

# Transparency and Egocentrism<sup>1</sup>

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## 1. Introduction

Kendall Walton says photographs are transparent: when I see my child pictured in a photo, I *literally* see her.

Photographs are *transparent*. We see the world *through* them. I must warn against watering down this suggestion, against taking it to be a colourful way of making a relatively mundane point. [...] My claim is that we *see*, quite literally, our dead relatives themselves when we look at photographs of them. (Walton 1984a, 251-252)

For Walton, then, photographs are not only representations, but also visual prosthetics.

This claim bears interestingly on other philosophical issues, particularly the phenomenal feel and epistemic status of photography and depiction more broadly.<sup>2</sup> But Walton's claim is provocative all by itself and has generated considerable resistance. In this paper, I consider arguably the most significant source of this resistance, which I call *egocentrism*: photographs fail to be transparent because, in one way or another, they fail to convey egocentric information to the viewer. In §2, I outline Walton's argument. In §3, I divide egocentrism into three claims that I argue are mistaken, before reflecting on its motivations in §4.

## 2. Walton's Argument

One can divide Walton's argument for photographic transparency into three unequal parts. First, Walton gently nudges us onto a slippery slope. Second, he invokes transparency to explain the phenomenal character of seeing photographs. Third, and most importantly, he identifies two features of photographs highly suggestive of their transparency: their

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<sup>1</sup> Heartfelt thanks to an audience at the University of Fribourg and to Dan Cavedon-Taylor, Rob Hopkins, Paloma Atencia-Linares, Ken Walton, and Nick Wiltsher for generous and helpful comments. This paper is descended from one written in 2008. Close relations of some of that early paper's insights have since appeared in Helen Yetter Chappell's 'Seeing Through Eyes, Mirrors, Shadows and Pictures' (Yetter-Chappell 2018), which I commend to readers.

<sup>2</sup> See, for instance, (Hacking 1981), (Maynard 1983), (Currie 1995, 48-78), (Walden 2005), (Meskin & Cohen 2008), (Costello & Phillips 2009), (Abell 2010), (Zeimbekis 2010), (Pettersson 2011), (Hopkins 2012), and (Cavedon-Taylor 2015). Some of these epistemic implications are not the ones about which Walton raises doubts in (Walton 2008, 113).

‘mechanical’ aetiology and their preservation of similarities that characterize ordinary perception. I lay the argument out in more detail now.

One way to see things is directly. However, Walton rightly identifies others. We also see through ‘eyeglasses, mirrors, and telescopes’.<sup>3</sup> If so, Walton asks, ‘don’t we also see through closed circuit television monitors and live television broadcasts?’ And once we concede this, he continues, why not delayed television broadcasts, films, and photographs? (Walton 1984b, 67). And if Walton’s slope does not seem slippery enough, we can grease it further with photography’s venerable forerunner, the *camera obscura*.<sup>4</sup>

Another consideration favouring photographic transparency is that it explains something Walton takes to be distinctive of, if not unique to, experiencing photography. Ordinarily, looking at a photograph makes one feel ‘in contact with’ what it depicts in a way that even hyper-realist hand-made images do not. This is largely explained by the fact that photographs do in fact put one in contact with what they depict, much as ordinary perception puts one in contact with what one perceives (Walton 1984a, 247, 255-258, 269-270, 273).

How does photography do this? Having warmed us up, Walton begins his argument in earnest. Seeing via photographs resembles ordinary and prosthetic seeing in one crucial respect. Unlike hand-made images, such as paintings and etchings, photographs are produced ‘mechanically’. When I see my child in a photo, there is a causal pathway from her to my visual experience, a feature shared with other forms of genuine seeing. Seeing even a faithful painting of her, however, does not secure this contact, since the artist’s intentional states interrupt the causal pathway from child to visual experience.<sup>5</sup>

Walton puts this difference counterfactually. The appearance of both photograph and painting depends counterfactually on my child as she was when each picture was executed. Had she pulled a different face, say, both pictures would have turned out differently. Nonetheless, the painting is only counterfactually dependent on my child’s appearance (to the extent that it is) because it depends counterfactually on the painter’s intentional states, such as her beliefs. This intentional mediation makes hand-drawn pictures opaque. For, the painter’s intentional states may be mistaken, as when she hallucinates and commits the hallucination to canvas. The photographer, meanwhile, no matter how deluded, will only capture what is actually before her—even in cases when the photograph, in an important sense, misrepresents things (Walton 1984a, 262-267).

But while transparency may require mechanically guaranteed causal and counterfactual dependence, it is far from enough. This brings us to

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<sup>3</sup> Walton’s slippery slope is reminiscent of Grover Maxwell’s (Maxwell 1962).

<sup>4</sup> Slippery slope considerations also inform a related debate about whether images in films really move. See (Wiltsher & Meskin 2019, 59-67).

