

# Ambiguity, cinema and the digital documentary image

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One of the values attributed to the arts is their articulation of ambiguity. Ambiguity unsettles the authority of exposition, rational argument and evidentiary media at levels both of form and content. Documentary arts that use mimetic technologies such as photography, film and video have never escaped a paradox in that they may both present evidence and pose questions about the evidence they display; they can both constrain and articulate ambiguity. This paradox leads documentary to a unique position in serving fields across the sciences, humanities and fine arts. Cameras – mimetic, technological devices – capture more in a moment's moment than the human eye can register. Their evidence is constructed artificially through frames (or stills), and, in time-based media such as film, through clips and edited sequences. Cameras also introduce ambiguity. Photographic and cinematic images raise questions about the limits of sight, about what is in the frame and what seems to be beyond it, about what is objectively fact and what is subjectively attributed, and what simply can or cannot be filmed.

The frame, or still, which is a fundamental building block in discussions of how nineteenth- and twentieth-century mimetic devices work, ostensibly “captures” a moment; it is a shock that artificially arrests actions, objects, expressions etc. from the flow and flux of time. For cinema, another building block has been the clip, or take, and another has been the cut, montage or edit. Theories about documentary's evidentiary capacity are based on these concepts of the still, clip and montage. Drawing the stability of these concepts into question in light of technological developments of computing, this chapter reconsiders ambiguity in the documentary image.

The two images in Figure 9.1 picture boat launches of Major John Wesley Powell's exploration expeditions of the Colorado River. On May 24, 1869, a 35-year-old, one-armed, Civil War veteran, Major John Wesley Powell (1834–1902) and nine crewmembers began an exploring expedition of the Green and Colorado Rivers. They aimed at being the first known team to navigate and map the rivers and nearby canyonlands, some areas of which were sparsely populated by differing native peoples, pioneers, and, to the West, Mormon settlers. Rail service was opening the desert West to future



Figure 9.1 An etching by Thomas Moran and photograph by E.O. Beaman depicting John Wesley Powell and a crew departing near Green River City on an exploring expedition of the Green and Colorado Rivers.

settlement with the first transcontinental service meeting at Promontory Summit, Utah, only two weeks before Powell's launch, and the Major was hurrying to beat others to the opportunity to map and name the *terra incognita*.<sup>1</sup> The expedition launched from below a train trestle near Green River City, Wyoming. About 1,000 miles and 99 days later, the expedition concluded at the mouth of the Virgin River in southwestern Utah, although a few of the crew members decided to float onward down the calm and better-known waters of the lower Colorado toward Yuma and the Sea of Cortez.<sup>2</sup>

Thomas Moran's etching represents this historic 1869 departure in both official and popular documents.<sup>3</sup> However, there were no artists or photographers on the first trip, and the image is probably based on a photograph that was taken on a less-discussed second voyage that took place in 1871–1872. It is almost like a child's game to spot the differences between the illustration of the Wild West and the photo it came from. Bushes become trees, natural spires appear where none belong and a vast scenery is compressed into a single dramatic and romantic vision. One might wonder, what was wrong with the photo, which is also strange, beautiful and remote? Or, did it matter that the photo did *actually* document a second departure while the almost identical etching is timeless?

In 1873, Powell invited Thomas Moran to join a third expedition, this one a land expedition via the Virgin River and Kenab to the Grand Canyon. Moran came with his own funding from the journals *Appleton's*, *The Aldine* and *Scribner's Monthly*<sup>4</sup> and many of the etchings in Powell's publications carry his name. Decorating political institutions, parks and travel materials, Moran's images invoked classical themes of Western dominion.<sup>5</sup> Powell's works participated in this Caucasian-American romantic migration narrative and drew clear ties with Moran's sensibilities. While several crewmembers

kept diaries of the first voyage, these were largely ignored in the narrative and report, which combined a memory of one trip with documentation from another. Powell relied on dominant approaches to writing and representation (with images, photos, maps etc.) that subsumed differing perspectives upon the *terra incognita* into relatively singular sensibility. Art and science blurred.

