

## Time in the Movies

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A large part of what is special about film, as a medium, is the way in which it represents time. By “time” I mean temporal properties of, and relations among, events. Among other relations, films represent some events as earlier than, later than, and simultaneous with others.<sup>1</sup> But films also represent intrinsic temporal features of events; they represent the duration of events, and sometimes the duration events seem to have to characters in the story.<sup>2</sup> Although novels, poetry, plays, music, dance, and sometimes even still photographs, sculptures, and paintings also represent time, none of these media represents time in quite the way that films do.

This article offers a general theory of the representation of time in film and derives analyses of three concepts of temporal representation in film from this general theory. A general theory of the representation of time in film is not simply a catalog of the myriad ways in which films do, in fact, represent time. Rather, it is an account of the ways in which films *must* represent time. It is an account, that is, of the forms of representation of time that are built-in to the very nature of the

1. All talk here of representation of events by films should be understood in the following sense: a film represents an event just in case the event is among those things that happen in the story that the film tells. It is quite possible that to say that a film represents an event is just to say that the viewer of the film is to imagine the event when engaging with the film in the ordinary way. That is, it is quite possible that fictional representation is best understood in the way in which Kendall Walton understands it. (See Kendall Walton, *Mimesis as Make-Believe* [Cambridge: Harvard University Press, 1990].) But nothing to say here rests on this particular construal of fictional representation.

2. Arguably, duration is actually a relational property, rather than an intrinsic property. Perhaps, for instance, it is a relation that holds between the beginning and end of an event. Nothing to be said here is threatened by this possibility.

medium of film, forms of temporal representation that every filmmaker must necessarily employ. What exactly this means will become clearer as the article progresses.

The three concepts of temporal representation to be analyzed are familiar to savvy filmgoers: (1) anachrony, in which the representations of the events are in a different temporal order from the events represented, of which the typical examples are flashbacks and flashforwards; (2) ellipsis, in which a film leaps over a period of time without representing anything that happens during that time; the couple embraces, for instance, and we cut to the two of them adoring their new baby; and, (3) slow- and fast-motion. Most of us know how to apply these concepts—we know when what just occurred in a film is an instance of anachrony, ellipsis, slow- or fast-motion, and when it is not. However, like many concepts amenable to philosophical analysis, the precise boundaries of these concepts are more difficult to draw than they might at first appear. By offering a general theory of temporal representation in film, and analyses of these three special concepts, a portrait of the exact sense in which film is a temporal medium emerges.<sup>3</sup>

Throughout I'll be using the term "image" in a technical way. In the sense in which I am using the term, an image in a film is the projection of light onto the screen during any continuous temporal interval. An image, then, is a particular, complex, light event. So we might talk of the image that is the film itself during any particular showing of it—that is, the image that consists of the light projected onto the screen from the very beginning of the film to the very end; or we might talk about the image that lasts only one-twenty-fourth of a second and consists of the light projected through a single frame of film. In general, given any temporal interval during which the film is projected, there is an image corresponding to that temporal interval. What this implies is that every image consists of an infinite number of further images corresponding to the various ways in which the relevant temporal interval can be carved.<sup>4</sup>

### **TOWARD A GENERAL THEORY OF THE REPRESENTATION OF TIME IN FILM**

Gregory Currie, whose important work on this topic forms the basis of the view to be developed here, observes that typically "films represent time by means of time."<sup>5</sup> To understand this, notice that when reading a novel, the duration of the

3. There is a further question as to whether other artistic media are temporal in the same sense in which film is. Answering this question would require accounts of the way in which various other media represent time.

4. I will also be ignoring, throughout, films that do not represent events at all. Stan Brackage, for instance, sometimes scratches and paints film to give the impression of watching a series of projected abstract paintings. Films of this nature are not under consideration here.

5. Gregory Currie, *Image and Mind: Film, Philosophy and Cognitive Science* (Cambridge: Cambridge University Press, 1995), pp. 96–103. All additional references to Currie are to this book. Some other useful discussions of this and closely related topics: George Bluestone, "Time in Film and Fiction," *Journal of Aesthetics and Art Criticism* 19 (1961), pp. 311–315; Haig Khatchadourian, "Space and Time in Film," *British Journal of Aesthetics*, 27 (1987), pp. 169–177; R. P. Kolker and

fictional events is not ordinarily depicted by controlling the amount of time in which the reader reads about them. Both a person who reads at a page a minute and one who reads at two pages a minute are still likely to agree that the story told in the novel takes place, say, from 1939 to 1944. Elapsed fictional time in a novel is not dependent on elapsed reading time. Films, however, control the amount of time that the viewer spends on its representations; films share this feature with the performative arts. A film bears a loose analogy to a novel in which the reader is forced to read one sentence every twenty-fourth of a second. So, say, for instance, that a film depicts a balloon slipping from a child's hand and slowly rising until it pops on a tree branch. Ordinarily, in the story that the film tells, the duration of time from the beginning to the end of the balloon's journey is just the duration of the images representing the event.<sup>6</sup> In the simplest of cases, then, films use the fact that they legislate the amount of time that the viewer spends looking at the images out of which they are constructed to depict the duration of the fictional events. And they do so in a very particular way: the actual duration of the images is the duration of the events those images depict. This is typical not just of duration, but also of temporal order: the image of the child releasing the balloon appears before the image of the balloon's popping, and, as a result, it is fictionally the case that the balloon is released before it popped. Ordinarily, temporal order of representation, as well as duration of representation, informs the viewer of the temporal order of the represented (fictional) events.

To precisify the thesis that "film represents time by means of time," Currie employs a useful distinction between "automorphic" and "homomorphic" representations<sup>7</sup>:

Representation R of event E *automorphically* represents E as having property P *if and only if* R's having property P represents E as having property P.

Representation R of event E *homomorphically* represents E as having property P *if and only if* R's having a property of the same kind as P represents E as having property P.<sup>8</sup>

J. Douglas Ousley, "A Phenomenology of Cinematic Time and Space," *British Journal of Aesthetics* 13 (1973), pp. 388–396; Steven Z. Levine, "Monet, Lumiere, and Cinematic Time," *Journal of Aesthetics and Art Criticism* 36 (1978), pp. 441–447; Alexander Sesonske, "Aesthetics of Film, or A Funny Thing Happened on the Way to the Movies," *Journal of Aesthetics and Art Criticism* 33 (1974), pp. 51–57; Alexander Sesonske, "Time and Tense in Cinema," *Journal of Aesthetics and Art Criticism* 38 (1980), pp. 419–426; Ralph Stevenson, "Space, Time and Montage," *British Journal of Aesthetics* 2 (1962), pp. 249–258.

6. Notice that the actual event that was filmed—the actor's release of the balloon and the balloon's rise—may take place in much more or less time than the amount of time that the film depicts it as occupying. The filmmaker might, for instance, splice a take of the child releasing the balloon with five minutes of the balloon flying through the air before popping when the actual balloon the child actor released popped three seconds after its release, or never popped at all.

7. Currie, p. 97. The definitions given here are intended to be the same as Currie's, but they are formulated slightly differently.

8. "Representing E as P" is intended to mean the same thing as "Representing that E is P."

