Online ISSN 2424-6158. PROBLEMOS 2018 93
DOI: https://doi.org/10.15388/Problemos.2018.93.11761

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TRANSPARENCY, PHOTOGRAPHY, AND THE A-THEORY OF TIME

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Abstract. *Walton's thesis of transparency of photographs has spurred much dispute among critics. One of the popular objections is spatial agnosticism, an argument that concerns the inertia of egocentric spatial information* vis-à-vis *a photograph. In this paper, I argue that spatial agnosticism fails. Spatial agnostics claim, for a wrong reason, that a photographic image cannot carry egocentric spatial information. I argue that it is the disjuncture of the photographic world in which the depicted object situated from the space in which the viewer of the photograph resides that renders the photograph spatially agnostic. It is the timeless photographic world rather than the photographic object that renders egocentric spatial information inert. With this new formulation of spatial agnosticism, I propose that spatial agnosticism needs to be coupled with the temporal dimension (the A-theory of time) in the efforts to refute the thesis of transparency of photographs.*

Keywords: *spatial agnosticism, the A-theory of time, transparency of photography, philosophy of arts, spatial information*

To see something transparently is to see it *appear* as it is. Transparency in seeing gives us perceptual access to things. In ordinary seeing, we see a tree appear as a tree under appropriate lighting condition; should a tree be fogged in the mist, we see a tree appear as a misty tree. Obviously, ordinary seeing does not necessarily warrant us to see the true appearance of the perceived object. Our seeing is always subject to lighting conditions, environmental variables, and physical laws. Imagine a rod placed inside a cup that is filled with water. We see the rod appear bent in the water. Although we know that the perceived crooked shape of the rod is an illusion, it is still a genuine and transparent seeing *per se*. Our ordinary seeing is determined by the visual properties and the egocentric spatial properties of our perceived object. The visual properties of the perceived object carry visual information (v-information); the egocentric spatial properties of the perceived object carry egocentric spatial information (e-information)[1]. Both v-information and e-information are

[1] See Cohen and Meskin (2004) and Meskin and Cohen (2008). I use their terminology, but my formulation of e-information is not exactly the same as theirs.

fallible. The v-information in the example of bent rod is fallible as it is clear that the bent rod under water *appears* to be bent, but actually it is not. As for the fallibility of e-information, it is conceivable that the actual distance of a befogged tree from the perceiver cannot be judged accurately. Despite the fact that the object in ordinary seeing *appears* as it is and is subject to fallibility (e.g., due to illusion, poor lighting, etc.), we have no qualm that our ordinary seeing is transparent – we see things directly, as they appear to be.

Seeing with the aid of optical instruments (eyeglasses, telescopes, mirrors, etc) is always recognized as an extension of our ordinary seeing. This implies that the transparency of our ordinary seeing is extended to the seeing with the aid of optical instruments. We see objects directly as they appear to be, via eyeglasses, telescopes and mirrors. No sensible person is likely to deny the transparency of such seeing.

However, not all seeing via optical means is undisputable. Problems arise when one is seeing through a photograph. Do we really directly see the photographed object as it is? Do we *really* see our deceased ancestors via photographs? The proponents of the thesis of transparency of photographs, Walton being one of the most notable among them, answer in the positive. We see, literally and directly, our deceased ancestors via photographs in a way that we see any object via optical instruments. To say that we literally see the photographed things is to admit of the causal mechanism of the photographic process. A photograph depicts faithfully the objects in front of the lens. It implies that the photographed object and the object itself are indistinguishable – they are identical things despite being represented via different means. It is in this sense that most of us agree that photographs do not lie. .

However, I claim that the seemingly evidential power of photographs does not confer photographs the status of transparency as possessed by the ordinary seeing and seeing with the aid of optical instruments, such as mirrors. Though a photograph shares v-information with ordinary seeing and seeing with the aid of instruments, it does not carry e-information as the latter do. In the next section, I elaborate on what this e-information is all about. I discuss Gregory Currie's, Noël Carroll's, and Jonathan Cohen and Aaron Meskin's version of e-information and spatial agnosticism, arguing that their accounts fail to refute the thesis of transparency of photographs. I propose a new formulation of the e-information theory, which incorporates a temporal dimension (the A-theory of time) in an attempt to refute the transparency thesis.

E-information

Gregory Currie defines e-information in terms of space and time, but his discussion focuses heavily on the spatial aspect of e-information while largely ignoring the temporal aspect. Noël Carroll advances an account of e-information similar to that of Currie. According to Carroll, ordinary seeing and seeing with the aid of optical instruments are transparent, while seeing via photographs is not, because we can glean spatial information from the seen object by orienting our body spatially in relation to the object in the former but not in the latter case (Carroll 1996: 61-62). In ordinary seeing, we see things perspectivally by getting the "information about the spatial and temporal

relations between the object seen and ourselves" (Currie 1991: 26). The perspectival seeing is inseparable from our ordinary seeing through which we obtain our e-information (Currie uses the term "egocentric information"). Notably, since Currie defines e-information in terms of *psychological* perspectival seeing, his account of e-information lacks the *ontological* temporal aspect of seeing that I will be stressing in this paper, he grants that seeing involves both temporal and spatial dimension. It is evident when he writes "I could not place myself in the world if I saw the world from no particular perspective. And from what perspective I see things depends on the location of my body or at least of my eyes relative to the things I see" (Currie 1991: 26). Although Currie recognizes that ordinary seeing is transparent in the sense that the perceived objects can be tracked across time, he attributes such visual tracking as a reflection in the change of one's subjective visual experience rather than in virtue of the passage of time. The ontological dimension of time was not mentioned in his explication of seeing.