Fifteen years later, expectations of the use of imagery in official documents had changed. Topographic line drawings, maps and landscape photographs gained status as scientific evidence, and these supported geographic studies. Once a *terra incognita* to the migrating Caucasians, the great sandy plain was now established as land to be bought, owned, used, subdivided, reclaimed, irrigated, mined, developed or dammed and flooded. A West constructed in romantic imagery and narrative language was quickly fading into the stuff of history and legend – of popular media and collective imagination. New evidentiary representations were drawn in lines and grids and written out in deeds and laws – a very differently sensibility.<sup>6</sup>

The etching is iconic and symbolic and, like most such etchings, it prioritizes, augments and eliminates details to illustrate the primary fact or drama. Despite techniques such as framing, focus, light adjustments (and, in cinema, motion), which all create authority, the observational image inevitably includes more than it can control and offers conditional verisimilitude through that excess. Paradoxically, excess produces ambiguity.<sup>7</sup> Without clarification, one cannot know if the above photograph (Figure 9.1) was primarily made to record information about the individuals, the kinds of boats used on the journey (notably, an important error in this case, as the etching claims to depict the maiden voyage when actually a different kind of boat was used), the weather, the biology, the geology, the performance of departure or any other question. Identifying ambiguity in images engages the imagination in making meaning. Sometimes text shapes how a viewer looks at an image and what the viewer looks for. Sometimes other images offer context and direction, as is common in film, and sometimes ambiguities in the image are unravelled through other information, such as sound.<sup>8</sup>

A photographic and cinematic documentary image is not like sight. Humans do not “see it all” in a single flash the way the mimetic devices (cameras, for example) record time. Where the frame offers an excess of spatially organized information, the documentary clip generally offers temporal excess. There is generally more content in a motion image of actuality that a viewer can digest; the viewer, not unlike the maker, constructs understanding from the information flashing by. Film viewing mirrors, and perhaps articulates, a fundamental human process by which the mind distinguishes, sorts and connects sensory information in time to construct, and continually reconstruct, a more or less cohesive sense of whole. Documentary representations of actuality, such as those of most ethnography, are *constitutive*, as Dia Vaughan writes,<sup>9</sup> and if such information wasn’t valued, they could be shot entirely

in studios – with an effect analogous, perhaps, to reducing the documentary photography to an etching.

Where the frame establishes spatial relationships, the clip creates temporal ones. This, too, is a kind of authority. Film cameras introduce a time-constant – a point underlying Andre Bazin's praise of Flaherty's long takes of Nanook catching a seal in *Nanook of the North*. The action is all there to see in the frame and it all happens in time, which is to say that it happens in time as mediated by the constants of the camera and projector. The camera's supposed objectivity is its observation stance that imposes an omniscient view and cinematic time, drawing the action into the time-constant of the overall film.

Although, in cinema, frame rates may be altered for effect, in most instances of documentary production both in recording and in playback, frame rates are largely imperceptible constants. The single-channel, linear-time qualities of film and the sensation of regulated time contrast with other modes of media reception such as reading. Generally, single-channel projection media did not allow viewers to escape the temporal constraints – or authority – of the projection mechanism.<sup>10</sup> Actions may move at different rates with differing modal, tonal and rhythmic qualities in their takes and cuts; however, within one system or another the frame rate is usually constant. How was Nanook experiencing time while (supposedly) struggling with that supposed seal beneath the water? Illusions of verisimilitude are constructed in the clips through both continuity and contiguity, with consistent and inclusive framing re-affirming relationships in the *mise-en-scène* vis-à-vis the frame and the objective, distanced stance of the camera.

The documentary image is its excess, which is also recognized as shock. A captured image is shock against the flows experienced by consciousness.<sup>11</sup> This excess and shock provided by technology are described in various ways such as through Benjamin's concept of the optical unconscious,<sup>12</sup> and the shock is articulated well in the haunting magic of the freeze-frame, such as in Vertov's film, *Man with a Movie Camera* (Figure 9.2). The cut, or edit, in documentary film (or photographic sequences, too) is paradoxical. The cut offers clarity to ambiguities by providing connections and allowing viewers to construct meaning.<sup>13</sup> However, the cut in single-channel film is also the artifice that disrupts contiguity and its verisimilitude. The cut offers only one trajectory at the loss of others and, therefore, it dictates its own predications, leading viewers to draw a connection to what seems to be coming ahead from what has just past. Thus, the cut creates absence and loss; the potential of the image – its ambiguities – is developed in one direction at the expense of others. In documentary films and videos, the cut supports many goals including constructing stories and illuminating details (as in films such as *Nanook of the North* and *Grass*), suggesting symbolic or tropic connections (as in *Song of Ceylon* and *Les Maitres Fous*), expressing patterns and movements (as in *Man with a Movie Camera* and *Berlin: Symphony of a Great City*) and



