7-2002

The Illusion of Realism in Film

Andrew Kania
Trinity University, akania@trinity.edu

Repository Citation

Kania, A. (2002). The illusion of realism in film. *British Journal of Aesthetics, 42*(3), 243-258. doi:10.1093/bjaesthetics/42.3.243

The Illusion of Realism in Film

Andrew Kania

[This is a pre-copyedited, author-produced PDF of an article accepted for publication in The British Journal of Aesthetics following peer review. The version of record (Andrew Kania, "The Illusion of Realism in Film" *British Journal of Aesthetics* 42 (2002): 243-58) is available online at: http://bjaesthetics.oxfordjournals.org/content/42/3/243.abstract?sid=31bb4bc4-514f-46ef-9efc-c7b4544506d4. Please cite only the published version.]

> The moviegoer's brain, hoodwinked by this succession of still lives, obligingly infers motion.
>
> − Nicholson Baker, "The Projector"[1]

In "Film, Reality, and Illusion,"[2] one of his many concentrated yet lucid writings on film, Gregory Currie argues, among other things, that when we watch a film we have the impression that we are seeing a 'moving picture' not because of an illusion perpetrated against our visual faculty, but because the images that we see up on the screen *really are moving*. This thesis is only one of several he puts forward in the course of the essay. It is an attack on 'weak illusionism' as the last bastion of anti-realism in philosophical film theory.[3] I agree with his other theses: that film is a perceptually realistic medium (compared with other media); that a long-shot/deep-focus style is more perceptually realistic than other styles; and that these theses are logically and causally independent of theses about transparency in film (in Walton's sense[4]), and illusionism (strong or weak).[5]

But I believe that insisting on realism about the motion of images in a film is mistaken. One of the first things one learns about film is that its initially most striking

feature – the apparent motion of its images – is an illusion. When new viewers (usually children) ask us how the pictures move, we explain the illusion (most easily with a 'flip-book' that gives the same sort of illusion, and with reference to the parallel way film projectors work. The latter will play a central role in my arguments.)

Moreover, as Currie rightly points out, our stance on weak illusionism need not affect our stances on the other types of realism claimed for film. On the other hand, we *can* use weak illusionism to explain why many theorists have wrongly asserted stronger illusionism claims.[6] For, as Currie well knows, not everyone keeps these senses of 'realism' separated. If one fudges the differences between kinds of realism, and then has an excellent argument for weak illusionism, it will seem one has an excellent argument against realism *tout court*.

Currie – along with the editors of *Post-Theory*, in which his essay appears – is concerned to establish a rigorously argued theory of film. This is in response to the rather unrigorous semiotic and psychoanalytic theory which dominated film studies up until the 1990s. Currie's contribution is putatively to show that film is a lot more realistic than those other theories have admitted, and that this observation undercuts a lot of that theory. To his credit, he tries to push this anti-illusionism as far as it will go. But he goes *too* far in claiming that weak illusionism is false – that is, that cinematic images really do move. However, because his many other claims about realism in film *do* hold up, and because he has also convincingly shown that one's stance on weak illusionism need not affect one's stance on other realism claims about film, the fact that he is wrong about weak illusionism leaves his impressive achievement all but untouched.

I

To begin, let me briefly explain the notion of 'weak illusionism'. This is simply the position that the motion we see when we watch a film is an illusion. The images we watch on screen are not really moving, on this view. That is an illusion perpetrated against our visual faculty by the twenty-four-frames-per-second projection apparatus. This is called weak illusionism in contrast to 'strong illusionism', beloved of semiotic and psychoanalytic film theorists, which is the position that when we watch films we are under some grander illusion, such as that we are dreaming, or that we are *really seeing* the action unfold before us, not just representations of that action in a fictional world.[7]

What are Currie's arguments for his claim that weak illusionism is false – that film images really move? He explicitly discusses only one, and rejects it fairly swiftly. He points out that one could adopt a 'kinder, gentler realism'[8] à la Dennett, wherein the usefulness of moving-picture talk vindicates its claims to truly describe the world. Currie rejects this line of argument, wanting to maintain a more traditional distinction between usefulness and truth. But he does not consider any further positive arguments for the motion of film images. Rather, he says that the burden of proof in any case of purported illusion rests on the shoulders of the party claiming illusion. So, for instance, a Berkeleyan is always obliged to cast the first stone against a Moorean. Then he goes on to consider a battery of arguments for weak illusionism, knocking them down one by one. The conclusion that he draws, albeit defeasible, is that weak illusionism is false: film images really do move.

I believe this strategy is mistaken, and possibly a little disingenuous, for a number of reasons which I will consider in turn. In the next three sections, I will attempt to show

that Currie *cannot* dismiss all the arguments he considers for weak illusionism. Moreover, there is more to be drawn from those he can refute. I believe, further, that there are implicit positive arguments in what Currie says about perceptual illusions. In the final sections, I will try to make these arguments explicit, and show how they do not work.