<sup>5</sup> Compare (Hacking 1981, 320).

the second respect in which photographic and ordinary seeing are importantly alike. Walton describes a hypothetical machine that registers light like a camera but produces written descriptions instead of pictures. Although the descriptions are mechanically produced, they remain opaque. Why? Walton argues that investigating things by looking at a description is importantly unlike doing so by looking directly, whereas investigating things by looking at a picture is ‘strikingly analogous’ to looking directly; the apparent similarity relations conveyed by pictures in general and photographs in particular, but not descriptions, correspond closely to those conveyed by ordinary perception. Walton captures such apparent similarities in terms of confusability: the things one typically confuses via photographic and ordinary seeing match closely, differing significantly from the things one typically confuses when examining descriptions. Crucially, the things one is liable to confuse in photographic and ordinary seeing match so closely, Walton maintains, *because* both are forms of perception—a mode of discrimination counts as perceptual only if it is sensitive to which things really are similar.<sup>6</sup>

The mistakes a perceiver is susceptible to correspond to similarities among things themselves. [...] An 85-foot tree resembles one which is 85.00001 feet high more closely than it does a 35-foot tree. Houses are more like barns and woodsheds than horses or hearses. [...] In fact, the degree of similarity explains the likelihood of confusion. [...] The correspondence between similarity and perceptual confusability is intrinsic, I suggest, to the notion of perception. A process of discrimination counts as perceptual only if its structure is thus analogous to the structure of the world. (Walton 1984a, 271)

Photography is a transparent medium because, in addition to preserving causal and counterfactual dependence of the depiction on what is depicted, photographs preserve real similarities. Descriptions, in contrast, are opaque because they ‘scramble the real similarity relations’. We see the words as ‘getting between us and what we are reading about, as blocking our view of it’ (Walton 1984a, 271).

Walton’s argument began with a slippery slope and an explanation for what it feels like to confront photographs. He then identified two important, even necessary, features of perception that photographs but not hand-drawn pictures enable. Absent powerful reasons to the contrary, therefore, we ought to consider photographs transparent. I turn now to the egocentrists, who attempt to present such reasons.

### 3. The Egocentrists

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<sup>6</sup> Compare (Hacking 1981, 318).

A recurring number of criticisms of Walton's claim get at the same basic idea: a visual experience counts as seeing something only if the experience helps locate that thing in one's 'egocentric space' (Warburton 1988), (Currie 1991, 26-27; 1995, 66), (Carroll 1996, 61-63), (Cohen & Meskin 2004), (Nanay 2010), (Zeimbekis 2010). One can divide this idea into three putatively necessary conditions: seeing something requires that one's visual experience (1) situate it in one's egocentric space; (2) situate it in one's egocentric time; and (3) be sensitive to changes in it.<sup>7</sup> Different authors have argued for one or more of these, and I consider each in turn.

### 3.1 Space

Egocentrism's most widely held commitment is that seeing something requires receiving information about its spatial position relative to oneself (Currie 1991, 26-27; 1995, 66), (Carroll 1996, 62), (Cohen & Meskin 2004). Noël Carroll makes this a requirement about belief, indeed knowledge, arguing that I do not literally see objects 'unless I can perspicuously relate myself spatially to them – i.e., unless I know (roughly) where they are in the space I inhabit' (Carroll 1996, 62). What should one make of such a spatial egocentrism?

It is worth noting in passing that no photograph is *wholly* egocentrically uninformative. Every photograph conveys the information that what it depicts lies within one's past light-cone. This is, as it were, the most absolute of egocentric 'spaces', being that portion of spacetime outside of which nothing could causally interact with one. Thus, since photography is less than 200 years old, any photograph one sees must have been taken within less than a 200-lightyear radius of one's current location—a cosmic stone's throw. The egocentrist might insist that such information is so slender as to be trivial. Fair enough. But this move comes at a cost. Where telescopic seeing involves a combination of mirrors and lenses, as with Newtonian and Lurie Houghton telescopes, and the telescope cannot be reoriented, the egocentric information provided is potentially as slender. If one were to see a star through such a telescope, or a more complicated one, while floating through space, one could learn only that the star lies somewhere within one's past light cone, which is precisely as much as any photograph tells us. Yet, one would surely still *see* the star in this way.

From a similarly cosmic perspective, one might wonder whether God sees through photographs even accepting this condition. After all, being everywhere and everywhen, *everything* is in His egocentric spacetime. But perhaps this is to misunderstand the way photographs are necessarily dislocated from ordinary space.<sup>8</sup>

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<sup>7</sup> (Warburton 1988) posits some of the conditions as *central* to seeing, not necessary, but since this is consistent with photographic transparency, I consider a logically stronger version of his claim.

