



Onward, Christian penguins: wildlife film and the image of scientific authority

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ABSTRACT

Within US media reactions to *March of the penguins*, animal images became an arena for displaced conflicts of human interest. This paper examines an intermediary step through which the film became a medium for social disagreement: conflict over control of the cultural authority to interpret animal images. I analyze claims to the cultural honorific of science made within disputes over readings of the film as evidence for intelligent design (ID). I argue that published refutations of this reading were largely misguided in that they tended to group arguments-for-ID with a suite of social-allegorical readings of the film. By failing to address essential differences between interpretations, critics of the arguments-for-ID necessarily overlooked their problematic and unexamined claim that the film shares the cultural authority of science. Furthermore, where critics of the ID readings might have challenged this claim, they often replicated it instead. This overarching failure critically to assess the status of the film's scientific authority may have resulted from audience expectations about the genre of wildlife films, the advertising strategy of the film's US distributors, and structural ambiguities within the film concerning its status as a scientific representation.

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1. Introduction

The cartoon by Bruce Eric Kaplan (Fig. 1), published in *The New Yorker* on 19 September 2005, plays on contestation over the control of the use of animal images. In this fictionalized scenario, one speaking penguin complains to another that its participation in a nature documentary has been distorted. What it thought would be art turned out to be something less desirable. Anthropomorphism through speech renders the subject of injury ambiguous; the figures might describe penguins, people, or some combination of the two. Thus, the cartoon implies that animal images can become arenas for displaced conflicts of human interest.

The penguin theme links Kaplan's commentary to a contemporary dispute in US media over the interpretation of the film *March of the penguins* (*March*).¹ Directed by French biologist and filmmaker Luc Jacquet and credited as the second highest grossing

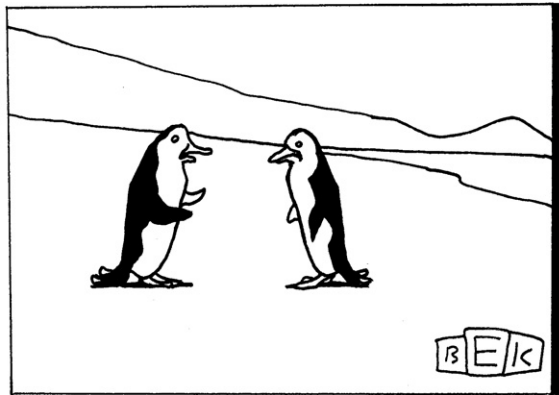
documentary in US history (behind *Fahrenheit 9/11*), *March* depicts the breeding cycle of Emperor penguins in the Antarctic.² Just like the displacement implied in Kaplan's cartoon, the dispute over *March* in the media was more about broad cultural disagreement than it was about either the film or actual penguins. In this paper, I examine an intermediary step through which the film became an arena for disagreement about social agendas: conflict over the cultural authority to interpret animal images. In particular, I analyze claims to the cultural honorific of science that were made in support of different readings of the film. In other words, this paper is about the cinematic appropriation of the image of scientific authority.

Conflict in the media stemmed partially from Christian interpretations of the film as evidence for intelligent design (ID), the allegedly scientific theory that a knowing designer created the universe, and all of its inhabitants, with a discernable purpose. ID is

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¹ The dispute originally at issue in US media was later described in UK media, from which some of my sources are taken. The original film was French and gave the penguins' voices. As the focus of this paper is a US dispute, I consider only the English version, for which Jordan Roberts wrote a new soundtrack using disembodied voice-over.

² Miller (2005), Sect. F, p. 2, col. 2; Jacquet (2005).



"It was years ago, for a nature documentary, and they said it was going to be very artistic."