Before we consider these substantive arguments, though, I would like to observe that there seems to be some equivocation about what the illusion in this case is, and thus how the burden of proof should be distributed. We may all agree that what is being claimed by the weak illusionist is that film perpetrates a continuous perceptual illusion upon the viewer. But as regards the burden of proof in illusion cases, the relevant type of illusion seems to be *cognitive* – one essentially involving a false belief. The reason we should ask a Berkeleyan idealist for arguments for her position is that we commonsensically believe in an exterior world made up of material objects. We should only be expected to come up with a defense of those beliefs under pressure of a Berkeleyan attack. Now in the cinematic case, I believe we commonsensically think there is a *perceptual* illusion. Even novice film viewers want to know how the picture manages to seem to move, and are then satisfied with the explanation of a rapid succession of still frames.[9] So, according to Currie, this commonsensical belief that film is perceptually illusory is false, since the images in film really do move. Thus we are almost all under some sort of cognitive illusion. So, I would argue that more of the burden of proof falls on the anti-illusionist's shoulders than Currie believes. Since almost everyone is quite happy to acknowledge and explain the perceptual illusion that is a motion picture, it is up

to anyone who denies this commonsensical view to prove that there is no perceptual illusion here – that, rather, we are all suffering from a cognitive illusion.

II

The first argument for weak illusionism Currie considers is that when we look at a strip of celluloid, we see images, but no movement. Currie dismisses this argument swiftly with an analogy to sound recordings. You can listen to a CD in at least two ways. The more usual is to put it into a CD-player and press 'play'. But one can of course literally listen to the disc itself. To do this you would take it out of its case and hold it close to your ear. By this method, all CDs sound the same. They are silent. But this does not lead us to conclude that when we listen to a CD in the conventional sense we are subject to an auditory illusion.

I think this refutation is successful, but I would nonetheless like to look a little more closely at the analogy to draw out some further insights. Most importantly, there is more than one way in which something (CD or film) can be illusory. Listening to a CD, no one would have reason to deny that they were hearing sounds (unless, say, they were taking part in a study about drug-induced auditory hallucinations). But we can at least imagine the case where a novice to sound-reproduction technology (say a medieval peasant, transported through time) comes under the illusion that there is a band of munchkin musicians concealed somewhere in the stereo housing.[10]

At this point it becomes more difficult to continue to draw the analogy. Certainly the conventional way to see a film is to sit in a dark theatre while it is projected, rather than to inspect the reels in a well-lit room. But once one is watching the film this way, the most one can say on analogy with the CD case is that one really does see something

(usually images) on the screen. One common way to continue the analogy is to claim that our medieval peasant would think there really were people up 'on stage' or 'behind the window' of the screen. But it seems clear now that no one would ever be subject to *that* illusion.[11]

Of course, the putative illusion we are interested in is the apparent motion of the images. But just as the illusion that there is a little band in your stereo can be quickly dispelled by taking it apart, appealing to the non-existence of munchkins, and so on, you can be disabused of the illusion of images in motion by a slowing down of the projector. As one begins to see the frames being replaced by one another, and the apparent motion disappearing and reappearing with changes in the speed of projection, one sees that (or rather *how*, since I believe almost no one *really believes* the images are really moving) the motion is illusory.[12] It is this very slow projection of a sequence of frames that I believe the look-at-the-film-strip argument is reaching towards. Currie dismisses it too quickly, and thus misses the real insights of its most charitable interpretation.

III

The next argument Currie considers is one which points out that the only reason we see motion in films is that we have a particular kind of perceptual apparatus. Creatures which had different perceptual apparatuses would not necessarily perceive films as motion pictures. Martians with much quicker 'refresh-rates' to their visual systems would perceive films as quick slide shows of very similar slides. Bats would not perceive anything relevant at all. So the motion we perceive is not real.

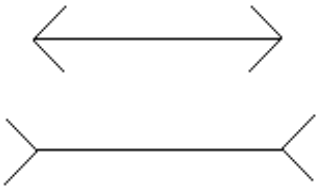
As it stands this is clearly a terrible argument. That not every creature has a faculty for perceiving a certain type of property does not mean that that kind of property

does not exist, or is less real than others. If that were true, the existence of bats would militate against the reality not just of cinematic motion but the visual in general. On the contrary, if creatures have evolved that can reliably discriminate between things using a certain faculty, one would suppose that that faculty perceives some aspect of reality.[13] Of course, perceptual faculties can also be fooled, and in those cases we have illusions or misperceptions. Unfortunately for Currie, this leaves us right where we started. We need to figure out whether our perception of motion at the movies is like our perception of a blue rectangle that is an Yves Klein canvas under normal conditions, or like our perception of a blue rectangle that is a blank canvas poorly lit. We need to know whether cinematic motion is real or illusory.

Currie might claim that he is not *exactly* where he started, for what he hopes to have convinced us of with his talk of perceptual faculties and reality is that the motion in film is a real *response-dependent* property of the film. Thus our experience of it is like our experience of the blue Klein canvas – and is similarly dependent on standard conditions of appreciation (such as a darkened room, a normal projection speed, and so on).

