

RETHINKING FILM MAGIC, A PRAGMATIST APPROACH¹

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Introduction

Film magic has many components. Movies have dramatic story lines. There are surprising special effects. There are celebrity actors. Time is compressed. One does not see the characters in films doing mundane things like looking for parking spaces or opening doors (unless it is relevant for the story line). All of those features (and there are many more) contribute to the heightened sense of reality when watching a film. But it is the claim of this paper that there is, in addition, a perceptual factor. This can be seen by considering the camera obscura. The camera obscura has been known since Euclid. Basically, it is a dark room with a pinhole that projects what is outside the room onto a wall. One can often find a camera obscura at science museums. A camera obscura shows nothing more dramatic than the people walking in and out of the museum. It has no plot, no stars, no camera angles, no editing, no special effects, no drama, but people line up to see its visual effect. The world looks remarkably different when seen through a camera obscura - though in ways which are somewhat difficult to articulate. The comings and goings of the museum visitors 'look like a movie'. The camera obscura is, in fact, a movie camera but without the ability to record. What one sees is trivial (museum goers entering and leaving the museum), but there is a heightened sense of reality of what one sees that makes the experience more intense than the ordinary experience of watching people entering and leaving a museum.

¹ This paper is part of a larger project that attempts to map out the structure of cinematic space, cinematic time, cinematic subjectivity, and cinematic emotions. Most of my work has been on cinematic space. I am using this seminar as an opportunity to work on this draft for an introductory theoretical chapter.

The camera obscura is an example of the difference between perceiving an event on film versus perceiving the same event in life. This contrast can be seen in a host of differences.² To start, for instance, why does breaking glass in a film not sound like breaking glass? The best way to replicate the sound of breaking glass in life is to break some glass. But that is not true in film. In fact all the sounds have to be modified *to seem real*. Or, for instance, why is acting in a play different from acting in a film? What is it about film that changes how one needs to act? Or, why is music necessary as background in film, particularly in silent films, but not in plays or, for that matter, in life? Or, why wasn't dialogue missed in silent films? Sound was introduced to save money on the music, not for the purposes of introducing dialogue. There was no demand for dialogue in the silent film era. Dialogue was simply not missed. Or how is it that the view of the film screen as seen from *every* seat in a movie theater is skewed and yet this is not noticed by the audience as a problem? And why is it that the only optically correct place to sit in a theater is in the projection booth and, yet reportedly, films lose some of their magic when seen from the only optically correct location? Why is an 'effective musical score' neither heard by the audience nor the characters in the film? Why is a purely subjective film (such as *Lady in the Lake* or *The Russian Ark*) difficult for the audience to track and seems to lose all sense of subjectivity? In other words, why do subjective films lose their subjectivity? What is the sense of reality of film characters? Reportedly, the audience can remember their features better than the people they interact with on a daily basis, including family members. Or why is it that one cannot predict how film would look from the act of filming? There is no dependable trajectory from the act of filming to what

² This appears to be the same claim made by formalists (as opposed to realists) in classical film studies. But formalists are making a normative claim. Film *should* not try to copy reality. I am not making any recommendations on how to make a film. I am making a descriptive claim. Film *can't* copy reality. But this does share with the formalists a contrast between ordinary perception and film perception, but without their obsession over the nature of art.

appears on the screen. There seems to be an ineliminable element of trial and error. For instance, it is a necessary ritual in film production to watch the dailies after a film shoot. It is not sufficient to be on the set and watch the performance to be able to know what the scene would look like on film. The same story is true in photography. For instance, in fashion photography, thousands of photographs have to be taken to find one suitable photograph. Yet fashion photographers are at the top of the field of photography, seasoned professionals, with years of experience photographing professional models. The lack of predictability of the outcome of the photographic process is another indicator that we are dealing with a kind of 'an island', an island of how things appear, within our world, or, if you wish, we are dealing with a different 'world'. This list is very far from complete.