<sup>8</sup> For discussion of the discontinuity of pictorial and actual space, see (Carroll 1996,

Returning to earth, the biggest problem with the doxastic version of spatial egocentrism is that it leads to a devastating counterexample:

Suppose I see a carnation in the ordinary way, right in front of my eyes. But suppose that there are lots of mirrors around, or I suspect that there are. None of them actually interferes with my perception of the carnation, but I cannot tell that they do not; I think I may be seeing the image of a carnation reflected in one or many mirrors. So I have no idea where the carnation is in relation to me. Currie and Carroll are forced to deny that I see the carnation at all! (Walton 1997, 70)

Jonathan Cohen and Aaron Meskin concur. They draw a general moral: beliefs ‘can be undermined too easily’; they are ‘fragile in ways that leaves seeing intact’ (Cohen & Meskin 2004, 199). What matters, they claim, is not what the perceiver *believes* but only that her visual experience carries egocentric information, understood in a technical sense borrowed from Fred Dretske: something carries information about something else if the former stands in an ‘objective probabilistic, counterfactual-supporting connection’ to the latter. A scoreboard, for instance, carries information about a game’s score insofar as it connects in a probabilistic, counterfactual-supporting way with that score. Roughly, if a game’s score is made sufficiently more probable, conditional on the scoreboard’s reading that score rather than another, then the scoreboard carries score information (Cohen & Meskin 2004, 200).

Cohen and Meskin’s proposal blunts Walton’s objection.

[W]hat is essential is that the relevant visual experience is produced by a process that carries egocentric spatial information about the object. That is, *x* sees *y* through a visual process *z* only if *z* carries information about the egocentric location of *y* with respect to *x*. [...] our view secures the desired conclusion that photography is not transparent, insofar as the visual process of looking at photographs fails to carry egocentric spatial information about their depicta. For there is no probabilistic relationship between the photographic image and the egocentric location of the depictum: as I move around the world with the photograph, the egocentric location of the depictum changes, but the photographic image does not (Cohen & Meskin 2004, 201).

Since the carnation is seen directly and direct seeing typically carries egocentric information, Walton’s carnation case satisfies the proposed condition. The truth of the following counterfactual is evidence of this: if the spatial relation between the viewer and carnation differed (e.g.

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61-62) and especially (Matthen 2005, 313-319).

because the viewer moved elsewhere), the carnation's appearance would differ. Seeing a photograph of a carnation, however, does not carry such information, as evidenced by the *falsity* of the following counterfactual: if the spatial relation between the viewer and the carnation differed, the photograph's appearance would differ. Photographs are 'spatially agnostic' and therefore do not enable genuine seeing (Cohen & Meskin 2004, 204).

I will quickly note that even on this more plausible formulation of spatial egocentrism, photographs are never *wholly* spatially agnostic. Again, what they depict must appear somewhere within 200 lightyears of the viewer. This is evidenced not by the fact that, were the viewer and the photographed object 201 lightyears apart, the photograph's appearance would differ. Rather, it is evidenced by the fact that in such a case, the photographed object would not, because *could* not, appear to the viewer in a photograph (or otherwise) at all. The important thing is, there is an objective, probabilistic relation of the relevant sort between the photographed object's being within 200 lightyears of the viewer and her seeing it depicted in a photograph. The fact that the photographic image does not alter as the viewer moves around does not change this.

But there are more serious problems. In 2008, the artist Paul St George installed a 'telectroscope' in the US and the UK. A device of 19<sup>th</sup> Century conception that anticipated televisions and webcams, it consisted of a transatlantic tunnel allowing New Yorkers to see Londoners and vice versa. So ran the fictional backstory anyway. In fact, the installation consisted of two massive, steampunk pipe-ends in each city representing the ends of a continuous (if fictional) tunnel. People on either side could view one another, life-sized, via video link (St George 2008).<sup>9</sup>

I believe viewers of the telectroscope could genuinely see the people at the other end. However, insisting on this would baldly beg the question. So, suppose we built a real transatlantic telectroscope. With enough fibre-optic cable and optical amplifiers to maintain signal strength, this would be more than speculative physics. Fibre-optic cables carry many types of information over enormous distances. Their common application to visual prosthesis is in endoscopy, where doctors use them to see inside bodies and mechanics to see inside machines. In such a device, the very same light that entered the fibre-optic cables in New York would travel unmediated, bar multiple reflections, into a Londoner's retinas.

Does our fibre-optic telectroscope let one genuinely see across the Atlantic? I think it clearly does. However, telectroscopic seeing gives one no spatial egocentric information. Or, when it does, this is entirely accidental, benefitting from what Cohen and Meskin call a '*de facto*' correlation between the relevant egocentric spatial relation and the image

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<sup>9</sup> The work was predated three decades by *A Hole in Space* (Galloway & Rabinowitz 1980)—a similar work using large screens and audio connecting shop windows in New York and Los Angeles.