In Currie's account, similarity in discriminatory error is a benchmark for the extent of similarity between ordinary seeing and seeing through photographs. If photograph viewing has a profile of discriminatory error similar to that of ordinary seeing, we may safely conclude that photograph viewing is as transparent as ordinary seeing. In ordinary seeing, one is prone to err on the spatial and temporal relation of one's body to the perceived objects (Currie 1991: 27). Nonetheless, a photograph does not convey e-information, as it does not provide us with perspectival seeing in relation to the depicted objects. By looking at a photograph, one will not be mistaken about the distance of the depicted object in relation to oneself, because there is no such spatial information. Nor is the photograph fallible in its temporal aspect because one cannot track the temporal change in a photographed object as one does in tracking the temporal change in the object perceived via the ordinary seeing. The discriminatory errors which are characteristic of ordinary seeing are apparently absent in the case of photographs. Hence, Currie concludes that seeing an object in a photograph is not as transparent as seeing an object face-to-face[2]. For Currie, there is no similarity in terms of discriminatory error between ordinary seeing and seeing photographs – "there are no grounds here for saying that perception of a photograph is perception of the object photographed" (Currie 1991: 27).

The non-transparent nature of photographs is evidenced by the fact that the perceiver does not have a perspectival relation to the depictum. According to Currie (1991), lack of a perspectival relation is due in large part to the fact that photographs do not convey e-information. For Currie, perspectival relations to the depictum are vital in corroborating transparent seeing. In ordinary seeing, one can always orient her body spatially to what she sees. But in seeing photographs, one cannot so orient her body to the depictum because "it is dis-

[2] Currie (1999) adopts a different strategy in resisting the transparency thesis of photography. He holds that the intensity of our emotional reaction towards a disturbing photograph is weaker than witnessing the same disturbing scenario directly (Currie 1999: 289). This implies that photographic viewing is not as transparent as direct ordinary seeing. He develops a notion of "visible traces" that accounts for the emotional effect and epistemic access that bear upon the viewer of a photograph.

connected, phenomenologically speaking, from the space that [she lives] in" (Carroll 1996: 62).

Cohen and Meskin adopt Dretske's information theory in their construal of e-information. In so doing, they drop the temporal dimension (which is espoused implicitly by Currie) of e-information[3]. They understand information-carrying "as a kind of (objective) probabilistic, counterfactual-supporting connection between independent variables" (Cohen and Meskin 2004: 200). Cohen and Meskin claim that though photographs carry v-information, they fail to carry e-information, because the counterfactual-supporting connection is not established between the viewer of a photograph and its depictum.

Cohen and Meskin's construal of e-information, in which the temporal dimension is discarded, is a regression from Currie's construal. To acquire reliable e-information about a perceived object, one needs to know both the spatial and temporal relation she bears to that object. I refer to such knowledge in a weak sense, as one does not need to know precisely where and when she is located in relation to the object. She does not need to acquire a precise spatial-temporal information to the extent of geographical coordinates and exact clock time in order to have reliable e-information about a perceived object. She needs only to be *aware* of her spatial-temporal location in order to be aware of her seeing of the object. As a perceiver, she must acquire general spatial information of the object (e.g., above, below, left, right, etc.) relative to her position at the *present* moment. By discarding the temporal dimension, as Cohen and Meskin do, one will lose her identity because she would no longer be a persisting entity in time. As such, egocentric information cannot be established in the absence of identity of the agent.

As an advocate of the thesis of transparency of photographs, Walton does not deny that e-information is one of the important functions of vision. What he has rejected is the claim that e-information is necessary in seeing. He interprets e-information as spatial information in the *proximity* of the viewer[4] (Walton 2008: 129). He then argues that spatial proximity is not a limit to seeing, because the advancement in technology allows us to see remote objects. Walton argues that the loss of e-information does not prohibit one from seeing.

> Consider an array of mirrors relaying the reflection of a carnation to a perceiver. Suppose that it is not evident to the perceiver how many mirrors are involved or how they are positioned, so he has no idea what direction the carnation is from him or how far away it is. Does he see the carnation through the mirrors? Surely he does (Walton 2008: 129).

The focal point of the contention between Walton and the e-informationists is their different understanding of "seeing". For Walton, seeing is to be interpreted literally, without the need of taking the spatial-temporal relation into consideration. When a viewer is shown a photograph of an object that is spatially (or temporally) disconnected relative to her spatial-temporal location, she literally sees the depictum. Nevertheless, for the

[3] See Note 13 in Cohen and Meskin (2004).