Fig. 1. Penguins complain of exploitation (Kaplan, 2005; used with the permission of Cartoon Bank).

essentially a new creationism adopted in response to US legal pressures concerning educational policies, and modified from its predecessor primarily through its claim of scientific validity.³ Viewer postings on one Christian website commented of *March*, 'testifies to a Divine Creator', 'an example of our Creator's design', and, 'evidence of a designer'.⁴ A Christian magazine reviewer reported of the film, 'That any one of these eggs survives is ... a strong case for intelligent design'.⁵ Secular and scientific journals published these and similar quotations alongside heated refutations: 'If that is intelligent design, the Big Guy has quite a sense of humor'; and, 'Invite an advocate for "intelligent design" to [a screening]. After ... ask for an explanation of just what the Designer had in mind here'.⁶ Jacquet protested, 'I am a scientist ... My film is not supposed to be interpreted in this way'.⁷ The fact that the US was simultaneously embroiled in its third major court case since the 1960s regarding the teaching of evolution, and not ID, in public school biology classrooms made critiques of the ID analysis of *March* all the more urgent.⁸

Despite their urgency, these critiques were largely misguided in that they tended to group arguments-for-ID with a suite of social-allegorical readings of the film, thereby ignoring critical differences between interpretations. In Section 2 of this paper, I argue that by failing to address these differences, critics of arguments-for-ID overlooked their central weakness: lack of justification for claims of the scientific authority of the film. Further, where they might have challenged this claim, critics of the ID readings often replicated it instead. In Section 3, I suggest that the failure of both sides of the ID conflict critically to assess the status of the film's scientific authority may have resulted in part from audience expectations about the genre of wildlife films coupled with the advertising strat-

egy of the film's US distributors. I also offer an alternative explanation of this failure based on my own analysis of ambiguities in the film's status as a representation of scientific information and perspectives.

2. Misguided critiques: an analysis of media objections to arguments-for-ID

Media critics from the secular and scientific press often conflated arguments-for-ID with other non-scientific religious or social readings of the film. Andrew Sullivan described claims that *March* was good for evangelical Christians and supportive of heterosexual monogamy in the same list of complaints as the claim that the film supported ID.⁹ In a similarly broad grouping of issues, Jonathan Miller recounted claims that *March* supported the anti-abortion movement, promoted monogamy and ID, and 'soft-pedaled' evolution and global warming as explanations of its appeal to conservatives.¹⁰ David Smith described the ID interpretation of the film along with other assertions that it supported traditional family values.¹¹ The amalgamation of these issues ultimately impeded the critiques that were launched at them.

Having conflated a wide variety of readings of the film, critics of these interpretations were then forced to voice their objections in broad and untailored responses that tended to focus on supposedly inappropriate projections of social agendas onto the film. After his list of complaints, Sullivan protested, 'Not everything is political. And not everything is about us'.¹² In refutation of his group of undesirable claims, Miller offered the US distributors' insistence that, 'the movie is simply a tale about penguins and that any attempt to divine a deeper meaning is misguided'.¹³ Similarly, in rebuttal against his own collection of objectionable interpretations, Smith quoted US distributor Adam Leipzig as commenting, 'It's not a film with a political and social agenda'.¹⁴ The subsumption of ID interpretations within a group of social-allegorical readings inhibited directed objections to these arguments and led instead to broad refutations of social readings of the film in general.

This broad response to arguments-for-ID simultaneous to other readings of the film was particularly problematic because the general objections raised were often weak. They deplored the projection of social agendas onto the film. But the film's allegorical appeal to US religious audiences, whose Puritan genealogies have been passed down by John Bunyan's Christian allegory *Pilgrim's progress* alongside the Bible, seems both clear and justifiable.¹⁵ One minister who organized church trips to the film commented on this allegorical appeal, 'The penguin is falling behind, is like some Christians falling behind. The path changes every year, yet they find their way, is like the Holy Spirit'.¹⁶ Journalist Michael Medved attributed the film's success partially to feelings of exclusion from mainstream media on the part of a broad swath of Christian audiences who feel their traditional family values of self-sacrifice, monogamy, and childrearing are underrepresented in mainstream cinema.¹⁷

³ For an in depth discussion of the history and theory of intelligent design, see Tammy Kitzmiller, et al., plaintiffs, v. Dover Area School District, et al., defendants (2005).

⁴ Helms (n.d.), Viewer comments.

⁵ Coffin (2005).

⁶ Goodman (2005); Kennedy (2005), p. 1494.

⁷ 'Penguins' director: Christians hijacked my film (2005).

⁸ Tammy Kitzmiller, et al., plaintiffs, v. Dover Area School District, et al., defendants. (2005).

⁹ Sullivan (2005).

¹⁰ Miller (2005), Sect. F., p. 2, col. 2.