I believe Currie equivocates a little here. Sometimes his claim about cinematic motion is that it is the garden-variety motion possessed by such things as my bicycle as I ride to school; sometimes his claim is that cinematic motion is something else – either a different kind of motion, or something else altogether. I will investigate what this confusion may belie in section VII, but for now I will simply examine each possibility separately. I believe Currie ultimately wants to, and ultimately *must* argue that film images display garden-variety motion, and I will look at that claim in the next section.

But first I would like to look closely at the strongest argument against film images' having the special response-dependent motion Currie sometimes claims for them. This is the argument in which Currie considers the Müller-Lyer illusion.



One of the lines in the above figure looks longer than the other. If you have not seen the image before, you may believe that the bottom line is longer than the top one. If you have, you probably know that they are both the same length. However, even if you do know this, you cannot help the bottoms line's *seeming* longer. In this case you are undergoing a perceptual illusion.

Now, the danger Currie sees in the Müller-Lyer illusion is that his claim that there is a special kind of response-dependent motion that cinematic images really undergo (as opposed to an illusion of garden-variety motion) will lead to the elimination of any sort of illusion. For could we not equally say that there is a special kind of response-dependent length, which we see the lower line really has more of than the upper? If that were true, it would turn out that the Müller-Lyer illusion is not an illusion after all, but evidence for a new property: response-dependent length.

Currie wants to avoid this conclusion, but it is not clear that he can. His first response is that our experience of the Müller-Lyer figure does not involve a judgement about some weird response-dependent property, but simply one about length. The lower line seems longer – it seems to have more garden-variety length. But the obvious

response to this is that in the theatre one seems to see garden-variety motion, not some related response-dependent effect.

Currie's rejoinder to this is that in fact our intuitions diverge in the Müller-Lyer and cinematic cases. He says

> the visible appearance of the lines suggests that, were you to measure them in the conventional way, the result would be that one was measurably longer than the other. That is why this is genuinely a case of an illusion, rather than a veridical experience of a response-dependent property. With the experience of screen watching, however, it is doubtful whether the movement that our experience represents as taking place is of a kind that would be undermined by independent checks analogous to the measuring check we carry out in the case of the Muller-Lyer [*sic*] illusion.[14]

But it seems to me that almost everyone is happy to say that the film's claim to real motion is undermined by "independent checks analogous to the measuring check" – like the slowing down of the projector to the point where one perceives a succession of still images.

A supporter of Currie might voice doubts about whether the slowed-down projector really is an independent check analogous to the measuring check on the Müller-Lyer illusion.[15] One of his concerns could be that when one slows down the projector, one has changed the conditions of perception, and these might be integral to the nature of what is under investigation. Suppose we cover the arrowheads of the Müller-Lyer figure with sheets of white paper. If we then announce that since everyone now sees the lines as being the same length, we have shown that the figure is no illusion at all, no one will be too impressed with our claims. But this too is disanalogous with the heuristic of the slowed-down projector.

The point of slowing down the projector is to show people what is going on *when it is run at normal speed*, since there are aspects of the process that become invisible at that speed. The point is not that when you slow down the projector the (apparent) motion

ceases to occur, so it must be an illusion. The point is that once you have understood what is going on at the lower level of the mechanics of projection (and on the assumption that this is something different from what you *thought* was going on) you will change your mind about what to say at the higher level of perception of the normally projected film.

Hence another analogy, attractive to a Curriean as a reductio of my position, loses traction. It could be argued that if one slowed down the molecular processes which enable, or perhaps even constitute, the life of an organism, to the point where the organism ceased to be alive, one would not have shown that life is an illusion. This is true enough. But to be analogous to the slowed-down projector heuristic, the evil biochemist would have to show you something at the molecular level which you were missing when life was happening at normal speed such that you would change your tune about whether life is real, as opposed to illusory, *when everything is running normally*. It is not clear what he could hope to show you, whereas the discrete nature of cinematic projection is usually enough to convince people of (or rather explain to them) the illusion of cinematic motion.

At this point an anti-illusionist might refer to an actual case from the history of science. We used to, and as folk probably still do, have a conception of solidity as a kind of thoroughgoing homogeneity. But when our technology developed to the point where we could look very closely at tables, bars of gold, and so on, we discovered that thoroughgoing homogeneity is not in fact instantiated anywhere. But we did not then conclude that tables were not solid. Analogously, it is not clear that we should deny

motion to cinematic images just because we know that their underlying bases do not exactly move.

This is a bad analogy because in the case of solidity we examined paradigm possessors of the property. It turned out *nothing* was solid in the way we thought things were, so we had two options. We could abandon talk of solidity, claiming we were mistaken when we predicated it of tables and bars of gold. However, if we had taken this route we would have had to invent some new term for the property we thought consisted in thoroughgoing homogeneity, for it is a very useful property to talk about. The other option is the one we in fact chose. We realized that solidity played an important role in our theories, and that we were mistaken not about the *distinctness* of things we called solid from things we called liquid and gaseous, but only about the underlying basis of that distinguishing property. So we simply concluded that solidity consists in something other than the thoroughgoing homogeneity we had previously assumed.