What these contrasts reveal, among other things is that the reality *sense* of a film is not the same as the reality *sense* of the world.

Initially we can say that this contrast between ordinary perception and film perception points to two obvious claims. The first obvious claim is that film and photography (for the moment I am not going to distinguish photography from film) give the viewer a sense of heightened reality. There is a significant difference between walking to where you have read this document and watching a film of you walking. The latter is more dramatic. And no doubt this is part of the explanation for the public obsession to photograph all events, including trivial ones.

The second obvious consequence in the comparison between ordinary perception and film perception is that it raises a question about the usual approach in film studies. The standard approach in film studies is to compare film to other arts (such as theater, novels, painting, etc.). A pragmatist approach would, on the other hand, compare film to ordinary life, not to theater

or painting. Since all of the arts are non-ordinary experience though in dramatically different ways.

Perceptual constancies

We can begin with a specific problem of how film perception differs from everyday perception. This might give us some understanding of how film heightens our sense of reality. In everyday perception, we experience, what psychologists call, the "perceptual constancies". The so-called constancies come in all varieties: size, shape, color, brightness, etc. For instance, given size constancy, what we perceive does not change in size in spite of the radical changes of the size of the object on our retina. If we saw what was actually on the retina, shapes, sizes, colors, etc. would vary wildly. They vary far less than one would expect from the laws of optics. But constancy is not perfect. There are plenty of exceptions. Constancies break down (e.g. when looking from an airplane window, cars and houses don't look far away, rather they look closer, but as unreal and toy like).

More to the immediate point, constancy breaks down in photography and film. Every amateur photographer knows this. The amateur photographer takes a picture of his friend sitting on a couch and if photographed from a low angle, the photograph will show the friend's legs as disproportionately large. It certainly did not look that way to the photographer at the time of taking the picture.

The problem

Now here is the problem. The brain corrects the optical information reaching the retina in ordinary life. What appears on the retina is skewed, ever changing, etc. But we don't see that. We see a corrected version, hence the constancies. *Then why doesn't the brain do that for a photograph (or for a film)?* Your brain corrects the size of the perceived leg in life, but not in the photograph. If you stand in the same place as the camera, the

situations are *optically identical*. There is no difference in what hits the eye. In terms of film, if you stand on a train platform and watch a train approach, it is not the same perceptual experience as watching a film of the same train filmed from the *same* location. The film version will show the train approaching faster and larger. Why doesn't the brain correct for what we see in photographs and films?

The pragmatist theory

Broadly speaking, the pragmatic framework pushes perception away from consciousness and closer to action. Perception is biologically tied to action. Perception evolved as a way to avoid predators, finding prey, avoiding obstacles, seeking shelter, navigating through cluttered and dangerous environments. We obviously did not develop perception for the sake of looking at films or pictures. But nor did we develop perception for simply looking. Perception is tied to action.

Perception as a form of action was explicitly conceived by John Dewey (1896) as a kind of interaction.³ Dewey recommends that we don't treat perception as an experience or as a photograph or as an image or even as a conscious event, but as a continuous (informational) interactive loop with the world. Successful perception (i.e., perception that terminates in an action) consists of feedback loops, where there is continuous adjustments to achieve the goal. Perception is typically part of a goal directed activity. For instance, in the traditional (non-interactive) view of perception, we conceive the task of parking a car in a parking lot, as if it is a two stage operation. We see the parking space and then we drive the car to fill the space. It is as if we were taking a photograph: one aims and then we drive. But if Dewey is right that is not what we do – as we drive the car we

make continuous adjustments. We used our vision to continuously control our driving. The trajectory of the car is constantly being adjusted from the continuous visual input. The driving directs the visual task. If we were doing something akin to taking a photograph, then we should be able to park the car by looking at the parking space as if it were a photo, *closing our eyes* and then drive. All of the information should be there. But to park a car under those conditions would be very difficult.