Figure 9.2 Still from Dziga Vertov's *Man with a Movie Camera*, in a sequence that demonstrates how film is made of frames that are cut, edited and animated.

offering argument or exposition (as in *The Plow that Broke the Plains* and *Sans Soleil*) etc.

Although many uses of digital technologies in documentary arts copy and look like prior forms, there are differences that challenge fundamental premises of what constitutes a cinematic image. The building blocks of film theory – the frame, clip and cut – prove to be malleable or even absent. These changes challenge over a century of film theory built upon these concepts including concepts of evidence, subjectivity and ambiguity in various forms of documentary representation. This topic is explored in a series of digital works I created about exploration, landscapes and their representation entitled *Unknown Territories*. The first of these works, *Voyage into the Unknown* (Figure 9.3) concerns John Wesley Powell's exploring expedition and the representation of that expedition through conventions of writing, illustration and photography. Later sections also concern uses of fiction, video, maps and brochures.

The digital format offers some valuable alternatives to print and single-channel video, enhancing qualities of ambiguity through the inclusion of differing perspectives, materials, disciplinary modes of inquiry and/or paths. One example of how a digital format can impact on representation is the interactive work *Unknown Territories*<sup>14</sup> in which documentary materials

about the representation and conceptualization of the arid West are gathered in narrativized scrolling environments. *Unknown Territories* explores how perceptions of place are shaped diversely through differing modes in writing and the arts; these can be engaged in digital environments in ways that differ from their engagement in other formats. In looking at evidence and imagery from John Wesley Powell's exploring expeditions as well as later materials, the project asks how does one come to know and imagine an "unknown territory"?<sup>15</sup>

Paths cut across history and landscapes as reader-viewers take up questions of growth and migration, industry and mining, including the impact of the uranium boom, dam building and tourism, all explored from the perspective of the humanities, to ask how are these varying historical developments and arguments framed through language and image. For example, in *Voyage into the Unknown* users navigate an interactive environment as they travel with the one-armed Major Powell and his crew of Civil War veterans down the then-uncharted waters of the mighty Colorado River into a *terra incognita*. First comes the adventure, then comes its representation. Much later comes critical examination and, perhaps, as a whole, re-invention. The work offers a learning environment that integrates readerly and viewing experiences. Part narrative, part documentary, the work bridges modes of writing and image-making through the use of a sequentially loading landscape and Adobe Flash® movie-based segments. Through interactive features, users discover how events and diaristic observations later become recast through photographs, illustrations, articles and books. The work draws its users' attentions to how differing media that were used by Powell and his colleagues might have contributed to popular conceptualizations of the American landscape.

The landscapes of *Unknown Territories* literalize the metaphor of making paths. In these panoramic environments, time-based cognition and text-based knowledge acquisition may go hand in hand, or may clash like objects in a collage, colliding in a field on which, at first glance, they would not seem to belong. The user takes a journey along possible routes and departures. The user is gathering information en route and piecing together a narrative. What do these elements add up to? These works confronts the very question revealed by the many ways evidence of the original journey is transformed after the fact; there can be no simple, monological or monolithic summation. Choice-making is fully integrated in the user experience allowing individuals flexibility in choosing to expand or limit narrative, expository and poetic approaches to a documentary's primary topic and its off-shoots. This off-shoot leads viewers into specific topic segments with narratives of their own.