Now the putative motion of cinematic images is under debate precisely because it seems a very different kind of thing from the motion of bicycles, balls, and so on. If it turned out that *they* moved by virtue of being stationary in twenty-four slightly different positions at twenty-four separate periods of time per second we might say that motion consists in something other than what we previously believed, and that cinematic images move paradigmatically. But that is not Currie's claim. Currie takes garden-variety motion to consist in just what we think it consists in.[16] This allows him to consider whether cinematic images move in a different way (which claim I have investigated in this section) or in the ordinary way (which I address in the next).

So, if Currie wants to claim that cinematic motion is (an instance of) a special kind of motion, the Müller-Lyer objection is a strong one. The introduction of this new kind of motion takes the normal film experience out of the realm of the illusory, where everyone seems to agree it belongs, and into the realm of the real. But the price one must pay for this is the certification of many other things as real which are currently considered illusory. And this starts to look very much like the more liberal attitude towards reality which Currie was at pains to avoid.

IV

Let us see, then, if film images exhibit garden-variety motion. Currie quickly passes over an important point about garden-variety motion relevant to the putative motion of film images, but again he seems to get it wrong. The point is that during a period of normal motion, an object passes through every point on some path between any two locations occupied by it. More particularly, an object does not normally move by its being in one place at one point in time, and then being in another non-contiguous place at another non-contiguous point in time without having passed through all the intervening contiguous places, while existing at every contiguous moment in the intervening time. Currie nods towards this when he says

> we see that [an image] is in one place on the screen, and we later see that it is in another; indeed, we see – really see – that image move from one place to another on the screen.…It is an image sustained by the continuous impact of light on the surface of the screen.[17]

But here, surely, Currie has made a simple factual error. There is *not* continuous light upon the screen when a film is shown. There are twenty-four impacts of light on the screen every second, each one separated from its predecessor and successor by a short period of darkness.[18]

Now, like many metaphysicians, I would be rather reluctant to admit items into my ontology which went in and out of existence, even if, like Currie's images, they normally did so so fast I would not notice them. But even if one did allow them into one's ontology, one would surely not immediately allow that if they disappeared in one place and reappeared in another they were simply moving from the one place to the other. That would certainly be a brave new type of motion which we would hope we could say something more about (and would probably want to give its own unique name). Yet again we can see that film's frame-by-frame nature forces us to deny that its images really move, in any standard sense.

Of course, if we imagine a case where many of Currie's presuppositions actually hold, we can imagine a kind of film wherein the images really do move. Suppose we had some kind of technology such that a projector shone a beam of light *continuously* through a single cell – like a single film frame. And suppose that the constitution of the frame would change over time – perhaps it would be a kind of transparent, colored liquid crystal display controlled by a computer program. Then the images on the screen would mirror the movements within the liquid crystal cell. They would be continuously and contiguously moving.[19] In this case I would be much happier ascribing movement to images on screen.

Now, a Curriean might point out that once this technology existed, we could convert old films to the new medium, and thus, according to me, in the LCD re-release of *The Searchers* the image of John Wayne *really would* move across the screen. But to a viewer in the theatre, the experience of watching the film and that of watching the LCD re-release, we may presume, would be indistinguishable. Yet I seem to have to claim that

in the *film* the images are not moving, while in the LCD projection they *are*. However, I am happy to say this. Just as you can set up what looks like a Müller-Lyer illusion, but in which the line that looks longer *actually is* longer, you can have illusions of movement, and things you might assume to be illusions of movement but which are in fact true movements.

V

The arguments I have considered above are concerned with showing that the movement of images is real rather than illusory by investigating the property of movement. But another strand in Currie's arguments worth teasing apart is concerned with the nature of the object which is moving – the image. Again he contrasts what he claims is real motion – that of images – with illusions (the Müller-Lyer illusion and the illusory movement of a wave). I will not talk much more about the Müller-Lyer illusion, but it is worth quoting Currie on the ontological distinction he thinks makes the difference.

> I do not think that our experience of screen watching is an experience which has as its representational content: There are reidentifiable physical objects moving in front of our eyes. Rather, its content is: There are images of reidentifiable physical objects moving in front of our eyes. In this respect the experience seems not to be undercut by information from other sources, and therefore to be crucially different from that induced by the Muller-Lyer [*sic*] setup.[20]

He makes a similar distinction when contrasting wave motion with image motion.

> In the case of the wave, but not in the case of the cinematic image, there is a physical object, namely a body of water, which perception represents to us as moving outward as the wave 'spreads'. But our perception of the motion of cinematic images does not suggest that there is some particular physical object which moves when a cinematic image does.[21]

Now, it seems clear to me that Currie is correct in his claim that we in no sense perceive there to be physical objects moving up on the screen, or on the other side of its 'window'. But he is invoking a false dichotomy if his claim is that since we do not have an *illusion* of *physical* objects moving in front of us, we must have a *veridical* experience

of *images* moving in front of us. An obvious third possibility is that we have an *illusion* of *images* moving in front of us.