(Cohen & Meskin 2004, 203).<sup>10</sup> As one moves around in London, one's view of New York does not change. So, perhaps egocentrists will deny that it counts as genuine seeing. How about endoscopic seeing? Endoscopes are well-established prosthetics to vision. And due to the flexibility of fibre-optic cables, we can, in principle, set up endoscopes of whatever contortion and length to collect visual data from wherever. If telectroscopes produce spatially agnostic images, then so do endoscopes. Endoscopes are, after all, just portable telectroscopes used by doctors and mechanics. So, perhaps endoscopic seeing, at least when the distal tip is held stationary, does not count as genuine either. This seems implausible.<sup>11</sup>

An interesting and underappreciated issue regarding egocentric space concerns where it is. Probing this issue helps intensify the endoscopic discomfort. Cohen and Meskin understand egocentric information in terms of the spatial relation between perceiver and perceived (Cohen & Meskin 2004, 198). But where is the perceiver? Answering this question is harder than it might seem. Put simply, while locating the body is relatively straightforward, locating the mind is not, even if that mind is realized in a body.<sup>12</sup> This presents the spatial egocentrist with a dilemma.

Imagine a cartoon-like character, Kurious Kaspar, sitting comfortably in Bosham, England. Intrigued about what Germany is like, he sends his incredibly (but truly!) stretchy eyeballs roving thousands of miles around until he finds himself in Münster, where he has a good look around. Where is the centre of Kaspar's egocentric space, his ego? In short: where is *Kaspar*? Wherever he is, we must surely grant that he genuinely sees Münster. However, this concession generates the dilemma. Either egocentrists locate Kaspar with his non-ocular body but then deny, implausibly, that he sees Münster. Alternatively, they locate Kaspar at his pupils, but then concede that photographs do convey egocentric information. In more detail:

**Horn One:** Kaspar is with his body in Bosham. However, as the visual information conveyed is from Münster and bears no more than an accidental spatial relation to Kaspar, his visual experience conveys no egocentric information. Thus, the space-egocentrist must deny that Kaspar genuinely sees.

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<sup>10</sup> See also (Carroll 1996, 63).

<sup>11</sup> One might think that key to Cohen & Meskin's proposal is that seeing is a *process* in which egocentric information is conveyed in time—as one 'moves around' (Cohen & Meskin 2004, 201, 203, 208n)—and that *this* rules out photographic transparency. However, there are three problems with this: (1) it is a stronger condition than I have attributed to them that is borderline question-begging; (2) it would conflict with strong intuitions about transient visual experiences, which I discuss later; (3) it does not clearly help with the kind of telectro-/endo-scope cases under discussion.

<sup>12</sup> This is delightfully illustrated by Daniel Dennett's story *Where am I?* (Dennett 1981).

Objection: *But Kaspar knows that his pupils went that way, and so that Münster must lie over there!* Not necessarily; one's roving eyeballs could get lost, like wanderers in an unfamiliar forest. Moreover, even granting he does know, Kaspar is in an epistemic situation like someone viewing a closed-circuit camera feed. She may know that the depicted scene is taking place in the room next door, say, but the egocentric information her visual experience imparts is merely accidental.

Objection: *But is it merely accidental? If Kaspar's head, or a bicycle in his visual field, moves to the left, his visual experience will change, showing that his visual experience does convey egocentric information after all!* Not quite. If his head moves, his pupils can remain stationary, and *vice versa*. So, while the moving bicycle will alter his visual experience, this experience does not convey egocentric information regarding the bicycle, since Kaspar's body could be moving in all sorts of ways relative to bicycle.

**Horn Two:** Kaspar is with his pupils in Münster. However, by the same token, the egocentric space in endoscopic/telectroscopic vision is centred wherever the information is gathered (e.g. inside the body/in New York). In a live broadcast, or photograph, it is wherever the camera lens is or was.<sup>13</sup> Thus, endoscopes, telectroscopes, and photographs convey egocentric information after all. Consequently, where lack of spatial egocentric information is the only obstacle to photographic transparency, the egocentrist must accept that photographs are transparent.

Objection: *But moving the camera lens now won't change the photograph's appearance, so how does a photograph convey egocentric information?* While true, this is irrelevant, as my discussion in the next two sections will hopefully clarify. It is enough that, *had* one moved the lens, the photograph would look different.

The force of this dilemma is that, rather than simply contradicting spatial egocentrism's condition, it concedes it, showing how it leads to one of two conclusions unacceptable to the view: implausibility or the acceptance of photographic transparency.

### 3.2 Time

Egocentric 'space' can also be understood more figuratively as placing temporal constraints on seeing. Here's Nigel Warburton:

[W]hat is seen is in almost all cases virtually simultaneous with what is actually happening, any differences being a factor of the speed at which light travels. Even when viewing extremely distant objects such

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<sup>13</sup> See the discussion of prosthetic eyes in (Yetter-Chappell 2018, esp. 2023).



as stars there are no arbitrary hold-ups in the path of the light travelling from object to eye. Still photographs always involve delay, and this delay is not a constant one. [...] if [Carl] Lewis takes 9.9 seconds to run 100 metres, it takes 9.9 seconds to see him do it. The time it takes to see a photograph has nothing to do with the length of time represented in that image. (Warburton 1988, 73)

Warburton endorses SIMULTANEITY: for a visual experience of something to count as *seeing* it, that visual experience must capture how that thing looks when the visual experience occurs. To see something *now* is for one's visual experience of it to correspond to how it is *now*. This condition also entails CONGRUITY: to see an event, at least in whole, one's visual experience of it must last precisely as long as the event. Seeing a five-second event must take five seconds.