[4] Currie and Carroll do not stipulate that e-information is only available in the proximate location. What is the key to their notion of e-information is the spatial perspective provided by the perceived object. Recently, Walden (2012) also interprets e-information as spatial information that requires physical proximity.

e-informationists, seeing not only involves the causal dependency of the medium and the depictum, which is granted by Walton, it also requires the spatial-temporal continuity between the perceived object and the perceiver. However, the e-informationists do not interpret spatial-temporal continuity in the ontological sense but in a cognitive one – the ability of the perceiver to acquire the updated spatial information when she orients her body towards the object. For the e-informationists, transparent seeing requires the spatial-temporal information of the perceived object to change correspondingly to the change of one's bodily orientation. As the photographed object is static, the change of one's bodily orientation does not enable her to grasp the updated spatial information of the object relative to her location. If I hold a photograph of the Eiffel Tower and move my body relative to the photograph, I will not obtain the correspondingly updated spatial information of the Eiffel Tower relative to my location. It is in this sense the e-informationists argue that the photographed object is disconnected spatially from the viewer's location, therefore there is no transparent seeing in photographed objects. Transparency thesis is thus rejected.

Let's grant that Walton is right in saying that we literally see objects such as our relative in a photograph. This cannot explain why we feel so much emotional difference between the ordinary seeing of our relative in person and the photographic viewing of our relative. By looking at the photograph, we do not have as strong a feeling as compared to our seeing of our relative face-to-face (i.e., transparently). What we feel is that we are seeing our relative indirectly through the surface of the photograph in a semi-transparent way. It is semi-transparent because of the incongruity of the photographic world with our actual world, the world *now* – we do not have temporal-perspectival relation with the object in a photograph (more on this point below).

The e-informationists do not state explicitly that spatial-temporal continuity is required to ensure the truthfulness of a photograph. Though photographs are always taken as evidence (e.g., evidence of a criminal act captured by the CCTV), their truthfulness is not always warranted by the depictum. The causal mechanism of the photographic process does not always produce a depictum faithfully identical to its original object. Differences in color, brightness, and perceptive texture are common. The causal mechanism of photography might "map green in the scene onto magnenta in the image" (Walden 2008: 107). In addition, judgment of the external features (e.g., size) and the triggered emotion could be significantly different between a photographed object and the face-to-face encounter, notwithstanding the causal exactness of the photographic process due to the advancement of technology. The causal mechanistic nature of photography is therefore not necessarily leading to the transparency of photographs. However, putting in a more cautious way, I do recognize that photographs could be semi-transparent: on the one hand, its transparency lies in its causal mechanism of the photographic process; on the other hand, its opacity lies in its non-identical duplication of the depictum from the original object, in the photographer's intentional manipulations, and, most importantly, in the temporal discontinuity of the photographic world from the actual world.

Digital photographs are subject to intentional editing. Photographs in the pre-digital era can also be manipulated to be deceiving, via the choice of angle, retouching, piercing negatives together in the darkroom, or scratching polaroids during the process of development. Unlike what has been claimed by Walton, photography *could* be an intentional artistic process. Photographs do exhibit stylistic properties of their makers. Photographers regularly exercise control over the appearance of the photograph's surface, photographic formal properties, the recorded moments, and the image selection (Lopes 2003: 437). The reason why a photograph is susceptible to editing or manipulation is that there is a spatial-temporal discontinuity between the actual world in which an object resides and the photographic world in which the depicted object resides. Photographic editing aside, it is widely agreed that photographs always lead to false beliefs (despite many true ones) (Walden 2008), a fact which goes against the transparency thesis. If photographs are transparent, an explanation is needed to account for the generation of false beliefs by some photographs. In the next section, I shall discuss the role of spatial-temporal continuity in ordinary seeing before I proceed to discuss its role in the case of photography.

Spatial-temporal Continuity in Ordinary and Photographic Seeing

A cat jumps onto my table right in front of me. I see it literally, and transparently, both in Walton's sense and in the e-informationists' sense of seeing. I see the cat's jumping in Walton's sense of seeing, because the light reflected from the cat's jumping is projected on my retina, thus forming the causal image of the cat's jumping. I see the cat's jumping in the e-informationists' sense of seeing, because I perceive the cat's jumping from my spatial-temporal perspective – the cat's jumping happens at my spatial-temporal location, that is, the cat and I are in the same spatial-temporal zone. I literally see the cat's jumping because there is a spatial-temporal continuum that connects my spatial-temporal location with that of the cat.