The borders between reading and viewing blur in an active process that reveals its construction and expository processes, leading viewers to engage with the director in the process of constructing meaning out of experience. On the one hand, propositions and arguments are developed through montages that provide a route through the material – a director's cut. On the other



maker's choice-making. Second, interactive formats enable video material to be combined with text elements such as original writing, field notes, primary documents, secondary documents, interview transcripts and so forth. Third, digital tools facilitate the inclusion of other kinds of visual materials into a project, such as maps and photographs, which can be compared with cinematic representations. Practically speaking, questions of design are not so different from those of writing or editing; the ethnographer/media-maker creates paths (arguments) via research materials. One difference for interactive works, however, is that the research materials may be included and the processes of research and representation may be revealed. Users may be able to follow the maker's choices and decisions that went into building an argument out of the fragments of experience and data. In the face of alternatives, the researcher encounters an increased need to present supporting evidence for how and why particular routes through the material were valuable, but may face less pressure to gel materials in narrative or expository constructs.<sup>19</sup>

In *Another Way of Telling*, Berger writes that an important difference between viewing (or reading) images in a book and watching such images in a film, is the forward temporal force of the technology, which Berger characterizes as producing a kind of temporal anxiety caused by the technological provocation to attend to each forthcoming frame. Berger writes:

Eisenstein once spoke of a "montage of attractions". By this he meant that what precedes the film-cut should attract what follows it, and vice versa. The energy of this attraction could take the form of a contrast, an equivalence, a conflict, a recurrence. In each case, the cut becomes eloquent and functions like the hinge of a metaphor. . . . Yet there was in fact an intrinsic difficulty in applying this idea to film. In a film there is always a third energy in play: that of the reel, that of the film's running through time. And so the two attractions in a film montage are never equal. . . . In a sequence of still photographs, however, the energy of attraction, either side of a cut, does remain equal, two way and mutual. . . . The sequence has become a field of coexistence like the field of memory. . . . Photographs so placed are restored to a living context: not of course to the original context from which they were taken – that is impossible – but to a context of experience.<sup>20</sup>

Navigation allows users to cross-reference images to discover formal, tropic, narrative and expository significations. The ability to juxtapose and link diverse kinds of materials expands the potential for reflexivity. The navigable spatial arrangement of the book enables choice and subjective temporality. Ambiguity in the image is restored.

Perhaps film editing is, and has always been, hypertextual. In celluloid editing practices, clips are examined as discreet physical objects that hang

from bins or are coiled on cores. They are arranged and often re-arranged into sets, which are spatial configurations, and they are given tags and annotations through logs.<sup>21</sup> The clips are gathered, taped and later glued in various physical variations. The editor fingers and scrolls through these, at times making cuts as much by the physical lengths of the clips as by their contents. Likewise, digital editing environments also arrange clips, or more correctly icons that signify clips, spatially. Bins, timelines and menus represent forms of spatial organization from which temporal experiences of actually watching clips are triggered. Where time-based viewership largely stimulates spontaneous constitutive processes (or, “worldmaking”), editing and other hypermedia activities more significantly emphasize conscious and reflexive constitutive processes in which questions that are raised by one image get explored through another, or another, or another. The editing process requires choice-making and selection. The editor may imagine and create sequences from clips in almost infinite variations, even if, in the final result, all but one of those variations are discarded, and the rejects are forgotten along with the myriad lessons and alternatives they may have offered. Digital technologies enable the inclusion of materials recorded or organized through differing modes as well as the incorporation of other kinds of research materials such as text, maps and photographs. They can allow for continual updating and offer opportunities for using algorithms to create versions generated by the computer or user inputs. Further, in locative media projects, virtual “edits” may even be created by users physically walking among actual places, conjoining located materials en route. Therefore, the editor may also be a theoretician, technician, writer, explorer, researcher and designer, and this may result in projects that are equally experiential or intellectual.<sup>22</sup>

As the format of interactive editing programs, interactive documentaries, web-based clips and database films merge with those of writing, data collection and spatial presentation, a new temporal relationship to argument emerges. Bringing together differing kinds of research materials can enable users to follow the media maker’s process, whether by allowing users to read field notes and supporting documents or to follow how particular sets of materials led to the development of an edit or argument.<sup>23</sup> When supporting materials and data are available, the user can see how choices were made and consider alternatives.<sup>24</sup> The media maker is not deprived of the power to make an argument and have a voice (expressing one’s ideas is among the important reasons that individuals make works). In fact, the maker may offer many arguments that would not fit together in the logics of a single-channel work. As evidenced in works by the Labyrinth Project, Jeffrey Shaw, Flavia Caviezel, Kurt Fendt and Ellen Crocker<sup>25</sup> among many others, such works can express relationships between the user, maker and subject that raise interesting ethical questions about single-channel media and the messages they may convey through form. Furthermore, there are many ways of working

with images, gathering visual evidence and layering them made possible by mobile technology and other kinds of organizational frameworks, such as Google maps for example.