The obvious counterexample to SIMULTANEITY, which Warburton and others consider, is that we see stars. Alpha Centauri C lies over four lightyears from Earth, meaning that when one looks at it, one sees it as it was just over four years ago. More distant objects may have ceased to exist by the time one sees them. Indeed, *all* seeing introduces delays between one's visual experience and the world owing, among other things, to the time it takes light to travel from object to retina, however brief. Warburton straightforwardly blocks the counterexample by exempting delays due to the speed of light (Warburton 1988, 69-70). This allows stargazing into the genuine-seeing-club, while excluding arbitrarily delayed experiences such as photographic and live-broadcast seeing.

This exemption is straightforward but introduces difficulties. Suppose one could slow light down, such that the delay between reality and visual experience were greater than usual. Would one see anything? Of course! If nothing else, it would be absurd to insist that creatures otherwise like us at possible worlds where the speed of light is 299,792,457 rather 299,792,458 m/s thereby do not really see anything. But we need not rely on science fiction. Over two decades ago, physicist Lene Hau and her team used super-cooled atoms to slow light to a crawling 17 m/s (Hau et al. 1999). It seems clear that, were one to visually experience an object via light travelling at this speed, one would still see it, just as surely as one sees the distant moon. One might try to salvage Warburton's exemption by using 'the speed of light' in an indexical spirit to pick out whatever speed the relevant set of photons happens to be travelling. In that case, 17 m/s would be the speed of light within the context of Hau's experiment and any visual impression it facilitated could count as seeing something. However, such a move makes delays due to the speed of light as arbitrary as any other. For this reason, one ought to let live-broadcast seeing count as genuine seeing—or, at least, not discount it on grounds of delay.

However, one could still deny that photographic seeing counts on slightly different grounds. Unlike delayed live television, and seeing the

photons in Hau's experiments, photographs do not just delay transmission, they delay it indefinitely. If a television broadcast is delayed by 30 seconds, then an active viewer will always see the things depicted as they were 30 seconds prior. But a photograph depicts objects at just some particular moment; its appearance bears no relation to how much time has passed by the time it is seen. If delayed television is akin to slowing light, a photograph is akin to stopping it.

Does this matter? What implications would, for instance, stopping rather than merely slowing light from an object and then releasing it again into one's eyes have for genuine seeing? Yet again, we need not rely on science fiction; just a couple of years after slowing light, Lene Hau's laboratory succeeded in temporarily stopping it entirely (Liu et al. 2001). Regardless, once one has shown the irrelevance of delaying light to the question of genuine seeing, showing the irrelevance of the delay's inconstancy is straightforward: for any instance of photographic or stopped-light seeing, some amount of time passes between the moment visually experienced and the visual experiencing of it. So, there is some reduced speed of light that would secure an equivalent delay. So, any instance of photographic or stopped-light seeing is equivalent, insofar as delays are concerned, to some form of seeing via slowed light. So, if slowing light is no obstacle to its facilitating seeing, then nor is stopping it. Both are just forms of delay.<sup>14</sup>

What about CONGRUITY? While seeing via slowed light, like watching a delayed live broadcast, does not preserve simultaneity, it does preserve congruity: a ten second event takes ten seconds to visually experience in full. CONGRUITY seems dubious for how it restricts genuine seeing to seeing objects over time—to seeing events. For, we also see momentary things, like the detailed tread of a rapidly spinning bicycle tyre during an eye saccade or dancers under strobe lighting. Of course, one can insist that such putative counterexamples still satisfy CONGRUITY. But doing so vitiates whatever force CONGRUITY had. For, on this basis, one could not conclude that photographs are opaque, only that they are opaque for any period of time beyond what is congruous with the moment captured. Suppose the photograph of my child was captured with a 1ms exposure. Then, CONGRUITY would imply that the photograph is transparent during this initial congruous 1ms, but opaque thereafter. This is a weird implication. But things get worse. Since precisely *when* one visually experiences the photograph is arbitrary, no specific period of 1ms is privileged as *the* moment-congruous, transparent period. So, the photograph is transparent during any 1ms period whatsoever. Given this, the photograph is always transparent (think of it like so: one can just place

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<sup>14</sup> Objection: when the light is delayed in the lab, one still registers the same photons reflecting off the object; not so with a photo. True, but irrelevant. I am considering whether the delay *as such* is disqualifying. See (Gaut 2008, 394-396) for a defence of the view that seeing something requires visually registering the photons reflecting off it.

all the transparent 1ms periods back to back forever), and seeing my child in it always counts as genuinely seeing her.