¹¹ Smith (2005).

¹² Sullivan (2005).

¹³ Miller (2005), Sect. F, p. 2., col. 2. This is Miller's description of the distributors' reactions.

¹⁴ Smith (2005).

¹⁵ Bunyan (1960).

¹⁶ Miller (2005), Sect. F, p. 2, col. 2.

¹⁷ Ibid.

These audiences could identify with the image of a penguin community embattled by external forces and turning inward for support.

US religious audiences who believe in ID are arguably even more receptive to stories about isolation and embattlement as a result of their strained relationship with mainstream America. Richard Lewontin describes the conflict between creationism and evolution as rooted in historical, regional, and class differences that extend back to the rural populism of poor southwestern farmers and miners in the early twentieth century.¹⁸ Based on this history, Lewontin argues that the 1950's national project to update and unify school biology curricula and include evolution was viewed by some as a renewed federal imposition on families' control of their children.¹⁹ Similarly, Stephen Jay Gould describes the rise of creationism as a misconstrued response to valid complaints about scientific elitism and 'faceless' state bureaucracy.²⁰ The relevance of these class analyses to the cultural contestation over the meaning of *March* was further revealed in viewer complaints about the price of watching the film in theatres. One posting on ChristianAnswers.net commented, 'I would see *March of the Penguins* again, but not in the theater—in the cost-effective, comfort of my living room'.²¹ *March's* story of community perseverance in the face of hostile forces may have had additional appeal to the classed and regional historical identities of the ID community.

It is no wonder, then, that social–allegorical readings of the film gained so much influence among US religious audiences. In fact, there is much to support these interpretations in even a cursory reading of the film. Beginning with the opening montage of breathtaking aerial shots of a pristine icescape comes the voice of narrator Morgan Freeman, who, notably, had already played God in one Hollywood movie and was working on the sequel.²² After describing the fall of Antarctica's climate from a previously tropical paradise to its present harsh state, he comments, 'As for the former inhabitants, they'd all died or moved on long ago. Well, almost all of them. Legend has it that one tribe stayed behind . . . whatever their reasons, these stalwart souls refused to leave'.²³ This introduction of the penguins as a lone 'tribe' of 'stalwart souls' struggling in the aftermath of a lost paradise marks the first implicit but readily legible comparison with God's chosen people.

In the next sequence, the penguins emerge from the safety and comfort of the water to begin a 'long, dangerous, and seemingly impossible journey' on land.²⁴ Like the soul's journey on earth, they have to forge their own path amidst a series of 'roadblocks'. Upon arrival at the breeding ground, they first choose a mate and then are 'severely tested', like Christian in *Pilgrim's progress*, by external forces such as cold and seemingly unbounded darkness. 'For those who began their march too late or have fallen behind', Freeman warns, 'hope of survival is now remote'.²⁵ This statement, which easily could suggest weakness of faith or rebellion, is reinforced by an im-

age of an ice cave, bathed in the red light of sunset, with frozen stalactites pressing down from the top of the frame. The entire image is bright red like a picture of the gates of hell. Ice structures become an expressive medium for theological associations. Visually, lack of survival implies lack of salvation. Space for such a religious interpretation was even implicitly promoted by Jacquet, who commented, 'My intention was . . . to leave [the story] open to any reading'.²⁶ Despite his contradiction of this statement in relation to ID specifically, Jacquet's insistence on interpretive flexibility is powerful license for more general social–allegorical readings of the film.²⁷

This clear potential of *March* to portray a religious message invalidates the objections that the entire array of social–allegorical readings of the film was an inappropriate projection of social agendas. Furthermore, by failing to differentiate arguments-for-ID from other allegorical interpretations, the secular and scientific media necessarily overlooked what I argue was the true weakness of the ID interpretation that was not shared by most other religious readings: an uncritical assumption of the film's scientific authority.