Paint sample charts are automorphic representations: the little square of color represents the color of the dried paint by virtue of having that very color. Maps are, to some degree anyway, homomorphic representations: a map of the United States represents the shape of California by means of the shape of the representation of California; however, the shape of the representation is not the precise shape of the state—for one thing, it’s much smaller—but is, instead, of the same kind as the shape of the state. Every automorphic representation is homomorphic, but not vice versa. Also, it should be noted that neither the claim that a particular representation is automorphic nor a claim that it is homomorphic is merely a claim to the effect that the property of the representation corresponds to the property of the represented event; mere correspondence is not enough for the property of the representation to *represent* the property of the event. The words “black ink” written on this page are both black and represent something that is black (namely black ink). However, the color of the representation (the words on the page) does not represent the color of what the representation represents. The color of the ink does not play any role in fixing the content of the representation. For a representation of an event to be automorphic or homomorphic, the representation must represent the event as possessing a certain property *in virtue of* the representation’s possessing some identical or similar property. Even if the words “black ink” were written in red, they would still represent black ink, and thus the color of the representation does not represent the color of what is represented. By contrast, the shape of California will be represented differently if the representation is made square.<sup>9</sup>

In order to develop a full theory of the representation of time in film, we need to know more than just that films typically represent various temporal properties automorphically or homomorphically. We need to know, also, whether films must do so; we need to know, that is, whether such representation of time is built-in to the medium of film itself, and in what way. To get a handle on the question, consider the following senses in which films could, by their very nature, represent temporal properties auto- or homomorphically.<sup>10</sup> Here,  $F$  is a collection of representations of events, such as a film;  $F$  consists of representations  $R_1, R_2, R_3 \dots$ , such as a collection of images, that represent events  $E_1, E_2, E_3 \dots$ , respectively<sup>11</sup>;  $T$  is a type of property, such as duration (although  $T$  could also be a type of relational property); and  $T(x)$  is the token property, of type  $T$ , possessed by  $x$  (if  $T$  is a two-place relational property, such as temporal precedence,  $x$  will be an ordered pair):

$F$  *strongly* auto-/homomorphically represents  $T$  if and only if  $\forall k(R_k$  auto-/homomorphically represents  $E_k$  as having property  $T(E_k)$ )

9. I don’t mean to imply that “in virtue of” relations can in general, or even in this case, be reduced to relations of counterfactual dependence. Counterfactual dependence of the sort drawn on here provides merely a rough test for determining if the representation has the content it has in virtue of possessing a property corresponding to the property it represents the event as possessing.

10. These terms are inspired by those used by Currie. See Currie, p. 6.

11. This form of notation suggests that both the number of images and the number of represented events are countable. This isn’t true, but the simplification is harmless.

F weakly auto-/homomorphically represents T if and only if  $\exists k(R_k$  auto-/homomorphically represents  $E_k$  as having property  $T(E_k)$ )<sup>12</sup>

So a full theory of the representation of time in film will tell us with respect to each type of temporal property, whether films represent that type of property strongly or weakly automorphically and strongly or weakly homomorphically. (The table at the end of the section *Presentness, Pastness, and Futurity* summarizes the results reached here.) Notice that examples of cases in which films represent particular temporal properties of events without employing the temporal properties of its images to do so, are not relevant to our purposes. Almost all films do this. If a character in a film says, “He ran that mile in five minutes,” then, when all else is equal, the film represents his running of the mile as having a duration of five minutes. It does not do this through employing a representation the duration of which accounts for its representing the event as lasting five minutes. The fact that films are *capable* of representing temporal properties without employing temporal properties does not imply that films do not, also, represent time strongly or weakly, automorphically or homomorphically. So in developing our theory of the representation of time in film, the discussion will ignore the ways in which films use the written word (with dialogue, or with banners on screen announcing time and place, for instance) and the ways in which films use sound (with voice-over, for instance), and attend only to the way in which temporal properties are represented by the images on screen. I’ll consider each type of temporal property in turn.<sup>13</sup>

## DURATION

Typically, the duration of the image corresponds to the duration of the represented event. And, further, the image typically represents the event as having a certain duration in virtue of its having that duration itself: if the image were to last less or more time, then the event, also, would be represented as lasting less or more time. However, slow-motion and fast-motion typically involve homomorphic representation of duration that is not automorphic. The events represented are typically represented as taking place at normal speed, and thus as having lesser or greater duration than the duration of the images used to represent them. Since a film could be shot entirely in slow- or fast-motion, without it thereby representing the events as taking place very slowly or very fast, it is possible for a film to entirely avoid automorphic representation of duration.

However, films always represent duration at least homomorphically: the duration of the images always represents some degree of duration of the represented event. In the most extreme case, the represented event is represented as

12. Both of these definitions will require some tweaking in order to accommodate cases in which T is a two-place relational property such as “before” or “after.” I leave the details to the reader.

13. The discussion ignores the direction of time. If the direction of time is a temporal property, then a full theory of the representation of time in film would have to say whether temporal direction is strongly or weakly, auto- or homomorphically represented by films.

having virtually no duration by images that have duration. For instance, in a kind of shot that has become typical in action movies since the appearance of Andy and Larry Wachowski's *The Matrix*, an event—such as a person jumping up in the air—is shot with many synchronized still cameras, positioned in a circle around the event. The stills are then shown in sequence, so that it appears that the action is frozen while the viewer circles around it. In this case, the represented event is represented as having an immeasurably short duration—as being a frozen timeslice—and it is so represented by the duration of the shot, which is typically a few seconds.

It is not much of a surprise that images in films cannot but represent duration at least homomorphically (that is, that films strongly homomorphically represent duration). The reason is that sensory experiences that represent events, of which visual experiences are just one example, represent duration strongly homomorphically. In fact, the function of sensory experience to help us to avoid involvement in harmful events and to seek involvement in helpful ones requires this form of representation of duration. Our senses need to inform of us which events are ongoing and which are over, if they are to play this role. They inform us of these facts, of the duration of events, through their own duration. The reason that this fact supports the claim that films strongly homomorphically represent duration is that images in films are precisely designed to give us a visual experience of a certain sort, and that visual experience is itself to represent what the images on the screen represent. Our visual experience of the images on the screen strongly homomorphically (even automorphically) represents the duration of those images. The images in turn make it the case that our visual experience strongly homomorphically represents the duration of the events that the image represents *by* strongly homomorphically representing the duration of those events. That is, images in film engage the normal way in which visual experiences represent duration in order to represent it themselves.