One might conclude that new concepts in digital video are contributing to a recognition of ambiguity in the structures of mimetic representation. New media can be used to suggest differing temporal and modal characteristics of visual experience. They may liberate elements from the regulation of the frame and frame rate. Digital formats change user and maker relationships to imagery.<sup>26</sup> In some works, the film editor may explore new ambiguities in the editing process, and the viewer may now have opportunities to do so, too.

However, paradoxically, some provocations of ambiguity unique to cinematic film may seem diminished. Take, for example the particular experience created through the flicker of film played at 18–24fps (frames per second). There is also a perceptibly different feel between 24fps projected film and emergent 48p digital formats. The flicker of old film is itself a kind of temporal ambiguity pointing to a break between frames that is both absent from the image and perceptible in its absence. Equally illusive are the qualities in shadows that also introduce ambiguity into images. As good as digital video forms are, they do not express shadows in quite the same way. This is particularly noticeable in comparing digital images to projected black and white cinematic ones. The lack of color specificity and a richness in shadows can provide a high capacity for abstraction and tropic predication. Therefore, the articulation of some kinds of ambiguity may be achieved through new media and new techniques such as those of layering, compositing and interactivity but others may be concealed.

## Notes

- 1 Powell first visited the area two years earlier in 1867, when, as a professor of natural sciences at Illinois State Normal University, he led a group amateur geologists and students to collect rock samples in Colorado. He set his ambitions on returning to explore the waterways of the Colorado River, which he began mostly with limited funding from sources in Illinois and his own salary. For more see William deBuys, “Introduction: Seeing Things Whole,” in *Seeing Things Whole: The Essential John Wesley Powell*, ed. William deBuys (Washington, D.C.: Island Press, 2001), 1–24.
- 2 For an expanded discussion of this voyage, see Roderick Coover, “Picturing the Great Unknown: John Wesley Powell and the Divergent Paths of Art and Science in the Representation of the Colorado River and Utah Canyonlands,” in *Writing with Photography*, ed. Liliane Weissberg and Karen Beckman (Minn. University of Minnesota, 2013), Chapter 2.
- 3 See, for example, John Wesley Powell, *Exploration of the Colorado River of the West and Its Tributaries* (Washington, DC: US Government Printing Office, 1875) and John Wesley Powell, *Canyons of the Colorado* (Meadville, Pa.: Flood & Vincent, 1895).