ID proponents regard ID as scientific theory. As one pro-ID website, Intelligent Design Network, puts it, ID is, 'a scientific disagreement with the core claim of evolutionary theory'.²⁸ Arguments that ID is science are exemplified in an article by the Vice President of the Discovery Institute, one of the main US centers of intelligent design work, 'The scientific status of intelligent design: The methodological equivalence of naturalistic and non-naturalistic origins theories'.²⁹ From this perspective, support for ID, filmic or otherwise, must also be scientific. This assumption that *March* rested on strong scientific authority was clear in ID interpretations describing the film as, 'evidence', 'a strong case', and something that, 'testifies'.³⁰ Although all of these words signify legal as well as scientific authority, they imbue the film with an implied objectivity that shares the cultural authority of science. Most importantly, they do so without critical reflection or justification.³¹

Finally, and perhaps most surprisingly, not only did secular and scientific media critics fail to challenge this unexamined claim to the film's scientific authority, but also, where they might have done so, they often replicated it instead. In response to the ID controversy, Jacquet rejoined, 'Some scientists I know find the film interesting because it can be a good argument against intelligent design'.³² By offering the film as an aid to scientists' arguments, this quote uncritically assumes the film has scientific potential, now mobilized against arguments-for-ID. That statement appeared in an article titled "'Penguins' director: Christians hijacked my film' (2005), implying that the Christian interpretation was an unjustified appropriation of the film for use against Jacquet's own scientific values. Similarly, US distributor Leipzig commented, 'We did not have discussions of what should be in [the film] from a social, cultural or political perspective at all. We just wanted to make sure that it was accurate'.³³ This statement exemplifies a mistaken concept that

¹⁸ Lewontin (1997).

¹⁹ Ibid.

²⁰ Gould (1994), pp. 253–262.

²¹ Helms (n.d.).

²² *Bruce almighty* (2003) (n.d.); *Evan almighty* (2007) (n.d.).

²³ Jacquet (2005).

²⁴ Ibid.

²⁵ Ibid.

²⁶ Miller (2005), Sect. F, p. 2, col. 2.

²⁷ See above for Jacquet's comment on ID interpretations of the film.

²⁸ Intelligent Design Network, Inc. (n.d.).

²⁹ Meyer (2005).

³⁰ Helms (n.d.), Viewer comments.

³¹ An in depth analysis of the status of the film's scientific authority comes later in the paper. Here, I note only that proponents of the arguments-for-ID did not themselves justify their assumptions.

³² 'Penguins' director: Christians hijacked my film (2005).

³³ Miller (2005), Sect. F, p. 2, col. 2.

visual material becomes accurate by being able supposedly to stand alone, uncontaminated by social context. Accuracy through social disembodiment is also typically attributed to scientific observations. Hence, Leipzig's description of the film, like claims to its objective authority, functions again as an attempt to share in the cultural honorific of science. Through uncritical replication of claims to the film's scientific authority on which the ID interpretation was founded, secular and scientific media critics in some ways reinforced the very arguments-for-ID that they were attempting to destabilize.

3. Explanations: consumption, presentation, and production

Unjustified assumptions of the scientific status of the film *March of the penguins* by religious, secular, and scientific critics alike can in part be attributed to patterns of consumption, or viewer expectations. The work of three theorists in particular informs my suggestion here. Christopher Williams argues that viewers are disposed to regard film sequences as realistic because of cultural tendencies resulting from nineteenth-century popular understandings of photography and film as mechanically accurate reproductions of the visual world.³⁴ Similar assumptions about 'mechanical objectivity' have also historically lent visual technologies a privileged scientific status.³⁵ Hence, widespread ideas about the scientific value of film may have influenced viewer reactions to *March*. Jonathan Burt adds to this analysis the idea that the strong emotional connotations of animal imagery make viewers particularly inclined to disregard filmic artifice.³⁶ Anthropomorphism in particular may have inhibited viewers' critical perceptions. Finally, Derek Bousé points out that wildlife films operate according to conventions of entertainment art, rather than scientific criteria, because the neutral objectivity that is the goal of scientific observation would never survive the ratings-driven television market.³⁷ Yet, Bousé also argues that filmmakers must conceal this fact in order to maintain their documentary appeal.³⁸ The more sophisticated filmmakers' manipulations become, the more likely audiences are to interpret them as scientific.³⁹ All of these patterns must have contributed to viewer reactions to *March*.

