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# In Search of... a Third Culture: Towards an Experimental Science and Nature Cinema

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## Abstract

This essay attempts to move beyond C.P. Snow's reductive formulation of the two cultures, positing a third culture forged out of the collision of science documentary television with the avant-garde traditions of the cinema. In particular, I use both scientific and humanistic understandings of memory to compare and contrast a science television program, "Understanding the Mysteries of Memory" (Science Channel, 2002) with an avant-garde film, *Report* (Bruce Conner, 1967).

**[Keywords:** Natural History, Experimental Cinema, "The Two Cultures", C.P. Snow, Avant-garde, Memory, Science Filmmaking, Critical Realism]

## Introduction

Throughout the history of cinema, groups of filmmakers have grown tired of conventional practices and attempted to re-invent them using avant-garde techniques. With *Un Chien Andalou* (1929), Luis Bunuel and Salvador Dali suggested that the rationalist narrative practices of the mainstream cinema be overwritten by a Surrealism driven by the unconscious. For Bunuel and Dali, this was a political project: the rationalism of mainstream social life had unleashed the devastation of World War I; the only sensible response, the filmmakers implied, was an embrace of the irrational.

Similarly, in the 1950s in the United States, Stan Brakhage postulated that Hollywood cinema had ruined people's ability to see, and proposed returning to a child-like spectatorial state in order to re-invent the world. Brakhage published these theories of vision, and allegorized them in his filmmaking: In *Reflections on Black* (1954), for example, the main character, a lost urbanite who appears to be in a trance, wanders up the stairs of a tenement house. He has no eyes, for Brakhage has scratched off the film emulsion around his ocular cavities.

Assigned to teach science and nature filmmakers at Montana State University, I began encouraging them to embrace the avant-garde in this way. The continued popularity of a documentary form of science and nature programming that has changed precious little in the past 100 years makes it ripe for similar avant-garde revisions. In this article, I suggest that the avant-garde mode be productively brought into contact with the genre practices of science and wildlife films.

Experimental cinema has a history as nature art, from *L'Age d'Or* (Luis Bunuel and Salvador Dali, 1930), which begins with scorpions' claws defined reflexively as organs "of battle and information," as apt a description of Bunuel's oeuvre as I have ever encountered; to *Mothlight* (Stan Brakhage, 1960), which squashes moths between leader yet projects their images on the screen, thus using cinema projection to bring the

dead insects back to life; to *Cremaster 3: The Order* (Matthew Barney, 2003), which uses a mythological structure to represent the sexual relationship between a male hunter/warrior and a female leopard.

Experimental cinema, science, and natural history have unexpected linkages, if we only bother to seek them out. In this essay, I will use an intertextual method to connect the genre of science filmmaking to the avant-garde tradition. I will examine science film using the representation of memory in recent television documentary and the 1960s American avant-garde. Via the case study, I want to suggest the opportunities not taken by current conventional television documentary, and point to the possibilities of conceiving of these forms in experimental terms.

### **Memory and the Two Cultures**

To connect a conventional television documentary about memory to the traditions of the avant-garde requires a pointed belief in the power of interdisciplinarity. At face value, a turn to the avant-garde might seem to violate the basic tenets of science. For, if *Un Chien Andalou's* embrace of the irrational is to be foregrounded, scientists might reply that there is no possible connection available to the scientific method, an Enlightenment tool of rationalism. However, this seems to give the game away too early. What if a cultural concept such as memory were seen to be definable according to different methods? To guide me in this line of reasoning, I will perform an application of the Darwin College Lectures on the topic of memory to two very different films: "Understanding the Mysteries of Memory," a Science Channel documentary first aired in the United States in 2002; and *Report* (1967), Bruce Conner's experimental film about the Kennedy assassination.

This analysis will demonstrate that the science of memory cannot just involve neurobiology, but also the phenomenological realities of human culture pertaining to recollection, which happen to lie at the cornerstone of great film art. In fact, the capture of memories is one of cinema's central missions. Groundbreaking cinema such as *Report*, seen in the light of the scientific impulse of television documentary, allows us to theorize media and culture anew.