### TEMPORAL ORDER

The situation is somewhat more complicated with respect to the way in which films represent temporal ordering. The first thing to see is that the temporal order of events is weakly automorphically represented by films. It is not possible for a film to represent an event unless it represents some temporal ordering automorphically. To see this, note first that every event takes place over a temporal interval and can be divided into as many other events as one likes by dividing the interval. To take a (relatively) simple case, the event of running the hundred-yard dash can be broken into the event of running the first fifty yards and the event of running the second fifty yards. Notice that some representations of an event contain parts that themselves represent events that are parts of the larger event represented. A simple film of a person running the hundred-yard dash is of this sort: the first half of it is a representation of the person running the first fifty yards, and the second half of it is a representation of the person running the second fifty yards. A film of this kind automorphically represents temporal order: the representation of the running of the first fifty yards precedes the representation of the

running of the second, and the corresponding represented events are in the same temporal order. Films always include at least some representations of events, the parts of which represent the parts of the represented event, for films consist of continuous shots, and continuous shots are representations of events of this sort. If we were to cut together a disconnected set of single frames to create a film with shots each only one twenty-fourth of a second long, each of those frames would still be this sort of representation of an event: each would be a representation of some object's continuous existence over the course of one twenty-fourth of a second, where the first forty-eighth of a second of this event would be automorphically represented as preceding the second forty-eighth by the first and second forty-eighths of a second during which light shines through the frame onto the screen.

Given that films do weakly automorphically represent temporal order, it follows that they also weakly homomorphically represent temporal order. However, they do not strongly automorphically represent temporal order for the obvious reason that images can appear in orders quite different from the orders of the events they represent. That is, films are capable of anachrony.

To develop a full account of the manner in which films represent temporal order, we still need to know whether films strongly homomorphically represent temporal order. The answer is that they do not. Films are capable of homomorphically representing temporal order, without automorphically doing so, but they need not. For instance, imagine that the running of the hundred-yard dash is filmed and projected backwards. The image of the finish precedes the image of the start, but the film represents the start as preceding the finish. However, the order of the images of finish and start represents the order of start and finish. It is a homomorphic, but non-automorphic representation of temporal order. However, not all cases are like this; in fact, most are not. Often, the temporal ordering of the images of two events has no representative function at all. This is typical in anachrony. A film might show a man with a tattoo on his arm having his head shaved, say, and then cut to an image of a very similar looking man with hair having an identical tattoo carved into his arm. The second event is represented as preceding the first, although the image of the second follows the image of the first. This doesn't rule out the possibility that the representation of temporal order is homomorphic. However, what does rule that out is the fact that the tattooing would be represented as preceding the haircut even if the temporal order of the images were reversed, and this fact does rule out the possibility that the representation is homomorphic. It is considerations of narrative coherence that account for the fact that the tattooing is represented as preceding the haircut, not the temporal ordering of the representations of the two events. It follows that films do not strongly homomorphically represent temporal order.

### **PRESENTNESS, PASTNESS, AND FUTURITY**

So far we have discussed only two sorts of temporal property: relations of duration and precedence. However, anyone familiar with the literature on the philosophy of time, and particularly J. M. E. McTaggart's field-defining work on time,

will notice that there is another sort of temporal property that needs to be discussed.<sup>14</sup> McTaggart, of course, draws a distinction between the A-series and the B-series. The B-series is what results when events are placed in order with respect to their relations of earlier-than, later-than, and simultaneous-with—I will call these relations “B-series properties”; they are just the properties of temporal order discussed in the preceding section. B-series properties are eternal and unchanging. World War I is earlier than World War II regardless of what time it is now. The A-series, by contrast, is what results when events are placed in order with respect to their degree of presentness, pastness, and futurity. These properties, what I will call “A-series properties,” are constantly changing. The Battle of the Bulge was once future, became less and less so until it became present, and has been becoming more and more past as time progresses. Ignoring the views of those who deny that actual events have A-series properties,<sup>15</sup> a complete theory of the representation of time in film requires that we ask, first, whether films represent A-series properties at all. If so, then we must ask the further questions as to whether films strongly or weakly, automorphically or homomorphically, represent A-series properties.

To get a handle on these questions, let’s digress briefly into the question of whether written English represents A-series properties homomorphically or automorphically. Written English does represent A-series properties: typically, although probably not exclusively, it does so through employing tense. The sentence “He is running” represents the event as present; “He ran” represents it as past.

The question of whether written English represents A-series properties homomorphically or automorphically needs to be disambiguated. The question could be construed as asking if the sentence, which is an abstract object concretized in ink on the page, represents A-series properties homomorphically or automorphically, or it could be asking if the token event of reading those words or speaking them does so. It seems clear that the sentence, construed as an abstract object, does not represent A-series properties even homomorphically. Arguably, anyway, the sentence has no A-series properties any more than the number three, or yellowness, or kinds have A-series properties. In any event, even if abstract objects do have A-series properties those properties don’t play any role in the way sentences represent such properties.

The more interesting question is whether token readings or utterances of sentences, which are just events possessing A-series properties of their own, represent A-series properties homomorphically or automorphically. It might seem that token readings and utterances of present-tense sentences represent A-series properties automorphically. But, in fact, this is false. It is true that at the moment it is being uttered, an utterance of a present tense sentence is, itself, present and that the utterance represents the event it represents as present. But the present-

14. Cf. J. M. E. McTaggart, “The Unreality of Time” in *The Philosophy of Time*, edited by R. Le Poidevin and M. Macbeath (Oxford: Oxford University Press, 1993), pp. 23–34.

15. Cf. D. H. Mellor, “The Unreality of Tense” in *The Philosophy of Time*, edited by R. Le Poidevin and M. Macbeath (Oxford: Oxford University Press, 1993), pp. 47–59.



ness of the utterance does not make it the case that the utterance represents the event it represents as present. To see this, notice that even when the utterance becomes past it still represents the event it represents as present. To put the same point a slightly different way: Let *U* be an utterance of present-tense sentence *S* that represents event *E*. *U* does represent an A-series property of *E*: it represents *E* as present. However, *U* always represents *E* as present, regardless of whether *U* is present, past, or future. Thus, *U* does not represent A-series properties even homomorphically, much less automorphically; the A-series property *U* represents *E* as possessing is not determined by the A-series property possessed by *U* itself. The same argument shows that no utterance or reading of a sentence, regardless of tense, represents A-series properties either homomorphically or automorphically. The tense of the verb fixes the A-series property of the represented event, and the tense of the verb does not vary with the A-series property of the utterance or reading.

Film theorists, especially those who hold that there is a “language of film,” have sometimes asked if films are capable of employing the past or future tense, or are confined to the present tense only.<sup>16</sup> The very question is as difficult to take literally as it is to take literally the claim that there is a language of film. There are so many disanalogies between imagistic representation and linguistic representation that one is tempted to think that the claim that there is a language of film is intended only in some metaphorical sense.<sup>17</sup> Of relevance for our purposes is the fact that films don’t employ anything like verbs—they show action, but they don’t use verbs to represent it the way language does. And so it isn’t clear what is even meant by the question of whether films employ the full range of tenses. The question seems to involve a kind of category mistake. However, we can meaningfully ask if films represent A-series properties at all, and if they do, go on to examine the further questions of whether they do so strongly or weakly, auto- or homomorphically. Currie has argued that films don’t represent A-series properties at all. According to Currie, that is, events in a film are represented as coming before, after, and at the same time as other events in the film—events are represented as having B-series properties—but the events in a film do not have any degree of presentness, pastness, or futurity.