Presentation, or the advertising strategy of the film's US distributors, may also have influenced uncritical claims to the scientific authority of *March*. The film's official US website plays up Jacquet's scientific identity. According to the site, Jacquet began filming penguins in response to an advertisement that read, 'looking for fearless biologist, ready to spend fourteen months at the end of the world' (alternately known as the Base Scientifique Dumont d'Urville).⁴⁰ The website also lauds the scientific credentials of cameraman Jérôme Maison, attributing to him, 'a good deal of marine biology experience'.⁴¹ Co-distributor National Geographic describes itself on the same site as, a 'nonprofit scientific and educational organization ... [which] has funded nearly 8,000 scientific

projects'.⁴² And the film's opening credits reinforce this aura of scientific purpose by announcing that it was created, 'In Association with the French Polar Institute (IPEV)', in turn described on the website as 'an agency which ... supports national research laboratories attached to institutions whose mission is scientific research'.⁴³ In short, the distributors showed off the film's scientific pedigree.

Furthermore, the formal aesthetic and structural elements of the film also, of course, influenced viewer reactions. To consider this impact, I provide a verbal, sequence, and shot analysis through which I evaluate the film's status as a representation of scientific information and perspectives. In verbal elements of the film, there appears to be little science to explain viewer interpretations. Indeed, the absence of science seems in some ways necessary to the film's allegorical potential because this absence unfixes the meaning of images, encourages anthropomorphism, and thereby opens up space for allegorical readings. The film's allegorical potential is founded in part on verbal anthropomorphism that precludes verbal transmission of scientific information.

For instance, in one scene depicting a confrontation, Freeman states, 'They're not that different from us, really. They pout, they bellow, they strut, and occasionally they will engage in some contact sports'.⁴⁴ This anthropomorphic reading of complex avian behaviors ignores scientific experimentation about the biological mechanisms for, and significance of, these behaviors.⁴⁵ In so doing, it freights on-screen images with human social relevance. There are also other examples of this kind of verbal mythmaking. The film fails to name the species of a large predatory bird attacking a chick.⁴⁶ Here, the lack of verbal species identification—normative in science—is again a vagueness that indicates a broad allegorical canvas of hostile forces. Such fictionalizations appear consistently throughout the narrative. At one point in the film, two penguins stand with their beaks wrapped around each other and their chick carefully sheltered between both pairs of feet as the voice-over comments, 'Occasionally, the new family can actually spend some time together'.⁴⁷ This statement encourages viewers to interpret the image according to human cultural understandings of quality family time. The dramatic love story guides viewers to interpret images according to cultural understandings of human love, obscuring the possibility of scientific explanations because there is a presumed incommensurability of love and biology. Biologist Gerald Kooyman exemplified this incommensurability in his comment about the film, 'A lot of what looks to us like love or grief is probably hormonally driven more than some kind of attachment'.⁴⁸ If other viewers shared Kooyman's implied assumption that hormonal and emotional explanations of behavior are mutually exclusive, or even just different, then they would have been led to downplay scientific explanations. Indeed, a scientific explication would necessarily censor the anthropomorphic, and hence also the allegorical, power of the love

³⁴ Williams (1980), p. 2.

³⁵ Daston & Galison (1992).

³⁶ Burt (2002), pp. 10–11.

³⁷ Bousé (2000), pp. 7, 153.

³⁸ *Ibid.*, p. 8.

³⁹ *Ibid.*

⁴⁰ Warner Bros Entertainment Inc. (2005a).

⁴¹ Warner Bros Entertainment Inc. (2005b).

⁴² Warner Bros Entertainment Inc. (2005c).

⁴³ Jacquet (2005); Warner Bros Entertainment Inc. (2005d).

⁴⁴ Jacquet (2005), *March of the Penguins* (2005).

⁴⁵ Guillottin & Jouventin (1979).

⁴⁶ The bird appears to be a Giant petrel.

⁴⁷ Jacquet (2005).

⁴⁸ As quoted Mayell (2005).

story. The allegorical qualities of the *March* narrative inhabit precisely the spaces opened up by the deliberate absence of scientific information.