Imagine now that the cat is located at a remote place and I see its jumping via a telescope. From the egocentric viewpoint of the e-informationists, there is a spatial-temporal perspective of me viewing the cat's jumping via a telescope, because were I to re-orient my body position relative to the cat, the orientation of the cat's jumping viewed from the telescope will be changed accordingly. However, e-informationists' egocentric view of spatial-temporal perspective of seeing cannot explain what makes possible the transparent seeing in the first place. Their theory fails to account for the fact that it is the ontology of spatial-temporal continuum that *grounds* transparent seeing (i.e., providing e-information of the object), rather than the psychological egocentric spatial-temporal perspective that explains the seeing. Egocentric account of seeing is crippled when e-information is lost (e.g., as in Walton's mirror example quoted above), yet the agent's seeing is genuine (e.g., the agent still sees carnation in an array of mirrors that distorts her spatial-temporal perspective). Walton's argument persuasively shows that e-information, interpreted in terms of egocentric spatial-temporal perspective, is dispensable for an agent to

see an object. Because of the interference from an array of mirrors that surrounds the viewer, she loses her egocentric spatial perspective relative to the carnation. However, the viewer definitely still sees the carnation sans egocentric spatial perspective.

I argue that it is not the psychological aspect of egocentric spatial-temporal perspective that grounds seeing, pace the e-informationists. I do not claim that the egocentric perspective has no role to play in seeing, but my point is that what *grounds* genuine seeing is the *ontological* properties of spatial-temporal continuum, rather than the e-informationist psychological egocentric perspective. The e-informationist account is susceptible not only to the scenario where the egocentric spatial perspective is prone to being lost, as Walton's mirror example shows; it is also vulnerable to many other psychological distortions such as hallucinations and illusions where one cannot grasp her *apt* egocentric spatial-temporal perspective.

From the ontological perspective, a photograph consists of a photographic world. When we look at our deceased relative in a photograph, we see a photographed person along with the background scene in which the person resided. Our deceased relative might be photographed, say, standing beside a car. The photographed person, a car, space, and time constitute a photographic (small version of) world. This is a world confined within the square boundary of the photograph, and nothing beyond it is a part of this photographic world. Obviously, this is not a fictional world. But it is *no more* a real world, a world in which we experience dynamic events, when it is captured in a photograph. A photograph isolates and captures a small portion of the real world, disconnecting the space-time of the photographic world from that of the real world. The photographic world is not a real world because it is no longer a part of our daily dynamic world, the actual world that exists *now*. However, the proponents of the transparency thesis may ask: if the photographic world is a small portion of the actual world, and it is not fictional, why can't we admit that we literally see through a photograph despite its not being a real world? Before I elaborate on my point, let's turn to an example of the apparent spatial-temporal discontinuity – star gazing, for a better comparison.

When we gaze at the distant stars in the sky, we see not the current state of the stars, but their remote past due to an enormous distance. Millions of light years that separate the stars from the earth explain the delay of light conveyed from the stars to us. The light projected from the distant stars to our retina produces an image of the stars that existed millions years ago. We see the stars (transparentists and the e-informationists concur with this), but we are not seeing the current state of the stars due to enormous distance. Analogously, transparentists grant that we see our ancestor in the photograph – seeing through into the past. Both cases involve spatial-temporal discontinuity – the space-time in which we are residing *now* is discontinued from the space-time in which the spatially remote stars and our temporally remote ancestor reside. The space-time is discontinued because we cannot travel freely between these distinct space-time regions. In fact, we do not see the distant stars in the sky and our deceased ancestor in the photograph in a transparent way. When we are gazing at the stars, what we see is the past of the stars, not the current state of

the stars happening simultaneously with our current state on the earth. It is conceivable that the star at which we are looking *now*, unbeknown to us, has been exploded. If star gazing is literally transparent, we shall not see an intact star after its explosion. We seem to see the stars but we do not see the stars transparently, because the reality of the stars is disconnected from ours – we are unable to travel freely from our planet to the remote stars to check on their current state. The same holds for our photographed ancestor. What we see is a small portion, fixed, photographic world which was shot with the intention of the photographer (the well-chosen angle, focusing technique, etc.) to exclude the larger reality which is beyond the frame of the photograph. We seem to see our deceased ancestor in the photograph but we do not see her transparently.

So, what is obvious is that the reality in which we are residing *now* is discontinued from the reality of the distant stars and the photographic reality in which our deceased ancestor resides. Though we may reorient ourselves relative to the stars, we still do not see (pace the e-informationist) the stars incongruous with our current states of reality on the earth. If the star at which we are gazing explodes right now, we will not see the explosion due to the delay of the light that travels from a great distance to reach our retina. Only our future generations will observe the star explosion, which is a past event of the star relative to their state of reality when their observation takes place. Similarly, the photographic world is incongruous with our own world in which we are residing now. The two worlds belong to the different realities of space-time – we have no access to their space-time. Looking at the photograph, we only see the past moment captured by the camera, and nothing more beyond that momentary temporal point. The causal mechanistic photographic process by itself should have conferred us transparent seeing when we look at the photograph; but the spatial-temporal incongruity between our world and the photographic world, along with the intention-mediated skill of the photographer, renders the photograph opaque.

A photographic World Is no More a Real World

Photographed objects are semi-transparent, pace Walton. The causal mechanism of photography warrants that what we perceive in a photograph is our deceased ancestor. Yet, the photograph is semi-transparent because of the incongruity of the photographic world with our actual world, the world in *now*, at *here*. What the e-informationists have argued for at length is the egocentric spatial information. What is lacking in their account is the ontological role played by time that contributes to the incongruity of the photographic world with the world in which we are residing.