More importantly, however, visual experiences via temporarily stopped light qualify as seeing because congruity is, in an important sense, not really distinct from simultaneity, whose irrelevance to genuine seeing I have already established. If one steadily increases the delays in transmission from object to viewer while she is looking, one will make the visual experience incongruous without changing whether or not one genuinely sees the object. So, once one shows SIMULTANEITY's falsity, as I have, CONGRUITY's drops out for free.

In closing, I want to consider the intriguing case of *akinetopsia*. Akinetopsia, or motion blindness, is a rare condition in which sufferers do not see objects' motion, but rather a series of still 'frames' that make moving objects appear to jump as each frame is updated (Miller et al. 2005, 609-614). In a well-documented case, a sufferer, L.M., described her difficulty pouring drinks, owing to the fact that 'she was unable to perceive the movement in the cup (or a pot) when the fluid rose' (Zihl et al. 1983, 315). Clearly, L.M. has a visual impairment. But equally clearly, her being *motion* blind does not make her blind *simpliciter*. She still sees the cup, despite her visual experience's overwhelming failure to be simultaneous or congruous with the pouring. SIMULTANEITY and CONGRUITY are, therefore, not necessary conditions on seeing something, even if seeing is typically simultaneous and congruous with what is seen.<sup>15</sup>

### 3.3 Change

Seeing something has been thought to require that one's visual experience of it be sensitive to its visible alterations over time, whether intrinsic (e.g. its shape) or relational (e.g. its position relative to oneself).

Bence Nanay defends a logically weaker and more precise version of this basic idea:

My claim is that if I see an object, then it must be true that there is at least one way for me to move such that if I were to move that way, my view of the perceived object would change continuously as I move. (Nanay 2010, 469)

Insofar as photographs cannot depict such change, photographically seeing something is not genuinely seeing it.

Nanay has taken egocentrism and whittled an extremely slender necessary condition from it: If one sees something, then there is a possible movement such that, performing that movement would change

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<sup>15</sup> See also the discussion of strobe lights in (Yetter-Chappell 2018, 2021).

one's view of what is seen (continuously as one moves). The condition requires only *one* possible movement. And it requires 'continuous' change, meaning change while keeping one's eyes on the object (this is to avoid triviality; otherwise, one could satisfy Nanay's counterfactual by travelling to the depicted object and looking up at it directly from the photograph). As concerns photography, the basic idea behind the condition is that, no matter how one moves, a photograph's appearance remains the same.

Slender though it is, the condition generates a problematic case. Suppose that God is annoyed with *New York Times* columnist David Brooks' dreadful think pieces, and particularly disgusted by the blend of McHistory lesson and concern trolling in his latest column. Accordingly, God curses him with an exotic object: a monochrome sphere that alters its position, size, surface luminosity, and peripheral fuzziness so as to always occlude precisely the same portion of his visual field in precisely the same way—an apt metaphor, God decides, for the dull and uniform shape of Brooks' thought.<sup>16</sup> No matter how he moves (and you can make this phrase as modally robust as you like, it is God after all), save by shutting his eyes, Brooks sees the sphere exhibit precisely the same visual appearance. 'Am I seeing an actual sphere?' Brooks asks a passer-by, who confirms that, yes, his spherical visual experience is as veridical as his writing is terrible: she can see it move and alter in perfect synchronicity with his movements. And she is right. His writing *is* terrible. But, more to the point, he does genuinely see the sphere, just as surely as he sees his own hands, its unusual nature notwithstanding.

But perhaps the biggest problem for the change-egocentrist is a dilemma with the same structure as that outlined in §3.1. Consider Katharina, viewing a beetle through an endoscope with a fixed distal tip. Either egocentrists index Katharina's movements to her body but deny, implausibly, that she sees the centipede, or they index them to the endoscope's distal tip, but then concede that photographs satisfy their condition after all. In more detail:

**Horn One:** Movement is indexed to Katharina's body. However, the visual experience of the centipede afforded by the eyepiece remains constant regardless of how Katharina moves. Thus, there is no way for Katharina to move such that, were she to move that way, her view of the beetle would change continuously as she moved. Thus, the egocentrist must deny that Katharina genuinely sees.

**Horn Two:** Movement is indexed to the endoscope's distal tip. Were one to move the distal tip, Katharina's view of the beetle would change. Therefore, her visual impression of the beetle satisfies the

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<sup>16</sup> Susanna Siegel and Bence Nanay describe very similar examples in (Siegel 2006, 369-370) and (Nanay 2010, 479n). Nanay denies that the example poses a problem for his view, owing to the disappearance of stabilized retinal images. But he should not, as I show in §4.

egocentrist's condition. However, by the same token, movement in photographic seeing is indexed to the camera lens. Thus, there is a possible movement (of the camera lens), such that performing this movement would alter the photograph's appearance and, more to the point, the viewer's view of what is depicted. Consequently, if the egocentrist's condition is the only obstacle to photographic transparency, the egocentrist must accept that photographs are transparent.