In their anthology of one of Cambridge University's Darwin College lectures series, Patricia Fara and Karalyn Patterson assemble an interdisciplinary set of scholars, ranging from humanists to scientists, to analyze memory as a concept of human experience. The book begins with humanities scholarship and ends with neurobiology. In the first essay, Richard Sennett details the differences between individual and collective memory, applying this distinction to how subsequent conquerors of the city of Jerusalem needed to shift the center of the city in order to change inhabitants' memories as they impinged upon their political interpretations of history. At the book's end, after a journey through psychoanalysis, Terrence Sejnowski writes about the current state of neurobiological understanding of memory and neural networks.

Fara's and Patterson's book makes headway in moving beyond C.P. Snow's famous binary of "The Two Cultures." Without refuting neurobiology's claims to knowledge, Sennett's essay de-centers what science does well, arguing that memory as a human endeavor transcends the individual brain, leading him toward a collective conception of human memory. Often, in attempts at interdisciplinarity, the humanities

cedes too much of the definitional game to the hard sciences, therefore making science's superiority to the humanities a *fait accompli*.

"Understanding the Mysteries of Memory" begins with sentimental music covered by stock imagery of children playing, accompanied by a male voice-over narrator speaking innocuous platitudes such as, "memory lets us glimpse our past" and "memory can lie." This initial teaser sequence is followed by a high-gloss credit sequence featuring music with a driving beat, purportedly to keep our attention and encourage us to resist changing the channel. Stock images of volcanoes, human brains, sharks, and DNA molecules tell us that we are about to watch a presentation of exciting scientific facts.

The show comes to rest on the story of Chris Webber, an NBA player who, in the NCAA championship, forgot that his team had no more time-outs, and thus caused them to lose the game. The narrator tells us that Mr. Webber wishes he could forget this particular lapse in his memory. This B-roll footage is then cut together with two face-the-camera interviews with scientific experts: Daniel Schacter, Ph.D., a Professor of Psychology at Harvard University, and Barry Gordon, an M.D./Ph.D. in Neurobiology from Johns Hopkins University. Dr. Gordon explains that there is a difference between the implicit memory system (programmed body movements, such as the memory of how to catch a ball) and the explicit memory system (such things as short- and long-term memory).

"Understanding the Mysteries of Memory," with its standard B-roll and cuts to authoritative scientists, is intellectually dull cinema. I do not debate the importance of the neurobiological understanding of the human brain, but simply demand a cinema that is as artistically interesting as are the scientific facts that it conveys. For this purpose, I suggest, we could turn to the experimental cinema of Bruce Conner, a cinema that implies that cultural meaning must be wrung out of film images via intensive editing. Here, following Sennett, I refuse to cede the definitional ground to neurobiology. *Report* is as much a film about memory as is "Understanding the Mysteries of Memory," if we define memory as a process that also includes collective experience as well as the neurons firing in an individual brain.

To cultural historians, discussing a film about the Kennedy assassination as a film about memory does not seem surprising at all. The question of where one was during the Kennedy assassination has become a kind of cliché for discussing cultural memory. Narrative films use the images of the Kennedy assassination to fix their characters at one moment in 1963 when American culture changed inexorably. As just one example, in *Mermaids* (Richard Benjamin, 1990), Charlotte (Winona Ryder), in the midst of a teenage romantic debacle, stops dead in her tracks as she sees the first report of the Kennedy assassination on a television screen in a downtown department store window.

Academic scholarship about *Report*, however, has not used the film for the purpose of analyzing collective memory. In his discussion of the film in *Allegories of Cinema: American Film in the Sixties*, David E. James does not once use the word memory. In his insightful analysis of the film, James argues, "Although its subject is the assassination of President Kennedy, its real purpose is to indict the media and its role in

the American way of life, even implying that the corporate interests manifested in the media are complicit in Kennedy's death" (157). I am unwilling to limit the open-endedness of *Report* to such an attribution of its "real purpose." Certainly, given the remarkable ending of the film, which features IBM stock footage of an operator pushing the "sell" button on a stock machine, one important function of the film is to ironically comment upon President Kennedy's death amidst an American corporate capitalism run amok.

