures is very different from the first-person experience of assenting to the content of the adulterous photograph discussed above. Viewers see the striker shoot the ball into the back of the net on the television screen and they instantly erupt into cheers. They do not reason from the state of the picture to the state of what is pictured; rather, they form their beliefs spontaneously and without pause. Seeing the game unfold on the television screen, one does not take an evaluative or critical stance regarding what one sees in the picture. After all, it is not as if one suspends judgement on the events of the game and only believes what one witnesses on the screen once some further evidence comes to light, or once one has independently verified the truth of those events. Upon pictorially experiencing the striker shooting the ball into the back of the net, no chain of reasoning mediates one's belief that a goal has been scored. The thought that our default attitude to such pictures is to withhold assent is intuitively false.

The above kind of case is not isolated. Myriad beliefs are formed about Arthur Danto when one sees him in Steve Pyke's photograph. Upon seeing Danto in the photograph, one forms the belief that his hair is white, that he has a beard and so on. Similarly, upon seeing the couple in Nan Goldin's photograph *The Hug*, one simply finds oneself believing that the individuals photographed are a man and a woman, that the man's arm is muscular and that the woman's dress has two bows on it, say. One does not see these things in the photograph and then pause to wonder whether they are true, or reason one's way to assent. Rather, one believes that the depicted man's arm is muscular *as one sees the arm in*

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the picture. Assent is spontaneous, uncritical and unmediated by inference. Moreover, as mentioned above, most paintings we see in books or on the internet are actually photographs of paintings. When one sees the *Mona Lisa* on the internet, what one sees is a *photograph* of the *Mona Lisa*. But we do not reason from the state of this photograph to the state of the photographed painting; most viewers are unlikely to register that it is a photograph they are looking at in the first place. They form beliefs about the look of the *Mona Lisa* (i.e. the painted portrait and photographed object) without any critical reflection on the fact that they are seeing a photograph of the *Mona Lisa*.

These are just a few examples, but the first-person experience of our encounters with photographs suggests that the point generalizes: when we see a photograph that depicts x as F, say, our default doxastic response is to believe that x is F – and to only withhold assent if we possess reasons *against* thinking the photograph creditworthy. Such reasons may concern the unreliability of how the picture was formed (e.g. if one believes that the photograph is poorly exposed or that it has been 'Photoshopped'); the unreliability of its maker (e.g. if one believes the picture's maker enjoys fooling people by presenting composite, 'Photoshopped' images as true); the unreliability of the place it is displayed (e.g. if one believes the picture is published in a magazine known for containing 'Photoshopped' pictures); or, as in the Gricean example above, we sometimes withhold assent if the photograph depicts something that contradicts a deeply held belief. The crucial point is that these are exceptions, rather than the norm. Scepticism is not the typical, default attitude we adopt when engaging with photographs. Very rarely do we assent to a photograph only once we are independently aware of facts about the creditworthiness of the photograph, its maker, etc. Such facts are typically not available to us, yet assent to photographs is widespread. Rather, our default mode of assent is as the non-reductionist characterizes our default mode of assent to testimony: just as we generally believe what we are told unless we have reason to be doubtful, we generally believe what we see in a photograph unless we have reason to be doubtful. Again, this is not how things stand when it comes to what we see in handmade pictures.

So photographically based knowledge can indeed be reduced to inferential knowledge, but that is compatible with them also furnishing perceptually based knowledge. Crucially, insofar as we typically assent to the contents of photographs without inference, it is typically perceptually based knowledge that such pictures do, in fact, furnish.

6. CONCLUSION

The relevance of the above discussion for the question of photography's epistemic value and privilege can now be spelled out: what is of epistemic significance about photographs, and arguably foundational for any inquiry into their epistemic value, is that they can be sources of perceptually based knowledge. By contrast, when handmade pictures furnish knowledge of their subjects, they furnish testimonially based knowledge. Our epistemic dependence on the testimony of others forms part of our widespread, and arguably indispensable, reliance on phenomena other than ourselves in order to acquire knowledge about the world. So in affirming the testimonial nature of handmade pictures, we recognize that such pictures can play an important role in our epistemic lives.

However, insofar as handmade pictures are a transmissive (rather than a generative) source of knowledge, this explains why they cannot play the kind of 'discovery' role in

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our epistemic lives that may be played by photographs. Accordingly, it explains why Muybridge photographed, rather than sketched, horses to know propositions about their movement. Insofar as sources of perceptual (and inferential) knowledge are generative sources of knowledge, my account explains this epistemic feature of photographs. I take this to be a significant merit, since other theories either fail to explain this feature or explain it in a counterintuitive or controversial way. Take Abell's (2010) claim that what is epistemically special about photographs is that they are more rich and reliable than handmade pictures. Consider also Cohen and Meskin's (2004) claim that photographs are epistemically special in that they are undemanding sources of information, relative to handmade pictures, insofar as they are easily identifiable as such. Last, consider Hopkins's (2012) claim that what is epistemically special about photographs is that the pictorial experiences they elicit are factive, whereas those elicited by handmade pictures are not. It is not obvious how appealing to richness and reliability, undemandingness of information transmission or factivity could illuminate the generative nature of photographically based knowledge. Being rich and reliable has nothing to do with being a generative source of knowledge. The same is true of being easily identifiable as a source of information, and factivity is a feature of knowledge generally – whether produced by a generative source or not.