- 4 The circumstances described in letters by Thomas Moran in *Home-thoughts, from Afar: Letters of Thomas Moran to Mary Nimmo Moran*, ed. Amy Bassford and Fritiof Fryxell (Davenport, Iowa: Wagner's Printers, 1967), 41–42. These are further discussed in Elizabeth C. Childs, "Time's Profile: John Wesley Powell, Art, and Geology at the Grand Canyon," *American Art* 10, no. 1 (1996): 7–35.
- 5 Curiously, Moran's painting of the Grand Canyon is less successful than his painting of Yellowstone because it does not fill the proper myth of the West. It is critiqued in the *New York Times* and *Atlantic Monthly* for expressing the West as a barren wasteland – a place of nightmares not dreams, in William H. Truettner, "Scenes of Majesty and Enduring Interest: Thomas Moran Goes West," *The Art Bulletin* 58, no. 2 (1976): 241–259.
- 6 For more, see Roderick Coover, "Picturing the Great Unknown."
- 7 For more about ambiguity in images, see John Berger and Jean Mohr, *Another Way of Telling* (New York: Pantheon, 1982). Meanings of a lone photograph, they argue, are empty and are contextualized by knowledge, text or other photographs, by which one may begin to identify correspondences, articulate ambiguities and make meaning. Curiously, the fact that Berger and Mohr make their argument through book-printed photographic images suggests there is some degree of commonality across printing forms. The relationship of differing photographic print and projection forms on visual messages is a valuable topic for another paper.
- 8 These ambiguities are expanded in the case of 1870s geographic photography, as the photographs, ostensibly as evidence of landscape, often included individuals and exploration in participation with constructions of cultural histories and myth-making of US Western exploration and migration.
- 9 If images didn't offer more than what could be imagined and controlled, Vaughan points out, ethnographies could be entirely made in studios with actors. For more on the constitutive nature of documentary reception, see Dai Vaughan, *For Documentary* (Los Angeles: University of California Press, 1999).
- 10 For more, see Roderick Coover, "Interactive Media Representation," in *The Sage Handbook of Visual Research Methods*, ed. Eric Margolis and Luc Pauwels (London: Sage Publications, 2011), 619–637.
- 11 Humans to do not have photographic memory, and they do not see all things equally. Nelson Goodman defines processes of making sense of stimuli as "worldmaking" in Nelson Goodman, *Ways of Worldmaking* (Indianapolis: Hackett Publishing Company, 1978). According to Goodman, seeing is motivated, and it is built upon memory. The human mind chooses what to look at and what to ignore, making sense of information through at least five processes: (1) composition and deletion; (2) weighting; (3) ordering; (4) deletion and supplementation; and (5) deformation. Through these processes, new realities are built out of old ones. For more on Nelson Goodman's theories of "worldmaking" and their relation to cinematic practices of editing and anthropological theories of tropes, see Roderick Coover, "Worldmaking, Metaphors, and Montage in the Representation of Cultures: Cross-Cultural Filmmaking and the Poetics of Robert Gardner's Forest of Bliss," *Visual Anthropology* 14, no. 4 (2001): 415–438.
- 12 Walter Benjamin, "A Short History of Photography," in *Classic Essays on Photography*, ed. Alan Trachtenberg (New Haven: Leete Island Books, 1980), 199–217.

- 13 For more on the cinematic construction of meaning through tropic predication see Roderick Coover, *Cultures in Webs: Working in Hypermedia with the Documentary Image*, Interactive CD-ROM (Watertown, Mass.: Eastgate, 2003).
- 14 Roderick Coover, *Unknown Territories* (2012), <http://unknownterritories.com>.
- 15 For further discussion see Roderick Coover, "Taking a Scroll: Text, Image and the Construction of Meaning in a Digital Panorama," *Hyperrhiz: New Media Cultures* no. 6 (2009), [www.hyperrhiz.net/hyperrhiz06](http://www.hyperrhiz.net/hyperrhiz06), which directly expands some of the discussion in this section and Coover, "Interactive Media Representation," which considers these theoretical questions in relation to other visual research projects.
- 16 Roderick Coover, *Voyage into the Unknown* (2007), <http://unknownterritories.com>.
- 17 See, for example, Sergei Eisenstein, *The Film Sense* (New York: Harcourt, Brace and World, 1975) and Sergei Eisenstein, *Film Form: Essays in Film Theory* (San Diego: Harcourt, 1977).
- 18 See, for example, Andre Bazin, *What Is Cinema?, Vol. 1* (Los Angeles: University of California Press, 1967).
- 19 For more, see Coover, "Interactive Media Representation."
- 20 Berger and Mohr, *Another Way of Telling*, 288–289.
- 21 As a result of the conditions of videotape, analog video editing makes greater use of logs that are referenced to stacks of time-coded tapes.
- 22 This by no means rejects the importance of film, video, photography or other media; there remain expressions far better articulated in an optically printed film or a silver nitrate photograph, for example, than through a digital work. Each stimulates differing perceptive and cognitive responses and each expands the world in differing ways, articulating and engaging life's experiential ambiguities.
- 23 For more, see Coover, *Cultures in Webs*.
- 24 For more, see Roderick Coover, "The Digital Panorama and Cinemascesapes," *Switching Codes: Thinking through Digital Technology in the Humanities and Arts*, in ed. Thomas Bartscherer and Roderick Coover (Chicago: University of Chicago Press, 2011), 199–217.
- 25 See Jeffrey Shaw et al., "Re-place: The Embodiment of Virtual Space," in *Switching Codes*, 218–237.
- 26 Roderick Coover et al., "Digital Technologies, Visual Research and the Non-fiction Image," in *Advances in Visual Methodology*, ed. Sarah Pink (Los Angeles: Sage, 2012), 191–208.