Take what Currie claims to be part of the content of our cinematic experience: 'There are *images* of reidentifiable physical objects moving in front of our eyes'.[22] Now out of context this is ambiguous, in that it could mean that we have *impressions* of physical objects moving in front of us, while this is precisely the content he is contrasting it with. He is, rather, claiming that it is the *images* which move, not the objects of which they are images. However, he does make it explicit that these objects are physical and reidentifiable. This might seem crucial to his argument. For motion, after all, is continuous change of spatial location over time. So it is important when identifying instances of motion that one can reidentify the object putatively moving. If you think you see a tomato in the dining room that you just left in the kitchen, you check to make sure it is the same tomato. If it is a different one, there is no motion to be explained.

But now we are clearly focusing on the wrong object again. What is under dispute is not that Jeff Bridges is moving in front of our eyes when we watch *The Big Lebowski*. That is plainly false. But neither is it disputed that we can see from watching *The Big Lebowski* that Jeff Bridges really did move as part of the creation of *The Big Lebowski*. And Jeff Bridges, in this case, is one of the reidentifiable physical objects Currie is talking about.

The *physicality* of the object the image is an image of is also a red herring, as Currie points out later in the article. He rightly wants to allow that cartoon film images move in exactly the same way photographic film images do. What we want to see, then, is not whether these putatively moving images are *of* reidentifiable physical objects, but

whether the *images themselves* are reidentifiable objects. If we can answer this question positively, *then* we can ask whether these reidentifiable objects are moving.

Currie seems to stress that we do not get the impression (nor is it true) that film images are *physical* objects. I agree with this claim, but again, I do not think it gets Currie anywhere. He says that our impression that a wave is moving outward from its source is illusory because we seem to see a reidentifiable physical object (part of a body of water) moving, but in fact there is no such physical object. Then he claims that since we do *not* have the impression of a reidentifiable physical object moving when we watch a film, that motion is not illusory. But again, he has not shown enough. He must show that the motion of the (non-physical) image is that of a single reidentifiable (non-physical) thing, and not an illusion brought about by some other means.

So let us look at the reidentifiability of film images. Imagine Paul the Projectionist showing Vince the Viewer a five-second medium-length shot from a fixed camera of a character played by John Wayne walking across the desert. Wayne is wholly within the frame throughout.

(Paul runs the film for Vince)

PAUL: So, what did you think?

VINCE: Great! I love seeing John Wayne striding manfully up there, right in front of me.

PAUL: Well, strictly speaking John Wayne himself wasn't up there in front of you, right?

VINCE: Well, no, obviously I only saw an *image* of John Wayne walking in front of me.

PAUL: An *image* walking? I didn't think they were the sorts of things that had legs.

VINCE: You've been taking too many philosophy courses, mate. I didn't mean I saw an image-of-John-Wayne walking. I saw an image of John-Wayne-walking.

PAUL: Oh, right, like a photo of John Wayne walking.

VINCE: Well, yes. But the great thing about film is that the image actually moves. It doesn't walk, of course, but it can be an image of someone walking by being an image which moves in such and such a way.

PAUL: So you're saying the image of John Wayne – the picture, if you like – moved from one side of the screen to the other.

VINCE: Precisely.

PAUL: OK, so this image here *(he starts the projector running again, and points to John Wayne on the right of the screen)* is the same as this image here *(pointing to John Wayne, now on the left of the screen)*.

VINCE: Yeah. Didn't you see it move?

PAUL: But, listen. You're saying that this image here *(he projects a single frame from the first second of footage)* is the same image as this image here *(a single frame from the last second of footage)*. But *that* can't be right. In the first image you can only see his left eye. In the second, he's facing the camera – you can see both.

VINCE: Well, OK, they're not the *same* image. But when you run them all in the proper way, like a normal projectionist would, the individual frames or images seem to disappear. You have the impression of a single moving image.

PAUL: I agree with you there, Vince. As long as under pressure you're happy to say that the motion's an impression, or an illusion.

This, I think, is ultimately what we must say with regard to the apparent motion of film images. It is indeed apparent – an illusion brought about by the speedy succession of similar still images. There is no single reidentifiable image which is moving.

VI

A supporter of Currie might suggest that the motion of film images can be understood by analogy with the motion of shadows. When I walk along the sunny side of the street, my shadow keeps pace perfectly with me; it seems to move as surely as I do. Similarly, when the sun moves across the sky, the shadows of buildings move over the ground. This shows, argues the Curriean, that shadows are higher-order entities than the momentary patterns of light and dark which constitute them, just as dogs and statues are higher-order entities than the collections of cells and lumps of clay that respectively constitute them.[23]

I would like to talk about all three aspects of this analysis: the distinction between persisting shadows and the momentary patterns of light and dark which make them up, the motion of the higher-order shadows, and the analogy with film images. Firstly, I think

the distinction between persisting shadows and their constituent patterns is a helpful one. Jerrold Levinson has suggested to me that under pressure of arguments like that of the slowed-down projector, anti-illusionists may do well to draw a similar distinction between image-slices (roughly identical with frames) and the cinematic images they constitute (the ones we see moving at the cinema). But it seems to me the two cases are disanalogous precisely where we begin to talk about movement.