To argue for this point, Currie objects to the view that he calls “The Claim of Presentness”: Images in film always represent the events they represent as occurring in the present. Put in the terminology developed here, the Claim of Presentness is the claim that films strongly automorphically represent A-series properties.<sup>18</sup> Currie’s primary objection to the Claim of Presentness, and the objection

16. The best-known defender of the view that there is a language of film is Christian Metz. Cff. Metz, *Film Language: A Semiotics of the Cinema*, translated by M. Taylor (New York: Oxford University Press, 1974); “On the Notion of Cinematographic Language” in *Movies and Method: An Anthology*, edited by B. Nichols (Berkeley, CA: University of California Press, 1985).

17. For discussion of this point, see Currie, pp. 113–137.

18. At one point, Currie suggests that the Claim of Presentness should be construed differently from the way I have construed it here. He seems to think of the Claim of Presentness as the claim that images in film ordinarily represent the events they depict as occurring in the present, but that this default form of representation can be overridden. See Currie, p. 202.

is powerful, is that the thesis cannot account for flashforwards and flashbacks in film. It seems, in such cases, that the images on the screen represent temporally absent events; they don't seem to represent events as present. It is as though what we see on screen is what is seen in a crystal ball that looks forward or back in time, and so the image itself represents events as non-present. Of course, the image doesn't accomplish this task by virtue of its intrinsic properties. A person who walks into a movie just as a flashforward sequence begins, and leaves just as it ends, will have no idea that the images on the screen do not represent the present. Currie goes on to argue that in order to account for anachrony we need not hold that films represent A-series properties at all. Even if the only properties represented are B-series properties, films could still have anachrony.

More on anachrony later, but for now it's worth noting that even if Currie is right that anachronous representation does not require the representation of A-series properties, that doesn't imply that films don't represent A-series properties; in fact, that point alone leaves open the possibility that they do so strongly automorphically. The Claim of Presentness is an extreme example of a position that might be held by someone who holds that films do represent A-series properties. But there are a variety of other positions that might be taken. For instance, one might hold, implausibly, that films represent all events as past—those who take there to be some intrinsic connection between films and memory experience might be drawn to such a view; such a view might imply that films strongly homomorphically represent A-series properties without representing them even weakly automorphically: the presentness of the image, on such a view, accounts for the image's representing the pastness of the event. Or, more plausibly, one might think that images in films represent the full range of A-series properties: they represent some events as present, others as past, and still others as future. So, while Currie is right that the Claim of Presentness is false, his argument against it leaves open the possibility that films do, in fact, represent A-series properties. And, as I'm about to argue, they do.

The first argument that can be offered for this claim is simple: images in films correspond to the visual experiences that people have when witnessing events; ordinary visual experiences represent A-series properties; thus, so do films. To see this, first, reflect briefly on the question of whether ordinary visual experiences represent A-series properties. It seems that visual experiences represent the B-series property of being-simultaneous-with-this-experience.<sup>19</sup> Say, for instance, that I am walking in the desert and hallucinate a camel walking in front of me. But imagine, further, that a camel with all of the same intrinsic properties that I hallucinate did indeed walk in exactly this location five years previously. Still, I am hallucinating: my visual experience does not represent things as they are, despite the fact that there was a time at which the properties I perceive were instantiated in just the

19. One might worry that this would require that visual experiences represent themselves, which seems unlikely. I put this difficulty aside, for the case for thinking that visual experiences represent A-series properties—as I am in the process of arguing—is made stronger, not weaker, by the denial of the claim that visual experiences represent the B-series property of being-simultaneous-with-this-experience.

place that I perceive them to be instantiated. One might think that the reason I am rightly said to be hallucinating is that my visual experience represents there to be a camel, with all of the relevant properties, *simultaneous with my visual experience*, and there is no such camel. For reasons similar to those expressed by John Perry in his discussions of indexicals,<sup>20</sup> there is reason to think that even if visual experiences represent such B-series properties, they also represent events as happening now, in the present. A visual experience that represents the B-series property of being-simultaneous-with-this-experience won't necessarily play the full range of roles that visual experiences ordinarily play. To modify one of Perry's examples, say that I see a bear running toward me. The relation of simultaneity between the bear's running toward me and my experience of it is an eternal relation; that relation held an hour ago and will continue to hold into the future; its holding is not dependent on the location on the timeline of the present. But I didn't have any reason to run away an hour ago, and now I do. The special property of the event that my experience represents, the property over and above the eternal B-relation between my experience and the event which the experience represents, is the now-ness of the event; I run away because my visual experience tells me that there is a bear coming toward me *right now*. Visual experiences, that is, ordinarily represent A-series properties, in particular, presentness.

But if ordinary visual experiences represent A-series properties, why should films be any different? There are, of course, many differences between film images and corresponding ordinary visual experiences: film images consist of projected light—they aren't anybody's experience; they are usually edited; they aren't bifocal; they represent fictional rather than actual events; they are capable of a wide variety of distortions; etc. But why should any of these differences matter when it comes to the question of whether films represent A-series properties? Images in film and visual experiences are both (in some sense) visual representations; since the latter are capable of representing A-series properties, and ordinarily do, there is no reason to think that the same isn't true of the former. To put the point another way, imagine that you were to interrupt an observer watching an actual event of a balloon rising from a child's hand and were to ask, "Is the balloon rising in the present, the past, or the future?" Obviously, the observer will answer "the present": his visual experience of the event represents the event as taking place in the present. Now, imagine that you were to interrupt a viewer of a film of a balloon rising from a child's hand and ask the same question, making clear that you are asking about the A-series property of the fictional event, and not the A-series property of the event that was filmed. It seems clear that the viewer should give the same answer.

If there is resistance to the thought that ordinary visual experiences represent A-series properties of the events they represent, this resistance may be rooted in a similar place as resistance to the claim that ordinary monocular visual experience represents distance from the eye. Berkeley famously denied that vision represents distance from the eye, claiming that when visual experience generates beliefs about the distance of visually perceived objects from us what is taking place

20. Cf. John Perry, "The Problem of the Essential Indexical," *Noûs* 13 (March 1979), pp. 3–21.

is only “acquired perception.”<sup>21</sup> Having come to recognize, for instance, that objects of a camel’s size appear small in our visual field when some distance away, we come to believe that the camel we see is some distance away when it occupies a small amount of the visual field. Facts about past experience of conjunction between, on the one hand, visual experiences with certain properties (such as including a camel shape that occupies only a small part of the visual field) and, on the other, further facts (such as the fact that there is a camel some distance from one) come to inform the content of our visual experiences; we come to see the distance of the camel from us only because of this past experience and not because of the intrinsic features of the visual experience itself.

We might say something similar about visual experience and A-series properties. What we’ve found, through experience, is that what we see is usually going on right now, and so we come to believe that what we see is going on right now despite the fact that the A-series property of the event we see is not represented in the visual experience itself. This might be true—perhaps visual experiences do only represent A-series properties as a result of some kind of acquired association of the A-series property with the visual experience.<sup>22</sup> But it remains true that they do, in fact, represent A-series properties, just as it remains true, even if Berkeley is right, that visual experiences do, in fact, represent distance from the eye. Whatever associations we have that make our ordinary visual experiences richer in content than they would be in the absence of such associations, are also involved in the case of images in film. If Berkeley is right, then those images are richer in content for us than they would be for creatures with no experience of seeing.