There are two camps of the theory of time, viz., the A-theory and the B-theory. The A-theory commits to the commonsense view of time in general: time passes objectively from the future, to the present, and finally into the past (Bigelow 1996; Keller 2004; Tallant 2009). The experience of temporal flow is the essential characteristic of the A-theory of time (Baron 2017). Futurity, presentness, and pastness cannot be equally real. According to the presentism, which is a version of the A-theory of time, only the present is real and should be privileged metaphysically (Bigelow 1996; Crisp

2007; Pezet 2017). Only present objects exist – past and future objects simply lack the property of being present (Markosian 2004). The growing-block view of time, which is another type of the A-theory of time, grants the flow of time such that both the present and past objects are real but the future objects are not (Briggs and Forbes 2012; Correia and Rosenkranz 2013). Because of its admission of the existence of the past objects, the proponents of the growing-block view have difficulty in explaining the difference between the past and the present (Braddon-Mitchell 2004, 2013; Forbes 2016), leading to the famous claim by Braddon-Mitchell that "the current time is probably not the present" (Braddon-Mitchell 2004: 199). The B-theory of time, on the other hand, does not recognize the view of temporal passage held by the A-theorists. The B-theorist holds that time is relational and static (Dainton 2011; Oaklander 1991; Prosser 2013; Sider 2001; Torre 2009). The B-theory of time entails eternalism – everything exists eternally (Mellor 1998; Sider 2001). Two temporal points stand to each other in the relation of *earlier than*, *simultaneous with*, or *later than*. The B-theorists maintain that our daily experience of time does not favor the A-theory (Prosser 2007, 2013). Indeed, in virtue of the fact that the flow of time has no role in determining the physical state of the objects, it follows that the flow of time could have no role in determining the nature of our daily experience, therefore it is sensible to conclude that "the nature of temporal experience provides no reason to posit a real flow of time" (Prosser 2000: 495). Because Walton and the e-informationists treat photographic seeing in the ordinary sense (i.e., they admit the flow of time), I am going to argue for the role of the A-theory of time in photographic seeing.

Let me first elaborate on a case of ordinary seeing in the light of the A-theory of time, in comparison to photographic seeing. In the aforementioned example of a cat's jumping onto my table right in front of me, the cat and I are situated at the same place and same time. I literally see the cat's jumping onto my table, because the space to which the cat and the table belong also belongs to me. It is within my reach to walk to the spot where the cat's jumping occurs, if I am doubtful about the continuum of my space and the cat's space. The space continuum therefore provides the first condition for transparent seeing to take place. The space continuum is an ontological precondition for the e-informationist's egocentric spatial relation to be established. In addition to space continuum, time continuum provides the second condition for transparent seeing to take place. Should the cat and I be located at the same spatial area but at different times, say, the cat's jumping occurred yesterday while I wasn't present (but present at the same place today), I would have not seen the cat's jumping. The cat's jumping (e_1) occurred yesterday, which is a past event when I am present (e_2) at the same place today. I cannot see the past event with my naked eyes because of the temporal incongruity of the two events e_1 and e_2, which occur at different times. As the A-theory of time, which is a commonsense view of time implicitly assumed in Walton's and the e-informationists' view of seeing, claims that time is objective and the temporal determinants (futurity, presentness, pastness) cannot be equally real, e_1 and e_2 therefore cannot be equally real. As such, it is more intuitive to claim that

e_2, which is my presence today at the spot of the cat's jumping, is my current state of reality rather than to claim that e_1, which is the cat's jumping occurred yesterday, is real. Since e_2 is real but e_1 is not, there is a discontinuity between yesterday's reality and today's reality. This implies that if I had not seen the cat's jumping yesterday, I will not see the cat's jumping today, because the cat's jumping is a past event. This conclusion based on the A-theory of time is intuitive and commonsensical. I see no reason for Walton to object.