Let us look at three things putatively moving – a coffee cup I wave before your eyes, my shadow as I walk along the street, and a cinematic image of a ball rolling along the ground. The first is a paradigmatic example of motion. Now, I take it that part of its being paradigmatic rests on the fact that at any moment the cup is at a certain spatial location, and that at the moments just before and after it is at contiguous locations.[24]

The shadow is a slightly trickier case, precisely because we are not so immediately certain there is a persisting object here. But when we think of its putative movement, we realize that, just as in the coffee-cup case, at any moment the shadow is in a particular spatial location (or, in order not to beg the question, that there is at least a pattern of light and dark produced by the same light-source and object) and that at the preceding and following moments the shadow is at spatially contiguous locations (or,…*mutatis mutandis*). And it seems that this is enough to start a case for a single entity's persisting, rather than the illusion of such.

Note that the identity of the shadow becomes uncertain again when we alter the conditions. The same source of light and object together do not appear to be sufficient for the identity of a shadow. For instance, my shadow on the meadow where I do Tai Chi today is not the same shadow as the one I cast there yesterday.[25] It is not clear to me that

the shadow I cast before I walk behind a building that occludes it is the same as that which 'reappears' when I emerge from behind the building. Nor is it clear that I am casting one and the same shadow as I dance for a few minutes under a stroboscopic light, even if in all these cases I am talking of the higher-order shadows, capable of movement. And the uncertainty comes about precisely because there are stretches of time when it is not clear that this higher-order entity is in existence at all, and hence that that necessary feature of paradigmatic motion – contiguous spatial locations of a single object at contiguous moments – is absent.

At this stage, the anti-illusionist may respond that these problematic shadows are beside the point in a discussion of cinematic motion, for here we have images continuously moving. Just as in the case of the paradigmatic moving shadow, or indeed the dog or statue, we have a higher-order entity. But merely *stating* that there is a higher-order entity – the cinematic (moving) image, as opposed to its constituent image slices, say – is not enough. We need an argument for its existence. Now it seems to me this argument could take one of two forms. One is an analogy with the moving shadow: it is not clear whether the proposed entity exists, but there seems to be motion, because the paradigmatic condition of motion is fulfilled (witness the contiguous spatio-temporal locations of the lower-order entities). This argument will not hold, because of what becomes clear with the slowed-down projector. There is *not* spatio-temporal contiguity here, so the anti-illusionist will need some other argument for the existence of the higher-order cinematic image.

The second argument is simply that we *see* the higher-order entity. Unlike the cases of problematic shadows, we can continuously point to the moving image on screen;

it does not appear to go in and out of existence. But this argument falls to the same objections Currie raises to the proposal of response-dependent length as a property of the Müller-Lyer illusion. If we are to grant existence to things merely on the basis of their *seeming* real, we will be at a loss to find any illusions in the world. And as surely as there is a real world out there, there are illusions too.

There are two thought-experiments an anti-illusionist might use to push the weak illusionist's intuitions about film images in the direction of our shared intuitions about shadows. The first asks what we would say if we discovered that light is necessarily stroboscopic. We find out that the sun, lasers, ordinary light bulbs, and so on, all actually flash on and off extremely quickly, despite their appearance of continuously shining. Surely if this turned out to be the case, the Curriean asks, we would still say that paradigmatic shadows move?[26]

I am not sure I would say that. For, as we noted above, paradigmatic shadows are not paradigms of *movement*. If something very different is going on when shadows appear to move from when bicycles and balls do, I suspect that we would want to predicate different things of them. Moreover if we are to preserve the term 'motion' for only one of these types, I suspect we would use it for the current paradigms – bicycles and balls. And if we are this reluctant to ascribe motion to higher-order entities supervenient on patterns of stroboscopic light, how much more so we must be with film images. They not only flicker on and off along with the projection beam, but are constituted out of series of these flickerings separated by longer periods of darkness.

The second thought-experiment nudges one's intuitions from the other side. The Curriean asks us to imagine a continuum of possible projectors with capacities to show an

increasing number of frames per second.[27] As the limit of frames per second approaches infinity, would we not ascribe real motion to the resulting images?

Again, I do not think I would, for the number of frames per second is irrelevant to the necessary condition of paradigmatic movement. A very fast projector still produces a succession of still images, not a single contiguously moving image. If pressed on to consideration of a projector capable of an infinite number of frames per second, I am not sure what to say. But my concession of that point would not get the anti-illusionist very far.

VII

There is a final possibility which I will touch on, but a full consideration of which would take me too far afield. What prompted me to consider this possibility was Currie's vacillation about whether the image's motion is supposed to be real or response-dependent. In many places he seems to claim that it is the canonical kind of motion that he is invoking. Firstly, he often has recourse to such phrases as "we literally see movement on the screen,"[28] "there really is movement within a single shot taken from a fixed perspective,"[29] and "Film is moving picture. Literally, that is."[30] Secondly, he has already rejected taking a more liberal approach to what we can claim as real.[31] Thirdly, his claim would simply not be so interesting if it were just that in films we see $motion_2$, a different kind of thing from $motion_1$ (that is, what bikes, people, and shadows have), because if we are under an illusion of motion when we watch a film, it is surely an illusion of garden-variety motion, not some weird kind of motion unheard of till now.