It’s not just past experience of the conjunction of a visual experience with a particular quality that can condition the content of the experience and thus cause that experience to represent the quality found to be conjoined with it. Other, more immediate features of context can accomplish the same thing. For instance, imagine that I look through a very powerful telescope after being told that the events that I will see unfolding happened many years earlier, many light-years away. If am able to shake off my habit of taking what I see to be happening now, then my visual experience will not represent the event it represents as present, but as past. Similarly, various facts about the placement of an image within a film can cause that image to represent the event it represents as past, even though it would have represented it as present in the absence of those contextual accompaniments. For instance, imagine that we see an image of a gypsy waving her hands over a crystal ball and muttering. The camera closes on the crystal ball until the image in the ball occupies the entire frame. Depending on what the viewer understands to be the power of the crystal ball and the gypsy’s intentions—is she looking into the

21. Cf. George Berkeley, “An Essay Towards a New Theory of Vision,” in *Philosophical Works (Including the Works on Vision)*, edited by M. R. Ayers (London: Everyman, 1975), section 45, pp. 21–22.

22. The notion of this kind of acquired perception has implications, which I don’t have space to explore, about the nature of the representation of A-series properties by documentary films. It is possible that knowing that one is watching a documentary film results in the images in the film representing the events they depict as past.

future or the past?—the image that the viewer sees after the camera has closed in on the ball will represent the event it represents as future or past, rather than as present. In any event, even in these cases, the image represents A-series properties, just as visual experiences do.

Further reason to think that films represent A-series properties of events comes from reflection on the particular emotional effects of which films are capable. Consider suspense. In Alfred Hitchcock's *Foreign Correspondent*, for instance, a man hides in the machinery of a windmill while listening to a conversation below among men who will surely kill him if they discover his presence. We see that the man's coat is caught in the machinery of the mill, and, as the machinery moves, the coat will tear, or else pull the man from his hiding place, thus revealing him. We are frightened at the prospect of his discovery. Next the man realizes his predicament and takes off his coat. We are relieved. Imagine that the film represented only B-series properties of the represented events. It would follow that the man's coat being caught is represented as being prior to the man's removing it. Why should the relative temporal priority of the various events be of any emotional relevance? After all, the coat being caught in the machinery is prior to the man's removing it regardless of the location of the present. This doesn't imply that films represent A-series properties, but only that the representation of B-series properties alone is not what generates the feeling of suspense.

There are a variety of factors that contribute to making the viewer feel suspense. Of great importance, for instance, is the state of the viewer's knowledge (or, perhaps, the fictional state of his knowledge). When watching the scene from *Foreign Correspondent*, we recognize that an event that we don't want to happen (the man's being caught) is possibly future, but, for the purposes of imagining the events of the story, we don't know whether it is actually future. Our (fictional) ignorance about what will happen contributes to our emotional reaction and does so quite independently of the A-series properties represented by the film. It would be enough for us to be in the dark only about the relevant B-series properties: is the man's being caught an event that occurs after his coat being caught in the machinery, or not? While we are ignorant about this, we will feel some suspense. However, (fictional) ignorance is not the only thing that generates the feeling of suspense. Also of relevance is the fact that we recognize that if the man's being caught is to occur, the event's futurity is shrinking: it is becoming closer and closer to the present. To see this, consider another example: In Charles Crichton's *A Fish Called Wanda*, a man stands with his feet stuck in wet concrete while another drives toward him, very slowly, intent on killing him, in a large piece of construction equipment designed for flattening concrete. The viewer is in no sense ignorant about what will happen: the man is going to be flattened. But what gives this scene its emotional power (improbably, it's hilarious) is that we see the inevitable approaching at such a slow speed. It's the slow shrinking of the *futurity* of the man's being squashed that gives the scene its emotional impact.

This explanation for the emotional force of these scenes can be resisted. We might try to explain our emotional reactions by appeal only to represented B-series properties and represented durations. In the scene from *A Fish Called Wanda*, for instance, perhaps the emotional force of the scene derives from the

fact that the squashing occurs later than the driving, and that the duration of time between the two events is so much longer than expected. However, notice that if such an explanation works, then it would work also to explain our emotional reactions to actually witnessed events, as well, such as the emotional response that prompts one to run away when having the visual experience of a charging bear. That is, the explanation would remove the need for appeal to A-series properties of actual events. However, we are assuming that actual events do have A-series properties, and that those properties play some central role in explaining our responses to our sensory experiences. If those properties can be reduced to other temporal properties, then films still represent A-series properties; they just do so by representing those other temporal properties to which A-series properties are reducible. The point is that in whatever sense sensory experiences represent A-series properties, films do also, and this is a large part of the reason that films have the particular emotional effects that they have.

Even though films represent A-series properties, it doesn't follow that they ever represent them either auto- or homomorphically, much less that they do so either strongly or weakly. Perhaps films, like language, represent A-series properties without representing them by means of the A-series properties of the image. When a viewer is watching the image, the image has the property of being present. At the moment it is being seen, is the presentness of the image ever a representation of the presentness of the represented event? There is good reason to think so. Ordinarily, the represented event is taken to be present; it is represented as taking place now, just as ordinary visual experience represents its object as taking place now. The further question is whether the A-series property the image represents is determined by the A-series property of the image. If this were so, then we would expect the image to represent the A-series property of the event differently as the A-series property of the image changes. We would expect, for instance, that the image would represent the A-series property of the represented event as being present when the image is present and past when the image is past; or, if there isn't perfect correspondence, there is, at least, some kind of tracking relationship between the changing A-series property of the image and the A-series property of the represented event. Of course, we don't see the image when it has become past any more than we hear the utterance after it has become past. But we can still ask what A-series property a now-past image represents the event as having, just as we could ask about the A-series property represented by a now-past utterance.

To see that, in many cases anyway, when the image becomes past it represents the represented event as past, notice that when a film repeats an image—when the viewer sees an event take place and then, later, sees it again—the second occurrence of the image is, in the normal case, taken to represent a past event. For instance, in the final episode of the fourth season of HBO's *The Sopranos*, Meadow Soprano sits on her bed crying as she thinks about the impending dissolution of her parents' marriage. We cut to a shot that we saw in a much earlier season: an adolescent Meadow throws a temper tantrum and runs from the room. And then we cut back to Meadow sitting on her bed and sobbing. The temper tantrum is

represented as past, not present, by the intercut image, even though the first time the image occurred, in a much earlier episode of the show, the event was represented as present. In fact, this is essential to the point of showing the temper tantrum. What the occurrence of that image does is to explain to the viewer the particular kind of emotion that Meadow is feeling, an emotion that is intimately tied to the pastness of her temper tantrum, and other events like it. What she is feeling is a mix of regret and remorse; she feels that in her past conduct, conduct that she cannot alter given its every moment receding further into the past, she both failed to take advantage of times in which her parents' marriage was relatively happy, and, perhaps, contributed to making it less so. The pastness of the events represented by the image of the temper tantrum is an essential part of the depicted event's meaning.