However, we also need to attend to other sections of the film that work in other directions. For example, a mere 45 seconds into the film, the image disappears, leaving only the radio reports of the assassination. This sequence lasts for almost three minutes, after which the found footage imagery returns. For these three minutes, we are presented with a film that deliberately denies cinema's primary tool, moving images. I can only conclude that Conner's purpose at this moment is to have us reflect upon our own images of the Kennedy assassination, images that, until the public release of the Zapruder film in 1975, were not available to our memories, unless we happen to have been standing upon the grassy knoll in Dallas in 1963. That is to say, *Report* is an exquisitely crafted film that reflects upon the way in which we come to associate images with cultural memory. *Report* is a science film about memory, every bit as important as "Understanding the Mysteries of Memory" and its scientists' ideas about explicit and implicit memory systems.

However, *Report* surprisingly shares many of the aesthetic attributes as "Understanding the Mysteries of Memory." In particular, there is a connection between conventional documentary's use of B-roll footage and the found footage in Conner's films. Conner, of course, uses his stock footage ironically, and refuses non-diegetic music and a voice-over narrator to interpret the imagery through a rational system, but the similarities between the films are as important as their differences, especially if the goal is to present *Report* as a viable model for science cinema.

David James uses a formalist method for assessing *Report*. Quoting Victor Shklovsky, James praises the formalist modifications of Conner's film. James quotes Shklovsky's analysis of Laurence Sterne's novel, *Tristam Shandy*: "the action is continually interrupted; the author repeatedly goes backwards or leaps forward" (158). James then applies Shklovsky to Conner's *Report*:

The media presentation of the event [is] constantly and more or less fragmentarily played over and over as it was in public broadcasts in the weeks after the assassination. Yet no matter how many times it is shown, how laboriously it is broken down, the footage cannot reveal the process of Kennedy's death. Like the Zapruder footage, the ostensible documentation may be subjected to an extended scrutiny, but it can never be made to give up the truth. Ironically, the only time we even see Oswald is when he is being shot, as if at one of the film's crucial moments the roles are reversed and the assassin can be seen only as the victim. Even the Dallas book depository is visible only upside down and in negative. All that remains, all that can be made present, is the television coverage; the film is a report not of the assassination, but of the mass media use of the assassination. (158)

James' insights into *Report* move far beyond formalist analysis, toward the crisis in the representation of the real which has plagued documentary film studies, but alas, not documentary practitioners.

As my concluding gesture, I would like to reflect upon the implications of James' analysis of *Report* and my connection of it with "Understanding the Mysteries of Memory." The latter film uses conventional documentary techniques, and the science content over a full hour is surprisingly low. However, from a purely formalist perspective, *Report* is also built out of found footage content (B-roll in documentary production parlance), and also has, if anything, even less science content. We are confronted with the reason C.P. Snow argued for a divide between the sciences and the humanities in the first place. The neurobiologists want to use the techniques of rationalism to understand how neurons in the brain allow human beings to remember their experiences. "Understanding the Mysteries of Memory" wants to celebrate this scientific quest.

As a Beat cinematic poet, on the other hand, Conner uses an irrational method, editing disparate footage into his films, to wring meaning out of the historical reality of President Kennedy's assassination. Conner's work is similarly celebrated by David James: "If [*Report*] is an elegy for Kennedy, its plangency arises from the irony that an elegy for such a figure of the media can only be constructed from the detritus of the cultural wasteland in which he perished" (157).

I am arguing that a third position—a third culture, to move beyond Snow's formulation—can be theorized. If neurobiology and "Understanding the Mysteries of Memory" are positivist methods and documents, believing in the power of rationalism to make sense of the chaos of the world; and Beat poetry and *Report* are irrationalist, relativist methods and documents, believing in the chaos of the world's victory over the power of rationalism; social scientists have posited a third path, variously called scientific realism, critical realism, or historical materialism (Wilson, 3). In this view of the world, a rationally identifiable external world can be studied, but this process is invariably clouded by the filters we call ideology, culture, and history. With the difficulties of processing the world understood in this way, we can validate the project of Fara's and Patterson's book: to understand a concept like memory, we need not one, but many methods, ranging from the humanities to psychoanalysis to neurobiology.