On the other hand, there is evidence that Currie thinks cinematic motion is a very different kind of property. The clearest evidence, along with his consideration of the

Müller-Lyer illusion, is his concluding remarks to both "Film, Reality, and Illusion" and the first chapter of *Image and Mind*. In both places he says that his conclusions

> go beyond film theory to embrace general metaphysics. It is traditional to regard motion as a paradigmatically primary quality, to be contrasted with those secondary qualities which are in some sense observer-dependent, like color. If what I have said here about cinematic motion is correct, we shall have to acknowledge a kind of motion which takes its place among the secondary qualities.[32]

Here he clearly talks of a different kind of motion from the "paradigmatically primary quality" we are all familiar with. But this is obviously at odds with his bold assertions that film images simply, literally move.

Now, I think this confusion may be a sign of the intuition that the image itself – the *object* – is somehow response-dependent. This would leave open the possibility that its motion – the property predicated of the object – is garden-variety. The notion of a *response-dependent object* is fairly unclear to me (though after-images may be paradigmatic examples). I am not sure, for instance, whether the properties of a response-dependent object would necessarily be response-dependent themselves, or whether they could be garden-variety. A suggestion of Jerrold Levinson's that film images may be *sui generis* entities with their own type of space and motion (though shared with flip-books, I suppose) may arise out of a similar intuition.

However, much more would have to be said about images as response-dependent objects than Currie even hints at, before this became a respectable position. I will leave that work to someone else. It seems clear to me that we need not, and should not, postulate such strange entities when we can explain the motion of cinematic images in such a simple way: it is an illusion.[33]

Notes

[1] Nicholson Baker "The Projector" (1994), reprinted in *The Size of Thoughts: Essays and Other Lumber* (London: Vintage, 1997), p. 47.
[2] Gregory Currie "Film, Reality, and Illusion," in *Post-Theory: Reconstructing Film Studies*, ed. David Bordwell and Noël Carroll (Madison: University of Wisconsin Press, 1996), pp. 325-44.
[3] I talk of 'philosophical' film theory in support of the editors of *Post-Theory* (and *Film Theory and Philosophy* – see note 5 below), who rightly see themselves as consolidating a tendency towards more tightly argued writing on film theory, *re*constructing it after ('post-') the deconstruction (in more senses than one) of theory-past.
[4] See Kendall Walton "Transparent Pictures: On the Nature of Photographic Realism," *Critical Inquiry* 11(1984): 246-77.
[5] A variant of "Film, Reality, and Illusion" appears as the first chapter of Currie's *Image and Mind: Film, Philosophy and Cognitive Science* (Cambridge: Cambridge University Press, 1995), pp. 19-47. I will refer to locations in both these sources where they say similar things, but I take "Film, Reality, and Illusion" as my primary target.
Currie also gives an abbreviated version as section two ('Moving Pictures'; pp. 46-50) of "The Film Theory that Never Was: A Nervous Manifesto," in *Film Theory and Philosophy*, ed. Richard Allen and Murray Smith (Oxford: Oxford University Press, 1997), pp. 42-59.
[6] Strong illusionism is the claim that film creates an illusion of the reality of the fiction it presents. See *Image and Mind*, p. 283, and my note 7 below.
[7] Currie himself calls these positions 'Perceptual Illusionism' (for weak) and 'Cognitive Illusionism' (for strong). This becomes confusing when we investigate to what degree we are suffering from perceptual or cognitive illusions merely supposing the first thesis (see below). So I prefer to call the positions strong and weak, following Currie's characterization of them as such in "Film, Reality and Illusion," pp. 333-4, and *Image and Mind*, pp. 28-30. The reader should also be wary not to confuse my distinction with that Currie makes between weak and strong versions of what he calls Cognitive Illusionism and I strong illusionism. See *Image and Mind*, p. 22.
[8] "Film, Reality, and Illusion," p. 336; *Image and Mind*, p.37.
[9] Of course, one should not be satisfied with this explanation as it stands. The mere succession of still frames, no matter how rapid, is not enough to achieve this illusion. One also needs a certain inertia, or persistence, of the visual image (what is usually called 'persistence of vision'). However, in explaining the effect to children, one need normally not go into this aspect, since we all seem to have an intuitive grasp of our perceptual limits (at least to the extent that we *have* them) and the seeming continuity which results when these are exceeded.
[10] There are real cases of slightly less impressive auditory hallucinations. In his autobiography, *Putting the Record Straight*, John Culshaw, producer of the first complete recording of Wagner's *Ring* cycle, revels in a story of fooling practised listeners. In the press release for his recording of *Das Rheingold*, he claimed that in the final scene one could hear the Rhine Maidens moving up from below the Rainbow Bridge. Despite the physical impossibility of achieving this effect with stereo, many reviewers 'heard' precisely that. (John Culshaw, *Putting the Record Straight : The Autobiography of John Culshaw* (New York: Viking Press, 1981), pp. 280-1.) For more examples of recording trickery, see 'Authentic Recording Practice,' chapter three in my "Not Just For the Record: A Philosophical Analysis of Classical Music Recordings" (M.A. thesis: University of Auckland, 1998).
[11] For the dismantling of this myth, see David Bordwell, "Convention, Construction, and Cinematic Vision," in *Post-Theory*, pp. 87-107; and Stephen Prince "The Discourse of Pictures: Iconicity and Film Studies," *Film Quarterly* 47 (1993): 16-28.
[12] Note that almost no one has the opportunity actually to do this. However, in my case, and I suspect many others', the illusion was explained with the aid of 'animated' flip-books. All of my illusionist arguments are intended to cover flip-books, and it seems to me that Currie's should also, unless something vital hangs on film's projected nature. Thus it is a good exercise to test one's intuitions against the cases of film and flip-books, while reading this essay and others on illusory motion. I shall say no more specifically about flip-books here.