One account that seems able to explain the generative nature of photographically based knowledge is Walton's (1984) transparency theory. Walton claims that viewers of a photograph literally, though indirectly, see the object that was photographed. Although it is motivated to explain the realism of photographs, it is not difficult to read this theory as offering an account of the epistemology of photography. Moreover, it is not difficult to appreciate how it would explain the generative nature of photographically based knowledge. One will sometimes see in a photograph – and thereby, on this account, literally *see* – some object that no one has previously seen (e.g. a black hole in a photograph taken by the Hubble Telescope) or an event which, due to its fleetingness, one cannot see face to face (e.g. a horse's hoof being off the ground).

Walton's critics have taken him to task for providing a poor analysis of the concept SEEING; they complain that it is counterintuitive that it can extend to seeing an object in a photograph. For such critics, the account of the epistemology of photography one can tease out of Walton's transparency theory will be *ipso facto* counterintuitive. However, Walton's critics arguably misunderstand his project. He wants us to *revise* our concept SEEING to make room for seeing an object in a photograph (2008, 111). His justification is the explanatory dividends yielded; that is, the elucidating of key differences between photographs and handmade pictures. But on my account, this business can be altogether avoided. One need not get tangled up in the project of revising and policing the extension of any concept in order to explain the difference in epistemic value between photographs and handmade pictures. We can, instead, simply situate each picture type among distinct sources of knowledge.

Consider also Currie's (2004) theory. Currie claims that photographs are epistemically special in virtue of there being traces of the objects they depict, where x is a trace of y just in case x is counterfactually dependent upon y in a mind-independent way (i.e. were y to have differed, then x would also have differed, independently of anyone's beliefs about y). This account explains the generative nature of photographically based knowledge much less problematically than the transparency theory does. Currie's theory claims that photographs acquire depictive content independently of anyone's mental states, including the

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photographer's, so it is no surprise that photographs can inform us of the truth of certain propositions of which no one was previously aware.

While the trace theory is less problematic than the transparency theory, insofar as it requires no revision of any of our concepts, it courts controversy by staking out a claim about the nature of the photographic medium itself. To date, no account of the nature of the photographic medium has turned out to be unproblematic. Instead, there is widespread disagreement. The obvious worry for the trace theorist is how to accommodate the role of the photographer's beliefs and other mental states in the production of photographs – a fact one would seem pressured to make room for in order to explain not only our aesthetic interest in photographs, but also how studying photographs can provide insight into the psychological states of photographers. The comparative merit of my account is that it takes no side in any debate about the photographic medium *per se*, since it makes no claims about the nature of photography. This vexed question is a matter on which we can remain neutral.

What of explicating the other epistemically special properties of photographs? Insofar as it is rationally permissible to believe another's testimony only if one grasps that the content of the testimony is presented as a true, factual account, acquiring knowledge from handmade pictures is more cognitively demanding than is acquiring knowledge from photographs. For it is permissible for one to believe the content of another's photograph, independently of how the photograph is presented, as long as one has no counterevidence as to the photograph's reliability. But might this change with the rise of digital technology; might it stop being the case that we generally believe what we see in a photograph unless we have reason to be doubtful and become as strict as we are in the case of handmade pictures? The outcome is difficult to predict, but if that does turn out to be the case, might photographs have the epistemic status of testimony? My account leaves this question open. But one who is worried by the effect that photography's digitization will eventually have on its epistemic value will likely think that even the analogue of the minimal conditions on it being rational to accept another's testimony will be too lax. In which case, one should hold that photographically based belief, in order to be rationally grounded, must be formed on the basis of positive reasons for thinking the photograph has been reliably produced. This will have the effect of rendering photographically based knowledge exclusively inferential in nature, and not testimonial.

For these reasons, photographs are epistemically privileged relative to handmade pictures, and thus it is preferable (all things being equal) to rely on photographs rather than handmade pictures as we go about our epistemic lives. The epistemically special properties of photographs can thus be illuminated in recognizably epistemic terms; that is, in terms of the sources of knowledge. In doing so, my account is arguably not just an alternative to other accounts, but is also, for reasons discussed in this section, explanatorily superior.

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