Similarly, film history demonstrates the varied power of the cinema. To make great science films that aspire to the cultural lucidity of Orson Welles' *Citizen Kane* (1941) or Akira Kurosawa's *Rashomon* (1950), we can draw upon the full resources of the history of the medium. "Understanding the Mysteries of Memory" fails not only to convey science well, it also fails to convey film artistry. There are dangers in reinventing science film via experimental cinema—to which academic critiques of post-modernism's more general co-optation of the avant-garde attest—but I believe a more complex understanding of avant-garde films like *Report* as science films, as not just aesthetic but also intellectual experimentation, represents the future of hybridizing science and cinema.

## Conclusion

Bill Nichols has argued strenuously for the re-consideration of our historical assumptions of the separation between documentary and avant-garde cinema: "Our understanding of the relationship between documentary film and the modernist avant-garde requires revision" (580). In a largely historical argument, Nichols traces the intertwined nature of the 1920s avant-garde and the simultaneous Griersonian documentary tradition: "Documentary, like avant-garde film, cast the familiar in a new light, not always that desired by the existing governments.... The modernist avant-garde of Man Ray [and] Rene Clair... proposed alternative subjects and subjectivities" (583). In the conclusion to *Watching Wildlife*, Cynthia Chris brilliantly analyses two Discovery Channel episodes of *Wild Discovery*—*Wild Jewels* and *Wild Treasures of the East*, both 1999—that were shot partially in Iran. That same week, in late January 2002, George Bush had delivered his "axis of evil" speech, positioning Iran as a demonic emitter of terrorism. Chris observes, "I found something quite moving, and even a little bit subversive, in these admiring considerations of natural beauty, their fleetingly articulated antimilitarism, and their humane visions of a population then being vilified by much of the American press and by the U.S. administration" (199). Can we not, as media educators, teach to a world where such subversion is not the result of television's amazing, but clearly accidental, flow, but one of deliberate artistic invention? That has been the goal of this essay, accomplished by exploring the intertextual connections between *Report* and "Understanding the Mysteries of Memory."

Of course, Nichols' invocation of the transformation in subjectivity authored by both documentary and the avant-garde cinema applies to traditional wildlife programming in particular via the representation of animal subjectivity as it relates to humanity. The academic literature is flooded with books theorizing the importance of the animal world for understanding the human one. However, there is no trace of this work—for example, the startling deconstructive argument forwarded by Akira Lippit in *Electric Animal*—in the televisual content on the Discovery Channel. However, this does not mean that our cultural producers must submit to dominant hegemony. Instead, we can train a new generation of filmmakers to embrace, not marginalize, Lippit's experimental approaches.

Happily, for my project on the avant-garde potential of a new generation of science and nature filmmakers, Lippit ends his book with a brief discussion of the cinema. He does not discuss Jacques Cousteau and Marlin Perkins, the usual subjects in wildlife cinema studies. Instead, he discusses the foundational filmmakers of the avant-garde tradition: Eisenstein, Vertov, and Dulac: "A kind of origin of cinema, Eisenstein's assertion, like the writings of Dziga Vertov, Germaine Dulac, Antonin Artaud, and others who sought to discuss the new medium in ritual forms, bears the trace of organic metaphor, an attempt to describe technological animation in animist terms" (193).

Moving at lightning speed through Freud and Derrida, Lippit concludes, "the advent of cinema is thus haunted by the animal figure, driven, as it were, by the wildlife after death of the animal" (197). Film historians and critics have something profound to contribute to the genre science and nature filmmaking: If we can define Vertov, Conner,

and Clair as science and nature filmmakers, we point a way to the future that builds on the past, a vast trove of experimental film techniques which truly do encourage us to see the world anew.

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