It may also be worth noting another sort of 'illusion' perpetrated by audio recordings. One seems to hear a single, continuous performance when listening to a recording, but this is almost never the case. Almost all recordings – rock and classical – are made by splicing different takes together and/or over each other. The closest film analogy to this process may be cutting between a close-up of Pierce Brosnan and a long shot of his stunt-double grappling with the baddies on top of a moving train in the latest Bond flick.

[13] For a thought-provoking discussion of the possibility of these unknowable (by us) features of reality, see Frank Jackson on 'Kantian Physicalism' in *From Metaphysics to Ethics: A Defence of Conceptual Analysis* (Oxford: Oxford University Press, 1998), pp. 23-4.

[14] "Film, Reality, and Illusion," p. 338. Strangely, this illusion is dubbed "Muller-Lyer" in "Film, Reality, and Illusion" and "Müller-Lyre" in *Image and Mind. The Oxford Companion to the Mind* calls it the "Müller-Lyer" illusion; I follow them. (*The Oxford Companion to the Mind*, ed. Richard L Gregory with the assistance of O. L. Zangwill (Oxford: Oxford University Press, 1987), s.v. "Müller-Lyer." I also discovered there that the original Müller-Lyer figure contains a 'neutral' line, with no arrowheads, between the two most people know as the illusion.)

[15] This suggestion, like many of those to which I respond, throughout the remainder of this paper, were made by Jerrold Levinson in private communications.

[16] Just what this is I will investigate in the next section.

[17] "Film, Reality, and Illusion," p. 340. The point is made more tentatively in *Image and Mind*, pp. 46-7.

[18] In fact, if I am reading Bruce Kawin correctly, there may be as many as 120 impacts per second, as each frame is projected several times to reduce (the perception of) flicker. However, I will stick to the proverbial 24 frames per second. See Bruce Kawin, *How Movies Work* (Berkeley: University of California Press, 1992), p. 125.

[19] The last scene of *Desperately Seeking Susan* features a currently possible version of this kind of movement. Aidan Quinn's character kisses Rosanna Arquette's against an old-style movie projector. This arrests a single frame in front of the beam. This melts the frame, and as the images 'melt' away on the screen we see their edges actually moving. (Technically, of course, we see nothing of the kind, since we are watching a normally projected film of this process. But the fictional audience within the film sees it, and we can easily imagine seeing the same thing.) I learnt of this scene from Baker's "The Projector," 50.

[20] "Film, Reality, and Illusion," p. 338. The same point is made in slightly different words in *Image and Mind*, p. 44.

[21] "Film, Reality, and Illusion," pp. 338-39. There is, again, a negligibly different statement in *Image and Mind*, p. 45.

[22] "Film, Reality, and Illusion," p. 338 (my emphasis, but Currie uses this very emphasis in *Image and Mind*, p. 44).

[23] None of the arguments in this section are dependent on the 'negative' nature of shadows. A spot of light sweeping a prison compound would do just as well as a paradigmatic higher-order entity supervenient on patterns of light and dark.

[24] My point is not that this is the essence of movement, just that it is a necessary feature of paradigmatic cases of motion.

[25] Compare T.S. Eliot:

> Only
> There is shadow under this red rock,
> (Come in under the shadow of this red rock),
> And I will show you something different from either
> Your shadow at morning striding behind you
> Or your shadow at evening rising to meet you;
> I will show you fear in a handful of dust.

The Waste Land, I. The Burial of the Dead, ll. 24-30, in *Collected Poems 1909-1962* (London: Faber and Faber, 1974) pp. 53-4.

[26] Currie himself, in a private communication, suggested an analogous thought-experiment wherein space-time turns out to be quantized and thus, at the foundation, motion is not really continuous. I believe this argument falls to the same points I consider here.

[27] And an analogous continuum of cameras to provide film stock for them.
[28] "Film, Reality, and Illusion," p. 325.
[29] "Film, Reality, and Illusion," p. 335; *Image and Mind*, p. 36.
[30] "The Film Theory that Never Was," p. 46.
[31] "Film, Reality, and Illusion," p. 336.
[32] "Film, Reality, and Illusion," p. 342; *Image and Mind*, p. 47.
[33] I am indebted to Jerrold Levinson, Anna Christina Ribeiro and Brad Rives for valuable discussion of the topic of this paper.