Suppose that my friend had shot a cat's jumping yesterday and he shows me the photograph today. Is it a case of *transparent* seeing when I see a cat's jumping through a photograph? No. I did not see the cat's jumping *transparently*, because I was not present at the place where the cat's jumping occurred yesterday. If I was present yesterday at the place where the cat's jumping occurred, I would have seen not only the cat's jumping, I would also have seen and felt the surrounding and the aura of the cat's jumping: I would have noticed the chair beside the table, the window was opened, the floor was dirty, and a lot more things at the vicinity of the cat's jumping – I saw, experienced, and felt the *reality* in which the cat and I were situated, and the cat's jumping was just among one of the many events and things that I witnessed in that reality. That reality consists of a cat, a table, cat's jumping onto the table, the window, the floor, the aura of the surrounding, and a lot more things and *dynamic* events – all of which make my experience of the cat's jumping genuine and transparent to me. Those things and dynamic events happened in the space and time that cannot be recorded completely into a photograph. In a photograph of a cat's jumping, I see a smaller photographic world that consists of the cat's jumping, mediated by the photographer's intention and skills. Would the photographer have taken the photograph from a different angle, or with different contrast setting, I would see a different photographic world based on the photographer's will. I always see the cat's jumping from one fixed perspective, which is different from my ordinary seeing where I see the cat's jumping from many different perspectives due to the flow of time: I see the cat's trajectory of movement, I see the table's shaking once the cat was landing on it, I see the cat's jumping against the larger background reality which is beyond the view in a photograph, and so forth. These various live perspectives are made possible by time, for they all constitutes dynamic events $e_1 \ldots e_n$ in time. In the ordinary seeing of the cat's jumping, we see and feel the totality of events $e_1 \ldots e_n$ that occur at the time of seeing; in the photographic seeing of the cat's jumping, we see e_1, which is only a part of the totality of events $e_1 \ldots e_n$ that occurred in time. A photographic seeing is not transparent seeing, for one cannot see the *complete context* made possible by the spatial and temporal dimensions in which the object was photographed. Seeing through a photograph is at best semi-transparent.

Time has duration in ordinary seeing; nonetheless, time has no duration in the photograph. In ordinary seeing, we see objects or events occur in a continuous manner along various temporal points, $T_1 \ldots T_n$. According to the A-theory of time, which is also the commonsensical view of time, time passes dynamically. An object or event changes in time in such a way that

from the future it comes into the present, and recedes into the past. Our experience of the dynamic time confers on us a feeling of being real with the surrounding objects and events. It is in the dynamic time that we are intuitively sure that we see the objects around us transparently.

Time's passage suits well with the daily experience of the real world but jars with the photographic world. Again, take the cat's jumping as an example. The event of a cat's jumping, e_1, undergoes all three temporal stages: e_1 is a future event before the occurrence of the cat's jumping; e_1 is a present event when the cat is jumping onto the table; e_1 is a past event when the cat's jumping is over. If I am present in the vicinity and witness the whole process of e_1, I will experience a temporal continuum and I am able to testify that the cat's jumping is real – for I witness e_1 transparently from its future temporal stage to its present temporal stage, and to its past temporal stage. Not only do I see e_1, I see other accompanying events in the temporal context – from the future to the past – that constitute the transparent reality for me. I see and feel the totality of the events $e_1 \ldots e_n$ that occur, from the future of e_1, to the present of e_1, to the past of e_1. With a complete knowledge of the totality of the events accompanying the cat's jumping, I grasp the cat's jumping transparently: I know that my seeing of the cat's jumping is not an illusion because I hear the sound of the table wobbling; I see the window left open and I judge that it is the place from which the cat came into the room; I see the antique ceiling fan moving, therefore I am sure that the cat's jumping occurs in my room; and the list of events goes on. If I were just shown the photograph of a cat's jumping, my testimony of e_1 is without a temporal ground. My perception of a cat's jumping is partial, as I see e_1 only at a fixed temporal point, which is a past event relative to the time at which my viewing of the photograph takes place. I do not perceive the totality of the events that accompanies e_1. My seeing of e_1 is constrained by the fixed moment and by the photographer's skills and intention. I might not even be sure if the cat is jumping onto or falling down from the table, because the event is captured in a static and momentary way. My seeing of the cat's jumping through the photograph is not fully transparent. It is semi-transparent at best.

Objections and Replies

In this penultimate section I anticipate three objections to my A-theory of time account of photographic seeing.

Critics may object that one is not required to see a whole range of events $e_1 \ldots e_n$ in dynamic time in order to see something in a photograph. In a photograph of a cat's jumping, the argument goes, we see the event of a cat's jumping e_1, which is sufficient for e_1 to constitute a case of seeing a cat's jumping. Other accompanying events that occurred in the time beyond the photographic world are dispensable for one to see the cat's jumping. The critics may as well affirm that any sensible person would confirm that they see a cat's jumping through a photograph, despite other events accompanying e_1 are not seen in the photograph.

I do not deny that seeing through a photograph is a seeing. My argument is that it is not a transparent seeing, but a semi-transparent one at best. Arguing for photographic transparency implies that one sees *everything* in a photograph without

any obstacles to seeing. The viewer gains full knowledge about the object seen if her seeing is transparent. Shall there be any obstacle to such full knowledge, we shall not insist that it is a transparent seeing. Imagine that a photographer intentionally shot a cat's jumping with some low contrast effect that leads to the cat's tail appearing blurry in the photograph. By looking at the photograph, I have no idea about the genuine colour and the length of the cat's tail, for such information is absent in the photograph although I see the cat and its tail. Apparently, though I see a cat through the photograph, I do not see it transparently. The cat in the photograph does not look the same as it actually is in reality. I have no way to check the colour and the length of the cat's tail, a case which is possible in the ordinary seeing, by taking a second glance at the photograph – for the photographic world is momentary, discrete, and discontinuous from the actual world in which I am residing. Besides, the information about the spatial orientation of the photographed object is missing because there is no continuity of time in a photographic world. It could be the case that the cat was not jumping up but falling down from the table at the moment when the photograph was shot. Without experiencing the dynamic temporal duration of the cat's jumping, I cannot conclusively say that I see a cat jumping onto the table or falling from the table. My seeing of a cat is therefore not transparent because I do not have full knowledge of what is happening in the photographic world, given the fact that I do not experience the flow of time in a photographic world. Transparent seeing must be temporally contextual seeing where the flow of time is experienced, but in the case of photographic seeing there is no temporal context within which seeing occurs. Seeing without temporal context in the photography is not transparent seeing, for the whole of the events that occur alongside the object photographed is discontinued from the reality of the photographic world. Seeing through a photograph is therefore semi-transparent at best.