Dewey's point is this: if perception is to guide action, it needs to be interactive. There needs to be a continuous feedback loop. So Dewey -- in effect -- is drawing a distinction between interactive perception (that which is tied to action) and non-interactive perception (where perception is not part of action). For Dewey, the difference is a matter of degree. A good example of non-interactive perception is watching a movie.

Peirce's disruption thesis

Typical perception, interactive perception, is what we do all of the time. We don't take note of it. Under normal circumstances the agent is able to retrieve sufficient information to achieve the task at hand, such as walking, keeping balance, avoiding obstacles, driving a car, etc. Typical perception can be maintained when there is sufficient information for the agent to act habitually. Typical perception is perception without awareness or without much awareness. These routine perceptual feats free consciousness to deal with more pertinent and interesting issues. So, we can think about a math problem and walk at the same time. Under this view, *being conscious of one's perception ("perceptual consciousness") is an intermittent phenomenon*. It comes and goes. One is aware of the topic of conversation, what is on one's mind, and a host of other things. We don't bother under normal conditions to be aware of what we perceive.

³ To be precise, Dewey is not talking about interaction, but about transaction. The difference matters, but not in this context.

Charles Peirce, writing in the mid-19th century and made popular by William James as the “psychologist’s fallacy”⁴, claimed that if you disrupt these normal, habitual, everyday interactions (if you break the feedback loops) you become perceptually conscious. Perceptual consciousness is a *solution* to disrupted perception. Non-interactive perception makes you perceptually conscious, aware of what you are perceiving.

Under this view, perceptual consciousness, being aware of what you perceive, has a function, a Darwinian function. When information is sufficient, there is no reason to (consciously) ‘think’. There is no reason to be aware. One just walks. One just avoids obstacles. One is aware of other things. It is typically the case in evolutionary evolved situations that the information available for the agent is sufficient: in fact, it is usually redundant, for routine tasks.

But when there is *insufficient* information (and there are many ways in which the information necessary for an action, such as walking, can be insufficient), consciousness kicks in to help solve the problem⁵. So, for instance, under normal circumstances, if driving, our consciousness might be directed to what is on the radio or to the conversation to the person in the passenger seat. But, of course, we are still perceiving. We are successfully driving. If we enter a dangerous intersection, the driver’s consciousness shifts from the conversation to the situation at hand. The driver initially was perceiving without much perceptual consciousness and her consciousness was directed to the conversation. Then as the driver enters the dangerous intersection, the driver’s consciousness shifted to what was being perceived. Consciousness for a waking person is not intermittent. But perceptual consciousness is. We simply don’t need to be aware of the pressure of the chair against our back if all is going well.

This, as pointed out, shifts perception from being a type of consciousness to being part of the action cycle. Under the pragmatist view, perception – under normal circumstances -- does not require awareness or, at least, a great degree of awareness. If this is true, then that explains the long and endless debates in philosophy and psychology over what we see. For instance, empiricism, Wundtian introspectionism and phenomenology all attempted to describe ordinary perceptual experience. None of these research programs could come to any consensus, even within their own programs, on a description of what we perceive. In fact, I would argue that these research programs – in practice – abandoned the program of describing perceptual experience. But that makes sense if one is only intermittently aware of what one perceives.

Perceptual constancies revisited

Perception is a type of exploration. If that exploration is disrupted, then we don’t get the information we need and we rely on other non-perceptual sources to compensate. If you walk into a familiar dark room and perception does not provide sufficient information to find your coat, you might use your memory to find your coat. In short, you become perceptually conscious. By making us conscious, a number of transformations occur. The relevant one here is that we lose the constancies. This is simply because one now has to notice what one sees. One does not normally do that. There were a number of Renaissance inventions (many depicted by Durer) which immobilizes the viewer so that they can notice what they perceive. And of course what one notices is that the shape, brightness, size, etc. does not remain constant. Photographs and films prevent interaction. They immobilize the viewer. They prevent perceptual exploration.