In addition to the avoidance of scientific information, the very choice of words in the narration actively conceals scientific procedures. On 3 January 2006, I interviewed bio-psychologist Ethel Tobach about the status of science represented in *March*.⁴⁹ She complained that the film mystifies behaviors, such as penguins' vocal recognition of each other, by excluding the scientific processes through which they are revealed. The voice-over comments of this particular ability, 'Somehow, each of them will hear their mate's song'.⁵⁰ The word 'somehow' obscures the mechanisms of this behavior and elides the scientific experimentation from which the observation in the narrative is originally derived.⁵¹ This concealment of the process of production of scientific knowledge implies that absence of scientific information in the film is inevitable. In other words, *March* constructs an anthropomorphic allegory founded on the absence of scientific information, and then naturalizes its own narrative by concealing the means of production of the absent information, or the mechanism for an alternative scientific construction.

Although verbal elements of the film appear to contradict, not explain, viewer assumptions that the film has scientific authority, the status of visual sequential elements in the film as representations of scientific information and perspectives is more ambiguous. These elements contain some potential sources for the film's credibility as science. For instance, the camera position is predominantly that of an invisible, third person perspective. Viewers easily may associate this perspective with notions of distanced objectivity that often share the cultural honorific of science. But this explanation is also problematic because the camera betrays this distance at certain points in the film, aligning itself instead with the point-of-view of the penguins and encouraging viewers to identify with fictional on-screen characters. One of these sequences is a classic suture sequence. As the penguins travel to the breeding ground, the camera shows a close up of one bird's face as it turns its head horizontally and presents an eye to the viewer. Next, the film cuts to a slow pan of the horizon, presumably what the bird is seeing, although penguins clearly must view the world differently from us, or from a screenshot. The following shot returns to the same bird, still turning its head. Another sequence uses slow motion to portray the fictionalized memory of a grieving penguin character. Three shots of a mother penguin nudging the carcass of a chick with its beak are inter-cut with two extreme slow motion close-ups of a penguin caressing a live chick, seemingly representing the mother's memory of better times. This cinematic convention is generally and recognizably applied to humans. The obvious visual distortion of reality is arguably less deceptive than effects whose manipulations are more actively concealed.⁵² But despite a modicum of self-referential honesty, this sequence functionally resembles the suture sequence in its anthropomorphizing gaze. In both of these cases, editing techniques reinforce the anthropomorphism that I have already shown to be verbally connected to an absence of represented scientific information and procedures. As such, these visual sequences also structure a larger absence of science in the film.

This inconsistency of the camera's perspective, sometimes functioning as a distanced observer and other times as an anthropomorphizing gaze, is further complicated by ambiguities in the scientific status of individual shots. Some shots contain scientifically relevant information embedded in the very non-scientific blur of the surrounding images. Hence, when Tobach, a professional scientific observer, watched the film, she first was able to identify that certain images correspond with known behavioral traits. Only after this was she able to detect that the verbal voice-over is lacking explanatory scientific information. Although they are inevitably mediated by technology and aesthetic preferences, single shots in the film contain legible information about their original referents. Where these referents are scientifically relevant, individual shots transmit scientifically relevant information. In so doing, they may support viewers' uncritical assumptions of the film's scientific authority.

Nor is filmic realism the only potential scientific representation in individual shots; they may also transmit scientific perspectives. The most fascinating and problematic image in the film in terms of scientific authority is an underwater shot taken from a camera strapped to a penguin's back. The penguin's beak and the top of its head are visible at the bottom of the frame as it swims around some ice and hunts fish. This image, like the suture and memory sequences, positions the viewer in the penguin's point-of-view. But rather than the artificiality of editing techniques, it uses physical contact of the camera with the penguin's body to accomplish this convergence. In this sense, it is even more anthropomorphizing than the edited sequences. Once again, as I have already argued that anthropomorphism is verbally connected to an absence of science in the film, it seems that this anthropomorphic underwater shot must also be implicated in this process.

Yet this shot also indicates the presence of science; it represents a scientific procedure. A National Geographic short attached to the *March* DVD depicts a biology experiment conducted at Penguin Ranch, Antarctica, in which scientists strapped a device including a video camera onto an Emperor Penguin's back in order to record experimental data about penguin hunting strategies.⁵³ The images produced by this device appear almost identical to the underwater shots from *March*. Once again, the top of the penguin's head is visible at the bottom of the frame as it swims around in search of fish. Elements of a certain way of seeing are shared between the film and the scientific experiment, rendering uncertain the scientific authority of this shot in *March*. On the one hand it anthropomorphizes, on the other it replicates a scientific perspective.