The second anticipated objection to my account is to dismiss the role of time in photographic seeing[5]. Critics may argue with an analogy that ordinary seeing does not require us to be aware of time. I see a cat in front of me, without the need to know what time it is when I see the cat. Similarly, I do not need to be aware of the time during which I see a cat through a photograph. I formulate this position as follows:

> To see e_1 in a photograph transparently, we only need to see e_1 without the need to be aware of the time at which such seeing occurs.

To see something as something requires cognitive process which is spanning across time. A vegetative patient, who has awakened from a coma without being conscious of himself and his surroundings, can open his eyes without genuine seeing and lack other cognitive functions. It is also conceivable that an absent-minded person is not seeing although he appears to see. Despite the fact that the light reflected from the object is projected onto their retina, a veg-

[5] In neuroscience, it is argued that temporal continuity plays a critical role in enhancing the binding of disparate component images (presented at different retinal locations) into the same image representation at the neuronal level (Wallis & Bülthoff 2001; Kourtzi & Connor 2011). Further evidence of the relation between time and consciousness is elaborated by Chris Nunn using the physical concept of broken symmetry, according to which the consciousness is rooted in temporality (Nunn 2016).

etative patient and an absent-minded person are not aware of the object that they appear to see. They "see", in the causal mechanical sense argued by Walton, but they perceive nothing, because their seeing is opaque. Seeing requires active awareness of the object and its surrounding, a state of mind which is made possible by the dynamic time. One needs to be conscious about the flow of time in order to see transparently. A vegetative and an absent-minded are not aware of what they see despite they are seeing (in Walton's mechanical sense), because they do not have temporal consciousness. To be conscious of time is to be able to situate oneself in the reality, in the presentness of one's current activity and states of mind. One does not need to be aware of the precise clock time. Rather, his temporal awareness is a state of mind which is his consciousness about the flow of time. His consciousness extends over a period of temporal points, taking those continuous temporal points as the reality in which he is situated. He is aware of the futurity, presentness, and pastness of the perceived object and its surroundings. He is conscious about the coordination of his body and mind with the surrounding objects and events. He is aware of how objects relate to each other in time, seeing and distinguishing various surrounding objects from the object seen. If he has no full awareness of the surrounding objects and events that are standing in a temporal relation to one another, he may not be sure if he is in the dream or in reality. Similarly, without being aware of the temporal duration (i.e., experiencing the flow of time) within which various objects and events accompany the depictum in a photograph, one may not know if what he sees is really what is actually the case. His seeing of an object in a photograph is semi-transparent, because there is no temporal duration in his photographic seeing[6].

Lastly, in the third anticipated objection to my account, the critics may point out that the dynamic time has no role to play in photographic seeing because the object would not change in a photograph. Unlike the moving images, time is frozen in the photographic world. It seems that the dynamic time does not ground the static photographic world. The critics may further contend that the causal connection between the depicted object in a photograph and the object itself is permanent. They may argue that the passage of time in the actual world will not change, and thus does not act on, this permanent status of the causal connection in the photographic world. The photographed object is always causally connected to (and is identified with) the object in reality, even when the object in reality has ceased to exist. When our ancestor ceases to exist, we can still see her existence permanently in the photograph despite the passage of time in our reality. Time in the photographic world, the critics may argue, is static rather than dynamic. It seems that if time does play a role in transparent seeing, it is the B-theory of time (which is a static account of time) rather than the A-theory that establishes and maintains the causal connection between the actual world and the photographic world.

To reply to this line of objection, it is important to note that, to my best knowledge,

[6] Cognitive scientists claim that the temporal dimension plays a role in image viewing (see Clarke and Tyler 2015: 685). The relation of the temporal dynamics and the processing of conceptual information, including image viewing, is a scientific issue which is at its budding stage of investigation (Clarke and Tyler 2015).

the existing literature on the transparency thesis of photography assumes a commonsensical notion of time, viz., the dynamic time or the A-theory of time. The advocates of the transparency thesis can hardly embrace the B-theory of time because the B-theorist cannot defend the experience of time in a satisfactory way. Admitting only *earlier than*, *simultaneous with*, and *later than* temporal relations, the B-theory does not accommodate for temporal passage. If there is no passage of time, there is no duration in time. How would an advocate of the transparency thesis account for the experience of the triggered emotion, which has a dimension of duration, during photographic viewing if time is static? It will be incoherent in their account of time if they hold that time is dynamic in the daily world, while static in the photograph. However, if the critics adhere to the B-theory of time for both the daily world and the photographic world, they could not explain the triggered emotion of photographic viewing which has a temporal duration.