⁴ James (1890).

⁵ This leaves open the problem what it is about consciousness that can solve this problem, i.e. why one needs to be conscious.

Typical mundane perception as a kind of exploration can be seen in a range of other phenomena. For instance, when filming with a movie camera or camcorder, the filmmaker can rapidly move the camera in any which way. The rapid movement does not disturb the person filming. But if one watches that very film, it can cause nausea. This is simply the contrast between perception as interaction (where one controls what one sees) and perception as non-interaction (where one does not control what one sees). The same explanation is at work for the contrast between being a driver of a car and a passenger. The driver of a car does not get carsick, only the passengers do. Perception is interactive. It is tied to control and feedback.⁶

The difference between perceiving photographs and perceiving films

Once one acknowledges the role of interaction in typical perception, it is a small step to see that film and photography are specific and different kinds of disruptions of habitual, mundane interactive perception. They prevent in different ways the viewer from exploring. By restricting the flow of information, the agent relies on her resources to make sense of what is seen. The viewer becomes perceptually conscious.⁷

There are two different contrasts being drawn here: film vs. photographs and films vs. ordinary perception. Perhaps the most salient feature of films is that they move. They are, after all, the 'movies', the 'motion pictures', 'moving pictures', etc.

While this contrasts strongly with photographs, it does

not seem to contrast much with ordinary life. Ordinary life moves too. But we now have the concepts to make the contrast. In ordinary life, when an event occurs you can reflect on what has happened. For instance, consider engaging in an important or compelling conversation. You were engaged and you were perceptually alert. But now you leave the room. You open the door, you walk down the hall, but you are still thinking about the conversation. You are not thinking about opening the door or walking down the hall. You are still obviously perceiving. You simply shifted from perceptual consciousness (being conscious of what you are perceiving -- the conversation) to non-perceptual consciousness (thinking about the conversation while of course still perceiving).

But when watching a film, you can't do this (unless the film is boring and you are not watching it). *Watching a film is being in a state of perceptual consciousness.* While one *looks* at a photograph, one *watches* a film. When looking at a photograph, you can shift your awareness from the photograph to your thoughts about the photograph. The photograph remains. Perceptual consciousness is intermittent when looking at a photograph. Perceptual consciousness is not intermittent when watching a film. With photographs there is still some interaction, less than life but more than film. One can scan the photograph. One can concentrate on one part of the photograph. Perceptual interaction and perceptual exploration are a matter of degree. Photographs limit interaction too. They do not completely abolish it.⁸ Photographs put you in a reflective mode, but they don't prevent you from reflecting.

⁶ This points to another research avenue: comparing watching a film to playing a video game. If this analysis is right, they are not visually equivalent.

⁷ While there is little consensus on what is being perceived during normal (interactive) perception, there is considerably more consensus in the cases of non-interactive perception, such as a perceiving a photograph. This also applies to the output of machines that don't record, such as Renaissance perspective machines, camera obscura, etc. Broadly speaking, everyday perception is indeterminate. Pictorial perception is relatively speaking more determinant.

⁸ Strictly speaking, there is some interaction even when watching a film. There are some head and eye movements. But relative to photography or everyday life, it is highly restricted. Film makers attempt to restrict it even more by various techniques such as "center-of-interest editing". They keep what matters in the center of the screen. That is designed to minimize head movements. Movement of one's head introduces some, albeit minor, voluntary movement.