Now, of course, the second occurrence of the image of the temper tantrum is not, literally, a re-occurrence of the first image; rather, it is a different token of the same type. But our reaction to it—that we recognize it to represent an event as past—helps to see what the right answer to the question is of what A-series property a represented event has once the image of it is no longer present: it has the A-series property the image has come to have, namely pastness. The first occurrence of the image is now past; the recurrence of the image represents the event as past. It does so by turning our attention to the first occurrence of the image; this suggests that the first occurrence of the image represents the event as past now that the first occurrence of the image itself has become past. That is, in a wide variety of cases, films represent A-series properties automorphically. Notice, however, that the second occurrence of the image does not represent the pastness of the temper tantrum automorphically: that image has the A-series property of presentness, so it can't *automorphically* represent pastness.

What we can conclude so far is only that films do not represent A-series properties strongly automorphically. Do films weakly automorphically represent A-series properties? Or, to put the point another way, must films depict some event or another as present? Since the image one sees at any given moment while sitting in the theater has the property of presentness, if films weakly automorphically represent A-series properties, then there must be some moment during the screening of a film in which the film depicts an event as present by means of the presentness of the image. Is this so? What would count as a counterexample?

A counterexample to the claim that films weakly automorphically represent A-series properties could be of one of three (possibly overlapping) sorts: (1) Films that represent no A-series properties at all, (2) films that represent all the events they represent as past or future, and none as present, or (3) films that represent some event as present, but do not do so automorphically. As will emerge, the best chance of finding a counterexample to the claim that films weakly automorphically represent A-properties is to find a film that falls into type 1. I'll take that case last. To see that it isn't possible for a film to fall into either type 2 or type 3, we need to reflect a bit further on the nature of A-series properties.

Both pastness and futurity come in degrees: both World War I and II are past, but World War I is further in the past, it is past to a greater degree than World

War II; plus, both events, every moment, have a bit more pastness than they had previously. Similarly, some future events are more future than others, and each future event's degree of futurity is shrinking every moment. What determines the degree of pastness or futurity of a particular event is the duration of the interval between the event and the present. Hence, an event cannot have any degree of pastness or futurity unless some other event has presentness. It follows that if an image represents an event as past, then it *ipso facto* also represents there as being some other event that is present; if there is a past event in a fictional world then some present event is also part of the fictional world.<sup>23</sup> There may be no *specific* event that is represented as present by an image that represents an event as past, but the image nonetheless represents there as being a present event. Also, no present event need appear on the screen when the image appears, but this doesn't imply that the image does not represent there as being a present event. Just as an image of a person's face ordinarily represents the person's head as having a back on it, even though it doesn't show the back of the person's head, an image of an event that represents the event as past also, and necessarily, represents there as being some present event, even if we are informed of nothing about the present event besides the fact that it is present. It follows that there can be no films of type 2.

For there to be a film of type 3, some image in the film would have to represent an event as present without doing so in virtue of the image's presentness. Images are never just time slices: rather they occupy a temporal interval during which there may or may not be changes in the content of the image. Technically, it is not the image which is present, but time slices of the image that are present at any given moment. If the image represents an event as present, but does not do so automorphically, then the represented present must not move with the actual present. That is, it must not be the case that when the image begins it represents the beginning of the event as present, and as the image's present moves the image represents the event's present as moving as well.<sup>24</sup> If the image represented the event as present in this way, then it would do so automorphically. What seems to follow is that if an image represents an event as present, but does not do so automorphically, then the image must represent the event's present as unchanging over the interval during which the image's present changes. That is, the image must only represent time-slice events, frozen moments. To give the viewer the impression that

23. It might be objected that there can be incoherent or incomplete fictions in which the logical consequences of something true in the fiction are either false in the fiction or, at least, not true in it. If this is possible, then it would be possible for a film to represent some event as past, and no event as present, despite the fact that if some event is past, then some other event is present. This is not, however, an effective objection: if a film represents some event as past, it does represent there as being a present event, even if it also represents there as being no present event. The possibility of incoherent or incomplete fictions shows that contradictions can be true in stories. In this case, the contradiction is that there both is and is not a present in the story; in which case the story does, still, represent there as being some events that are present.

24. In theory, I suppose, the movement of the event's present could be represented by something else about the image that changes as the image's present moves. Although I recognize this as a theoretical possibility, I can't imagine how this would actually work.



he is watching present objects move would be to represent the present automorphically. Thus, a film that represents some event as present but does not represent any event as present *automorphically* would have to consist entirely of discontinuous stills. Chris Marker's *La Jetée* is like this. If *La Jetée*, or any other collection of projected stills, is not a film, then we have shown that there can be no counterexamples of type 3 to the claim that films weakly automorphically represent A-series properties. However, it would be a mistake to say, flatly, that *La Jetée* is not a film; more correct, it seems to me, is to say that the case for thinking that *La Jetée* is a film is not based on the nature of the images of which it consists but, instead, on other considerations such as the fact that those images are accompanied by a soundtrack. Hence, the images in *La Jetée* do not represent time filmically. This claim, more plausible than the simple insistence that *La Jetée* is not a film, also serves to defend the claim that films weakly automorphically represent A-series properties.

We are left, then, with the possibility of films of type 1, films that represent no A-series properties at all of the events they represent. Can there be films of this sort? I think the answer is, No. The reason is that such a film would fail to homomorphically represent *duration*, and, as we've seen, films strongly homomorphically represent duration, and so no film can fail to homomorphically represent the duration of every event it represents. In the ordinary case (non-ordinary cases are discussed below), the homomorphic representation of duration proceeds by controlling the way in which the rate of change of the presentness of the image represents the rate of change of the presentness of the represented event. Put more intuitively, in the ordinary case the duration of the event is represented by the duration of the image by putting the viewer in the position of continuously being able to report on what is happening in the film through employing the indexical "now." The viewer, that is, can say things like "Now his coat is caught in the machinery. Now it's being pulled farther in. Now he's noticing it and is alarmed." The events are represented as occupying a certain amount of time by representing the "moving" presentness of the image as "moving" at a particular rate of speed that maps onto the rate of progression of the "movement" of the presentness of the represented event. If the presentness of the image didn't "move" forward in some way that corresponded to the forward "motion" of the presentness of the represented event, then the image's duration would not homomorphically represent the duration of the represented event; the duration of an event is the elapsed time from the beginning of the event's being present to the end of the event's being present. For the image to homomorphically represent the duration of the represented event, it must succeed in aligning the "motion" of the presentness of the image with the "motion" of the presentness of the represented event. Such an alignment requires automorphically representing the presentness of the image.

The argument just offered can be put more clearly using an example: I watch the image of the balloon rising from the child's hand and popping in the tree. My experience of the image is the experience of presentness moving from the image of the balloon leaving the child's hand to the image of the balloon popping. Since films strongly homomorphically represent duration, this movement of the pre-

sentness of the image homomorphically represents the duration of the event. What follows is that the movement of the presentness of the image must represent the movement of the presentness of the represented event. So, at any given instant, the presentness of the image automorphically represents the presentness of the time-slice of the event that the present image represents.