Nanay's condition is not therefore necessary for seeing an object. Why think it is? In the next section, I will speculate about egocentrism's general motivations. As concerns this particular condition, I conjecture that part of what makes it tempting is that many cases where one cannot change one's visual experience by moving are explained by the visual experience's non-veridical nature, as with phosphenes and some hallucinations. It is therefore tempting to explain one's inability to alter one's visual experience of photographs in the same way: photographic seeing is not *real* seeing. But this order of explanation relies on the (scope-restricted) implication going from the fact that one's visual experience is non-veridical to the fact that things appear the same regardless of how one moves. Importantly, the implication does not go the other way, which is what Nanay's condition says.

I will close by redirecting a version of John Kulvicki's worry about Cohen & Meskin's condition on genuine seeing at Nanay's condition. Once one has diluted egocentrism to such a degree that it places only an extremely weak modal condition on genuine seeing, with none of egocentrism's body-orienting or action-guiding ambitions preserved, why should one want it at all? (Kulvicki 2014, 186-187)

#### 4. Why Egocentrism?

I maintain that none of the egocentrist conditions are necessary for seeing something. Why do so many find egocentrism plausible then? Seeing something probably requires seeing it from somewhere, from a *perspective*, and thus, requires seeing objects at least as if spatiotemporally related to this perspective, veridically or not (Currie 1995, 66). However, this falls wildly short of egocentrism. I confess that I find egocentrism's widespread attraction mysterious; seeing Walton's transparency thesis repeatedly rebuffed by egocentrists is like seeing the claim that Beethoven's *Opus* 131 is humanity's crowning musical achievement rebuffed by admirers of David Hasselhoff's *Looking for Freedom*.

Assuming egocentrism's motivations go beyond a vague distaste for Walton's proposal, what are they? There are various possibilities,

including the one just considered in the previous section.<sup>17</sup> But one consideration apparently motivating some egocentrists is the desire to accommodate the reciprocal importance of action to perception. Carroll, for instance, notes of *Casablanca* that ‘I would not know, looking at the image on the screen, how to point my body in the direction that I would have to take in order to *walk*, or *drive* or *fly* to Rick’s bar’ (Carroll 1996, 62—my emphasis). Warburton stresses that the ‘main use’ and ‘evolutionary function’ of our visual capacities is ‘as an aid to finding our way around our immediate environment’ (Warburton 1988, 69, 73).

Expanding beyond egocentrism proper, there are what we might call ‘egocentricish’ philosophers who, like some egocentrists, couple their desire to understand action’s implications in perception with a desire to accommodate empirical findings on visual perception.<sup>18</sup> I will consider just three illustrative examples of these kinds of findings to show why I think they fail to support egocentrism.

One suggestive finding that has come out of empirical work on visual perception is that integrated visual experience is processed by two separate ‘streams’ occupying largely different portions of the brain that work in tandem. Very roughly, these are (a) the ventral stream, which creates a three-dimensional map of objects and their relations to one another and (b) the dorsal stream, which maps objects egocentrically rather than in relation to each other, helping guide bodily movements.<sup>19</sup> The dorsal stream is particularly interesting because of the way that its contribution to visual representation deviates from common sense. In particular, the dorsal stream is widely thought to contribute nothing to visual awareness (Matthen 2005, 300). Rather, it allows one to efficiently negotiate objects in one’s immediate vicinity—one’s egocentric space. Patients who have suffered brain damage affecting the dorsal pathway, for instance, may still enjoy a rich experience of visual space around them, owing to the ventral stream. Yet, they struggle to perform tasks that are effortless for able-bodied people without such brain damage, such as picking up a cup (Matthen 2005, 297-298).

Another related (and more obvious) feature of visual perception revealed by science is that it is an evolved capacity allowing us to negotiate our environments effectively, aiding our ability to sustain ourselves, avoid dangers, and reproduce.<sup>20</sup>

A final, and more specific, finding from the empirical sciences is that when a retinal stimulus remains uniform, the mind effectively erases it from visual awareness (Siegel 2006, 355). So, for instance, an observer will eventually cease to see an object that consistently occludes precisely

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<sup>17</sup> There is also a tradition of considering egocentric information necessary for knowledge by acquaintance—see (Evans 1982). I do not have space to address this.

<sup>18</sup> See, e.g., (Regan & Noë 2001), (Noë 2003), (Matthen 2005).

<sup>19</sup> The *locus classicus* for this distinction is (Goodale & Milner 1992).

<sup>20</sup> See (Currie 1995, 69) and (Noë 2003, 18, 21-22).

the same portion of her visual field.<sup>21</sup>

It is quite tempting, I think, to go from these sorts of findings to the thought that visual perception is more complicated than common sense suggests—that our conception of it as passively rendering an accurate mental *picture* of objects and their spatial relations to one another is mistaken. Perhaps seeing something requires one’s movement (Noë 2004, 13) or, at least, an externally induced change in retinal stimulus.<sup>22</sup> And perhaps these characteristics result from the fact that orienting objects around oneself, registering their egocentric changes, and thereby facilitating the negotiation of one’s environment, is a constitutive function of visual perception. This inference may be particularly tempting if one is given to functionalist analyses of evolved capacities.