Watching a film is different. Film watching does not stop. Normal perceptual consciousness is intermittent. But perceptual consciousness when watching a film is not intermittent. This, I contend, opens the door to understanding many of the features of film magic.⁹ This is part of the heightening of reality of a film. You are 'pure' perceptual consciousness. In life, this is rare.¹⁰

But there is something more. One is not just perceptually conscious. One becomes perceptually conscious but without the ability to stop and reflect. We now have reached the central research recommendation of this project. *Films put you in a reflective mode but without the time and without the ability to reflect.* From a Deweyian perspective, perceptual consciousness kicks in for the consummation of an action. (We don't perceive for the purposes of perceiving. We perceive in order to act.) Perceptual consciousness has the function of providing information when there is insufficient information in the flow of information for action. But film consistently frustrates this process. In situations where information is insufficient, where our movements can't gather more, we are in a state of perceptual readiness to gather more information. *For Dewey, one's awareness is heightened when one is looking to complete an action.* Film, as such, is an evolutionary anomaly. Film continually frustrates the perceptual process. The research recommendation here is that this is transformative of perceptual experience.

⁹ There are of course films in which this does not happen. There are boring films, in which one does not pay attention. But then one is not really watching the film. One is thinking about something else. There are also films that invite reflection. Andy Warhol's *Empire* is a 7 hour film without camera movement showing the Empire State Building. From the point of view expressed here, *Empire* does not have the properties of a typical film. It is more like a photograph, so it is no surprise that the viewer drifts in and out of perceptual consciousness. The test of this claim is whether Warhol's *Empire* has the other features of a non-reflective act of reflected perception. I predict it doesn't.

¹⁰ One can, for instance, observe a dramatic event, such as a car accident. It is often said that such events appear in 'a kind of slow motion'. These events are sometimes described as 'just like a movie'.

The test of this thesis, of course, depends on its explanatory power. The question is does it help clarify the nature of cinematic space, cinematic time, cinematic emotions, cinematic subjectivity, etc.

Revisiting the world of film

This begins to give us some grip on the metaphor that there is a 'world' of film or the metaphor that film provides a different 'sense of reality'. There is an intuitive feel that when watching a film one is entering a different 'world'. Such terminology, as mentioned earlier, is ambiguous. Philosophers, in particular, tend to be dismissive of such metaphors. But I think that is mistaken if we can flesh out the ins and outs of the world of film. Film transforms how we experience. It does so by preventing the natural everyday interaction we have with events and objects. We are temporarily disabled.¹¹ It makes us a kind of tourist. It adds a clarity to life that life itself lacks.

From this point of view, we can begin to understand why the foley artist who needs to add the sound of walking in snow simply does not record the sound of walking in snow. The foley artist adds the sound, not one that a normal perceiver would hear, but one that a hyper-conscious person would hear.

From this point of view, we can begin to understand why purely subjective films (such as *Lady in the Lake*) don't work. If film puts you in a hyper conscious mode, then a subjective film gives you a very specific, very atypical subjective experience. For instance, in ordinary life, when opening a door, one does not watch one's hand reach for the doorknob. But in these films, you do. You see the hand stretch out and grab the door knob. We don't experience opening a door in that way. These films create a self-conscious subjectivity.¹²

¹¹ Another area that needs exploration is how certain disabilities, such as anosognosia, change visual perception. In many of these cases, there is no evidence that the visual cortex is damaged.

¹² I am not claiming that this is the primary explanation

From this point of view, we can begin to understand why 3-D films are different perceptually than ordinary life. In normal perception, we always see in depth. Even two-dimensional displays have some degree of depth (as demonstrated by Gestalt psychologists).¹³ So for instance, the letters on this page seem to be on the page, not in the page. Seeing in depth is the norm. But in 3-D films, we don't see in depth, we see depth itself. Seeing depth (itself) is a very conscious act.¹⁴

Film becomes its own perceptual island. There is a world of film. Film does generate a specific sense of reality. The shape of that world of film can only be uncovered by examining the range of transformations that occur in the cinematic experience.

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for the failure of these films. A deeper reason is provided by Kant: subjectivity cannot be sustained without objectivity. These issues are discussed in the chapter on Cinematic Subjectivity.

¹³ Arnheim (1954/1974).

¹⁴ Depth perception in non-3-d films gets a very different analysis.