Besides, the B-theory of time assumes that there is no objective time. Time is a subjective notion, relative to one's frame of reference. There is no objective "now", "past", and "future". There is no absolute temporal relation that links up two events in time. One cannot meaningfully speak of the time in the actual world and in the photographic world as the same contiguous time. Worst still, there are infinitely many different frames of time even in the actual world. One cannot objectively define an *absolute* temporal relation between his actual world within which he is viewing a photograph of his deceased ancestor and the photographic world within which his deceased ancestor resides. There is no absolute temporal relation that links up two worlds according to the B-theory of time. There is no transparent seeing if there is no absolute temporal relation between the actual world and the photographic world, for the times in these two worlds are non-contiguous – again, we are back to the similar problem faced by the advocates of the transparency thesis who embrace a dynamic notion of time. Regardless of whether one is to advocate the A-theory or the B-theory of time, both accounts prohibit temporal continuum spanning from the actual world to the photographic world. Because time is not contiguous between two distinct worlds, the advocates of the transparency thesis cannot claim that one can see through the photograph across time.

Conclusion

The advocates of the transparency thesis of photography do not take spatial and temporal factors as a necessary *ontological* condition for photographic seeing. They argue that the causal mechanism of photographic process warrants the transparency of photographs. Contentiously, they deny the intentional aspects of photography, which *may* have altered the visual properties of the photographed object, therefore contribute to reducing the transparency of a photograph. I argue that the e-informationist arguments fall short to decisively refute the transparency thesis because the ontological role of temporal dimension has been largely omitted in their account of photographic viewing. To see an object transparently in a photograph, in the literal sense of seeing as repeatedly emphasized by Walton, a contiguous temporal dimension is required to bridge the actual world and the

photographic world. The A-theory of time, which embraces a dynamic notion of time, explains the experience of ordinary and photographic seeing. The advocates of the transparency thesis embrace the A-theory of time implicitly, for it is the commonsensical notion of time. However, I argue that time is not contiguous from the actual world to the photographic world. Time in the actual world is passing dynamically, whereas it is fixed in the photographic world. Time in our world is discontinued from the time in the photographic world because we cannot travel freely between these two distinct worlds. The discrete time in the photographic world renders transparent seeing via photographs impossible – it is a semi-transparent seeing at best, especially when we take the intentional aspects of photography into consideration. As such, contrary to the assertions of the advocates of the transparency thesis, I contend that one sees her ancestor through a photograph but does not see him in a transparent way[7]. Photograph is not a window to the actual world; rather, it is a window to the photographic world in which we may not always see its inhabitants as they *really* were due to the nature of the discontinuity of time from the actual world to the photographic world. I contend that we need to be cautious on the claim about the transparency of photography given the discontinuity of the actual time from our actual world to the photographic time in the photographic world. Photographic viewing therefore is semi-transparent at best.

[7] Atencia-Linares (2012) argues that it is the genre rather than the representational content of photographs that confers fictional status to a photograph. Walton implicitly assumes that what we see in a photograph (as in his example of seeing our ancestor in a photograph) is a genuine, non-fictional seeing of the appearance of the photographic object. I am inclined to think that Atencia-Linares is right. Though we should not confound transparent seeing with non-fictional seeing, we should not rule out the possibility that a photograph could be fictional due to its genre.

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PERMATOMUMAS, FOTOGRAFIJA IR A LAIKO TEORIJA

Sim-Hui Tee

Santrauka. Waltono fotografijų permatomumo tezė tarp kritikų sukėlė nemenką polemiką. Vienas iš populiariausių priekaištų yra erdvinis agnosticizmas – argumentas, susijęs su egocentrinės erdvinės informacijos inertiškumu fotografijos atžvilgiu. Šiame straipsnyje teigiama, jog erdvinis agnosticizmas yra nepagrįstas. Remdamiesi klaidingu pagrindu erdvinio agnosticizmo atstovai tvirtina, jog fotografinis atvaizdas negali perteikti egocentrinės erdvinės informacijos. Aš teigiu, kad fotografiją erdviškai agnostišką padaro fotografinio pasaulio, kuriame dislokuotas vaizduojamas objektas, atsietumas nuo erdvės, kuriai priklauso fotografijos stebėtojas. Egocentrinę erdvinę informaciją inertišką daro belaikis fotografijos pasaulis, o ne fotografijos objektas. Pasitelkdamas šią naują erdvinio agnosticizmo formuluotę teigiu, jog, siekiant atmesti fotografijos permatomumo tezę, erdvinis agnosticizmas turi būti papildytas temporaline dimensija (A laiko teorija).

Pagrindiniai žodžiai: erdvinis agnosticizmas, A laiko teorija, fotografijos permatomumas, meno filosofija, erdvinė informacija

Įteikta 2017 08 19
Priimta 2018 03 05