Tempting, perhaps, but not desirable. The ‘two streams’ theory of perception enriches our pretheoretical grasp of how visual perception interacts with our motor functions. However, whatever other functions it performs, the ‘motion guiding vision’ of the dorsal stream that maps egocentric space is redundant when we gaze at distant objects, such as clouds or mountain ranges; our understanding of their spatial relations is ‘likely very little different from that of objects in a picture’ (Matthen 2005, 322-324). But it would be insanity to therefore deny that we see mountains on the horizon. My point here is not that one cannot orient oneself to distant mountains or ‘act on them’ by, say, walking towards them. It is rather that whether one genuinely sees something is distinct from whether one’s dorsal stream contributes to the visual experience. One can see this point more directly by considering that those whose dorsal pathway is disabled by brain damage, but whose remaining visual system remains in operation, obviously continue to see in any sense of the word worth preserving (Nanay 2010, 467).

What of vision’s purported evolved function? While facilitating efficient movement by locating objects in egocentric space is, of course, important, it is not the or even *a* constitutive function of vision. This is clear when one considers comparable functional analyses of other fitness-enhancing biological processes—specifically, how implausible they are. For instance, pain likely evolved to register (potential) damage to the hurt organism, speech to facilitate communication, and sexual intercourse to vastly increase an organism’s probability of reproducing. But it is hardly plausible to think that pain caused by artificially stimulating pain receptors is not *real* pain (Walton 1997, 69-70); that speech deployed in, say, rehearsing lines is not *really* speaking (Friday 1996, 34); or that recreational sex between infertile lovers is reduced to an awkward, avant-garde dance.

What of the observation that objects manifesting in a stabilized retinal image eventually disappear from sight? While a perfectly interesting

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<sup>21</sup> Does this mean God has to mess with Brooks’ visual system too in the example above? Just though this would be, it is unnecessary since Brooks can close his eyes.

<sup>22</sup> See (Cavedon-Taylor 2013).

feature of human vision, it is not plausibly a feature of seeing as such. It thus offers poor grounds on which to base necessary conditions or from which to anchor one's theory. Human beings could easily have lacked this feature, retaining awareness of objects uniformly stimulating the retina. At the very least, this is straightforward to imagine of humans or other creatures, actual or merely possible. More importantly, however, and contrary to what some—e.g. (Nanay 2010, 479n)—appear to think, this phenomenon bears no relevance to the truth of egocentrism. For, even granting that the mind erases visual awareness of objects causing stabilized retinal images, we are visually aware of them before this happens; we *see* them. That we cannot see them indefinitely is immaterial.<sup>23</sup>

We still lack an explanation for why this kind of empirical literature should be attractive to the egocentrically inclined. One unflattering answer is that its attractiveness stems from a combination of something like semantic externalism with an inability to clearly distinguish Walton's potentially revisionary project of theory construction from the potentially more conservative project of conceptual analysis.<sup>24</sup> For, operating under this combination, the issue as to how paradigmatic cases of sight are actually (as opposed to possibly) realized in humans and other organisms becomes very important; those are the processes, at our world, to which literal uses of 'sight' and its grammatical variants refer. Empirical work furnishes the relevant information.

If one is constructing a theory, however, as Walton makes clear he is, by giving a unified account of being perceptually connected to the world, then how the paradigmatic cases are *actually* realized becomes less relevant. Instead, the most important features these cases share with others, actual or merely possible, become the theory's moorings.

A more flattering answer with a similar result is that the empirical work is propelling the egocentric race-car, rather than just adding go-faster stripes. On this view, the egocentric are also in the business of theory construction and happy with potentially revisionary accounts of seeing something. They just appear to differ from Walton on whether their respective revisionary account accommodates the best scientific work, or needs to. This last point, speculative and tentative though it is, would have one interesting implication for the debate: those who disagree with Walton, egocentric and otherwise, might do better by interrogating what a theory of vision ought to accomplish than registering ways in which Walton's theory is peculiar or does violence to some ordinary notion of seeing. For, like the empirically driven egocentric theorists as I have imagined them, Walton accepts the peculiarity that comes with an unorthodox theory, provided it pays.

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<sup>23</sup> Compare the discussion of the *ganzfeld* effect in (Schellenberg 2018, 27).

<sup>24</sup> Provided the content externalism is of the right kind. See (Burge 1982).



## V. Conclusion

Egocentrists deny Walton's claim that photographs are transparent on the grounds that photographs do not convey egocentric information. I divided this criticism into three claims—concerning space, time, and change—showing how each fails to hit the mark. Finally, I speculated about the motivations behind egocentrism and other closely related views that connect perception to the active body. Ultimately, no claim I have defended here contradicts the empirical insight that perception has a lot more to do with guiding action and orienting the body than common sense would suggest. Perception just has a lot less to do with these things than egocentrism seems to require.

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