Although, if this argument succeeds, it follows that there are no films that fail to represent any A-series properties at all, it might seem also to follow that films strongly automorphically represent A-series properties, contrary to what has been argued above. After all, we might say, if the argument just offered works, then it shows that every instance of homomorphic representation of duration involves multiple instances of automorphic representation of presentness. If this is right, then we are brought back to the Claim of Presentness. But, in fact, this isn't right. For the moving presentness of the image need not represent the moving *presentness* of the represented event; it might, instead, represent the continuous movement of a given degree of pastness or futurity. Duration, that is, might be equated not with the elapsed time from the moment at which the beginning of an event is present to the moment at which the end of the event is present, but, instead, with the elapsed time from the moment at which, say, the beginning of the event is one-hour-past to the moment at which the end of the event is one-hour-past. So, the "moving" presentness of the image might represent the moving one-hour-pastness, say, of the represented event. This is the case in a standard flashback. The second occurrence of the image of Meadow's temper tantrum, for instance, represents the "movement" of (roughly) two-years-pastness from the beginning of the event to the end by way of the "movement" of the presentness of the image. Thus, in this case, in representing the duration of an event that is represented as past, the presentness of the image homomorphically, but not automorphically, represents the pastness of the event.

Now, if there could be a film of type 2, a film that represents A-series properties but represents no events as present, then, even given the argument just offered against thinking that there can be any films of type 3, it would still be possible for a film to fail to *automorphically* represent the A-series property of any event that it represents; the image's presentness would never account for the fact that the image represents the A-series property of presentness in a film that represents no events as present. However, there can't be examples of films of type 2, nor, as has been argued, of types 1 or 3, and so it follows that every film must represent some event's A-series property automorphically. That is, films weakly automorphically represent A-series properties. Further, we are in position to fill in the last piece of the puzzle: films must strongly homomorphically represent A-series properties, for they strongly homomorphically represent duration, and, as has been argued, the homomorphic representation of duration requires the homomorphic representation of A-series properties.

The result of this article so far, the general theory of the way in which films represent time that has been offered, is summarized in the following table. Here, "yes" or "no" answers the question of whether films represent the type of temporal property of the row in the manner of the column:

	Strongly Homomorphic	Weakly Homomorphic	Strongly Automorphic	Weakly Automorphic
Duration	Yes	Yes	No	No
B-series properties	No	Yes	No	Yes
A-series properties	Yes	Yes	No	Yes

### ANACHRONY, ELLIPSIS, SLOW- AND FAST-MOTION

The result of this article up to this point can be used to construct accounts of the familiar concepts of anachrony, ellipsis, and slow- and fast-motion, the most common ways in which films take liberties with the presentation of time. Currie notes that anachrony and ellipsis are closely linked.<sup>25</sup> He points out that, if time travel were possible, we would think of both travel forward in time and travel back and forth between the past, or the future, and the present as instances of the same single phenomenon. Of course, ellipsis is just like travel forward in time, and flashbacks and flashforwards are just like travel back and forth between the past or future, respectively, and the present. So satisfactory accounts of the nature of anachrony and ellipsis, like satisfactory accounts of the nature of trips into the future, and trips back and forth in time, will describe a more general phenomena of which they are both instances. Currie says that both anachrony and ellipsis involve the “violation of a cinematic norm” and the “violation of story time.”<sup>26</sup> As we’ll see, Currie is correct, but the idea can be given a more precise expression. However, I claim, once the idea is expressed precisely we find that Currie is wrong to claim that anachrony and ellipsis cannot be analyzed through appeal to the representation of A-series properties. Anachrony and ellipsis and, it emerges, slow- and fast-motion, are violations of the alignment between the A-series properties of the images and the A-series properties of the represented events.

First, consider the following relation that can, but need not, hold between an image and the event it represents:

Image  $R_k$ , representing event  $E_k$ , is *A-series aligned* with  $E_k$  over temporal interval  $[t_1, t_2]$  if and only if Over the interval from  $[t_1, t_2]$ ,  $R_k$ ’s degree of pastness (futurity) increases (decreases) at the same rate as  $E_k$ ’s.

So, for instance, if the duration of an event is automorphically represented, then during the interval over which the image of the event appears, it is A-series aligned with the event: the beginning of the image, say, recedes into the past at the same

25. Currie, pp. 219–220.

26. Currie, p. 220.

rate that the beginning of the event that it represents recedes into the past; the actual present, in other words, marches forward in lock-step with the fictional present.

Now notice what happens in a case like that of Meadow's flashback to her temper tantrum. The image of Meadow sobbing, immediately before the flashback, represents the sobbing as present (in fact, it does so automorphically). This image recedes into the past during the course of the flashback; however, the event it represents does not recede into the past at all. It doesn't begin to recede into the past until the moment that we return from the flashback. So, during the temporal interval occupied only by the flashback, the image representing Meadow's sobbing before the flashback is not A-series aligned with the event it represents. Notice that during the temporal interval that begins immediately after the flashback and includes only the second shot of Meadow sobbing, the image of Meadow sobbing *before* the flashback (an image which does not appear during the relevant interval) *is* A-series aligned with what it represents: the image represents the event as slightly less past than the image itself is past, but the image recedes into the past during that interval at the same rate as the event it represents. What the flashback does is to "reset" our conception of the location of the present within the fiction, but after the reset is complete, the earlier image returns to receding into the past at the same rate as the event it represents. Any temporal interval in which the location of the present is "reset" will be one with respect to which some image is not A-series aligned with the event it represents.

Notice that whether the image of Meadow's sobbing immediately before the flashback is A-series aligned with the event it represents (over the interval that includes only the flashback) depends on how we interpret the scene. Some might take the cut to the temper tantrum to show us what Meadow is thinking, and might even take the image of the temper tantrum to occupy the precise amount of time that the thought it represents occupies. So understood, the image of Meadow's sobbing before the cut to the temper tantrum is A-series aligned with what it represents during the interval in which the temper tantrum is shown. After all, so understood, the fictional present continues to march forward in lock-step with the actual present while the temper tantrum is shown, because what is really being shown is what Meadow is thinking as she sobs, and her episode of thinking occupies story time in the middle of her sobbing. Notice that this result is what we would expect to be the case: if we interpret the image of the temper tantrum as representing the contents of Meadow's thoughts, then the image of it is not, in fact, a flashback at all.

Cases of ellipsis also involve images that are not A-series aligned with the events they represent. To use an example introduced at the beginning, imagine that a film shows a couple embracing and then shows them adoring their new baby. Over the temporal interval including both images, the image of the couple embracing is not A-series aligned with the event it represents. It represents that event as present prior to the cut, but after the cut the image has receded into the past far less (roughly nine months less) than the event that it represents. However, over the temporal interval beginning after the cut, the image of the couple embracing is A-series aligned with the event it represents. The cut resets the location of the

present within the fiction, but after the cut the fictional present again moves forward in lock-step with the actual present.

So, although Currie would disapprove, let's define his term "violation of story time" as follows:

There is a *violation of story time* in film F during temporal interval  $[t_1, t_2]$  if and only if  $\exists R$  (R is an image in F representing event E, and R is not A-series aligned with E over  $[t_1, t_2]$ )

Every film containing anachrony, ellipsis, or slow- or fast-motion includes a violation of story time in this technical sense; this is the sense in which all of these phenomena are instances of a single type of phenomena. However, there are further distinctions to be drawn between violations of story time. First, there are those violations of story time in which the image that is A-series unaligned with the event it represents becomes past at a greater rate than the event it represents, and those in which the image becomes past at a lesser rate than the event it represents. Call the former violations of story time "lapses" and the latter "leaps." Flashbacks are instances of lapses; flashforwards and ellipses are instances of leaps.