The work of two theorists in particular is useful in considering the significance of this ambiguity. Helen Macdonald argues that the complex construction of objectivity in ethology includes emotion, that is, 'professional empathy' of observer with observed.⁵⁴ Accordingly, it is possible that the scientific perspective contained in the underwater shot in *March* may stem from this particular tradition of 'professional empathy', as distinguished from other socially based anthropomorphic structures in the film. Alternatively, Gregg Mitman argues that narrative cinematic conventions have influenced the cognitive structures of science as a whole, and of animal behavior research in particular.⁵⁵ In this sense, the shared perspective of the *March* shot and the scientific experiment may be an example

⁴⁹ Wexler (2006).

⁵⁰ Jacquet (2005).

⁵¹ The film's website attributes knowledge of this process to scientific experimentation by Pierre Jouventin, Centre d'Éducation Fonctionnelle et Évolutive (CNRS). See also Aubin et al. (2000), pp. 1081–1087; Searby (2004).

⁵² Bousé (2000), p. 8.

⁵³ Beaudry (2003).

⁵⁴ Macdonald (2005); cited with permission of the author.

⁵⁵ Mitman (1993), p. 641.

of cinematic anthropomorphic techniques imported into science. Regardless of its origin, this representation of an undeniably scientific perspective in an anthropomorphic and narrative shot is a further inconsistency that may partially explain viewer assumptions that the film shares the cultural honorific of science.

Nevertheless, despite a certain level of possibility, although ambiguous, for individual shots to transmit scientific information and ideas, these images cannot maintain their own scientific authority when placed in the film as a whole. The meaning of single images, or even single sequences, changes when viewed as part of a moving film. Indeed, Paul Virilio and Sylvere Lotringer argue that it is the speed of movement between, and interruption of, images that characterizes cinema.⁵⁶ In other words, the speed of movement creates violence in the experience of the viewer, preventing her or him from absorbing information from one image without first being bombarded with the next. Hence, although *March* may transmit some scientific information and perspectives through individual shots, the fact that these shots are located within a broadly allegorical and moving framework structured by the general absence of science inhibits their retention of scientific authority.

4. Conclusions

Secular and scientific media critics' responses to ID interpretations of *March* conflated ID with other social-allegorical readings of the film, overlooking and replicating unjustified claims that the film shares the cultural honorific of science. The failure to challenge, or even to examine, these claims may have stemmed in part from genre expectations about wildlife films, from advertising, and from ambiguous elements of the film itself.

Ultimately, the central issue examined in this paper is the image of scientific authority in wildlife film, an issue that is highly politicized. One logical reason that the *March* and ID conflict received so much media attention was the simultaneous judicial examination of the legal and scientific status of ID in the Dover, Pennsylvania school district trial.⁵⁷ In this larger sense, Kaplan's *New Yorker* cartoon is a warning. Images and representations, be they of animals, of humans, or of scientific authority, made under pretext of one purpose can become distorted for less desirable uses. The status of the cultural authority of science has an effect on the production of laws and norms, so this paper also shows that lack of sophistication in claims to the cultural authority of science might confuse or inhibit optimal outcomes in that arena. To prevent this, a more critical approach to staking claims to the cultural honorific of science is needed, even by scientists themselves, probably to be developed through a historical, philosophical, or sociological perspective.

I suggest in particular that the *March* ID dispute might be a starting point from which to interrogate more broadly the status of film as a medium of scientific representation. Current scholarship in the history and philosophy of science concerning technologies of scientific perception has tended to focus on still images. Far less work has been done on moving images in science, and even less, if any, on the relationship between the two. Connecting these perspectives could provide a structure with which to understand how individual scientific images embedded in a film are contextualized.

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⁵⁶ Virilio & Lotringer (1997), p. 41.

⁵⁷ Tammy Kitzmiller, et al., plaintiffs, v. Dover Area School District, et al., defendants (2005). Given weaknesses around the issue of science in arguments against the ID interpretation of *March* that appeared in the general press, it is all the more impressive how thorough and exact Judge Jones's own argument against the scientific status of ID was in the opinion he rendered on the case.

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