Violations of story time can be distinguished in another way as well, using the following notion of continuity and discontinuity. Here  $R_1$  and  $R_2$  are images in film F representing events  $E_1$  and  $E_2$ , respectively;  $R_1$  begins at time  $t_1$  and  $R_2$  ends at later time  $t_2$ :

$R_1$  and  $R_2$  are *representationally continuous* over temporal interval  $[t_1, t_2]$  if and only if  $\forall E_k R_k$  (If  $R_k$  is an image representing  $E_k$  then ((in the story,  $E_k$  occurs after  $E_1$  and before  $E_2$ ) if and only if (in actuality  $R_k$  occurs after  $t_1$  and before  $t_2$ )))

Put roughly, two images are representationally continuous just in case the temporal interval between them is filled with images that represent the events that fill the temporal interval in the story between the events they represent.<sup>27</sup> The beginning and end of a continuous shot are ordinarily representationally continuous.

27. Notice that there is a problem with this definition, as it stands, that can only be solved by providing a full theory of the representation of space in films. Here's the problem: Imagine that the balloon's path from the child's hand to the tree is presented in a continuous shot in which the balloon fills the image. But imagine, also, that it is fictional that the child is watching the balloon throughout its entire trip. Is the beginning of the shot of the balloon representationally continuous with the end of the shot? We want it to be, but it's not clear that our definition says that it is. After all, the child's watching the balloon is not represented by any image that occurs in the interval, although it is fictional that the event occurs in the interval. The problem is solved, however, if the definition of representational continuity is revised to say that all of the events that are represented as *spatially continuous* with the events represented by the images are represented by images that occur in the interval. However, a theory of spatial continuity that will yield the right results would need to be supplied in order to supplement the definition in the necessary way. Providing such a theory would take us too far afield.

The distinction between lapses and leaps cuts across the distinction between representationally continuous and discontinuous images. When a story contains a lapse or a leap there may or may not be representational continuity between the image that begins the interval and the image that ends it. In the case of the temporal interval beginning and ending with images of Meadow sobbing, and containing the image of her temper tantrum, there is a lapse (the first image of her sobbing recedes into the past more quickly, over that interval, than the event that it represents), but there is not representational continuity between the beginning and ending images of her sobbing: there is an image that appears in the interval that does not represent an event that occurs in the fictional interval. On the other hand, in the case of a standard slow-motion shot, there is a lapse—imagine, for instance, that the image at the beginning of the shot recedes into the past by one minute, when the event that it represents recedes into the story’s past by only ten seconds over the course of the shot—but there is also representational continuity between the images at the beginning and the end of the shot: every event in the story that occurs in the interval is represented in the interval between the two images. Similarly, leaps can involve representational discontinuity (flashforwards and ellipses) or representational continuity (fast-motion). Thus, using the two distinctions, we are now in a position to offer accounts of four kinds of violation of story time:

*Flashback*: A lapse in which the beginning and ending images are not representationally continuous.

*Flashforward or Ellipsis*: A leap in which the beginning and ending images are not representationally continuous.

*Slow-motion*: A lapse in which the beginning and ending images are representationally continuous.

*Fast-motion*: A leap in which the beginning and ending images are representationally continuous.

A consequence of this account is that there is no deep distinction between an ellipsis and a flashforward. Flashforwards are typically followed by flashbacks, although this doesn’t always happen. But there is no general difference in the nature of films that employ ellipses and flashforwards. The difference, if there is a difference at all, is to be found only in the labels that we tend to give to the phenomenon.

The account has another result worth highlighting, a result that any adequate theory of anachrony ought to have. An account of anachrony ought to explain why it is that a viewer who watches only the flashback sequence will have no idea that he is watching a flashback. The reason is that what the flashback sequence does is to alter the way in which images that *precede* the flashback represent the A-series properties of the events they depict. What makes an image a flashback is not the way in which it represents the events it represents but, instead, the way in which other prior images represent the events they represent. The account offered here makes it possible to explain the intrinsic similarity between flashbacks and normal images, because the images that are not A-series aligned with the events they represent during an interval that contains a flashback are always the

images that precede the flashback, and not the images that are part of the flashback itself.<sup>28</sup>

## CONCLUSION

We began by noting the obvious: films represent time, and do so in a way quite different from the way in which other artistic media do. What we've seen is what this obvious truth really amounts to. The central insight, on which the view offered here is built, is Currie's: films employ their own temporal properties in order to represent the temporal properties of the events they represent; they "represent time by means of time." The distinction between automorphic and homomorphic representations marks two different ways in which a film might do this. And the distinction between strongly and weakly auto- and homomorphically representing is a distinction between two different kinds of necessity placed on filmmakers, in their decisions about how to represent time, by the very medium of film itself. What has been shown here is that the medium does impose restrictions, although the restrictions are different depending on the type of temporal property being represented. While there's no doubt that films can be transporting, there are various ways in which they employ, rather than escape, the temporal properties of the images the viewer encounters in the theater. However, despite all of the restrictions that the medium imposes, it also provides possibilities for variation in the representation of time that emerge when considering the nature of anachrony, ellipsis, and slow- and fast-motion. What emerges in the analysis of those concepts

28. This provides us with a tool to respond to one of Currie's objections to the claim that anachrony in films occurs through the manner in which films represent A-series properties. At one point, in his discussion of anachrony, Currie criticizes a view according to which the default is for images in films to represent the events they represent as present, but that this ordinary form of representation is overridden in cases of anachrony by, for instance, narrative cues (the characters look much younger, for instance). In criticism of such a view Currie says,

When I watch a film that contains anachronous material, I detect no difference between my experience of the images when they present material in standard order and when they deviate from that order. The theory we are considering postulates a functional discontinuity for which there seems to be no psychological evidence. (Currie, p. 202)

It seems to me that Currie is looking in the wrong place for psychological evidence for the functional discontinuity. The images that one is looking at during a flashback represent events in just the way that all images do when they are present. What has changed as a result of the occurrence of the flashback is what previous images, no longer being seen, represent. If we were to ask the viewer, while watching Meadow's temper tantrum, how far in the past her sobbing is in the story, the viewer would say that her sobbing is present. But, of course, the image of her sobbing is not present while the image of her temper tantrum appears, but it is the image of her sobbing that represents her sobbing and represented it as present prior to the beginning of the flashback. What this implies is that the viewer takes the image of her sobbing that preceded the flashback to represent the sobbing as present, during the flashback, even though the image has become past during that time. There is a functional discontinuity and there is psychological evidence for it, evidence to be found in the judgments of fictional A-series properties that viewers of the film are making while watching the film.

is that films that employ such techniques do something that, it might seem, only God can do: they freely transform the location of the present, and thus give to viewers the sense that the spotlight of the present—the spotlight that, in life, moves so doggedly to the right across the timeline—can be shined on any time.<sup>29</sup>

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