

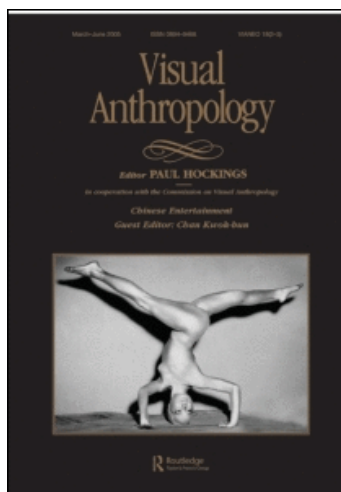
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Repeat Photography as a Method in Visual Anthropology

Trudi Smith

This paper explores the use of repeat photography as a powerful method to produce knowledge about place. I use examples from research in Waterton Lakes National Park, Canada, to describe the process of making a repeat photograph, from locating images in archives, to the embodied act of locating a historic vantage point, to the production of a new photograph. This act brings art and anthropology into a shared space to recreate photographs, an act that goes beyond looking at historical images in archives to move our thinking onward about how we relate to images.

INTRODUCTION: THE LONE PINE

This paper examines the application of repeat photography as a distinctive and innovative method in visual anthropology. Used as a tool to monitor physical changes in landscapes or urban sites, repeat photography is a multidisciplinary strategy that uses historical photographic collections to explore space and place. The aim of such research is to create contemporary photographs, or “repeat” photographs, that are taken from the exact location or perspective of the previous historical photograph, thereby allowing for an analysis of the space over a stretch of time [Figure 1].

David MacDougall contends that “anthropology has had no lack of interest in the visual, the problem has always been what to do with it” [MacDougall 1997: 276]. While solutions to MacDougall’s problem have recently taken the form of experimental collaborations (*e.g.*, between artists and anthropologists; see Grimshaw and Ravetz [2005] and Pink [2004]) and new technologies (*e.g.*, interactive CD-ROM technology and websites; see Pink [2004b: 166–184]), my use of repeat photography allows us to think about our relationship to images in a different way than has been previously discussed. Repeat photography can probe into historical images in archives and then move beyond this type of looking to allow for a different kind of engagement with images. By producing new

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Figure 1 Bison Paddock Viewpoint, Waterton Lakes National Park. Left – 1914 Dominion Land Survey image (M.P. Bridgland. Courtesy Library and Archives Canada). Right – 2004 photograph by the Rocky Mountain Repeat Photography Project team (T. Smith and E. Higgs. Courtesy Rocky Mountain Repeat Photography Project, University of Victoria).

photographs, repeat photography brings a distinct awareness to acts of vision and provides an active, interpretive understanding of space and place. In this paper I want to provide evidence and suggest that repeat photography is an embodied, ethnographic strategy that brings together the practice of anthropology and the practice of visual art to gain a greater understanding of humans in the world.

On the south end of Waterton Lake, on the verge of a pathway that runs along the shoreline, stands a single limber pine tree (*Pinus flexilis*). Characteristically small and exhibiting a slight windswept lean to the north, the pine stands apart from the clusters of trees more typically established around the lake. Late in a summer day in 2004, I stood poised with my camera and tripod pointed at the solitary tree and made an exposure onto Polaroid instant film, placing the tree at center foreground, bordered by the lake and mountains in the background. I was living in Waterton for the summer as a researcher, and while not exactly a typical tourist to the area, I was not unlike many tourists using photography to produce a narrative and record an impression of the space and place of the national park. A few days later, a fellow researcher was looking through albums in the park archives and found a small black and white photograph dating from the late 1960s taken by Kurt Seel, a former park naturalist, of the same limber pine, from almost the exact same location [Figure 2]. This event struck me and, not willing to resign myself to a faith in coincidence, I used it as a departure point for investigating why people visit and photograph the same places over time. Through this and other experiences, I have come to understand not only the power of photographs as representations affecting how we understand and see place [Lury 1998: 3], but the power of the embodied practice of revisiting points from which landscapes are commonly viewed. The act of returning to particular vantage points, shaped by a physical presence, and reoccupying locations by standing in the spot from which a historic image was photographed, becomes a ground to construct knowledge about place, environment and people's relationship with it.



Figure 2 Limber Pine, Waterton Lakes National Park. Left – 2004, Trudi Smith. Right – 1960s photograph by Kurt Seel (Courtesy Waterton Lakes National Park).

HOW IS ETHNOGRAPHIC PRACTICE ENCOUNTERED IN VISUAL ANTHROPOLOGY AND VISUAL ART?

According to Roger Sanjek, ethnography is a set of techniques, both *product* (ethnographic writing) and *process* (participant observation or fieldwork) [Sanjek 2002: 193–198] that join with a critical interpretation of human cultures and social life (comparative theory and contextualization) to construct anthropological knowledge [Grimshaw and Ravetz 2005; Marcus and Myers 1995]. In this section, I take a closer look at the *products* and *processes* that make up ethnography, to illustrate connections between visual anthropology and visual art.

In the 20th-century discipline of anthropology, an emphasis on realist conventions characterized the dominant visual modes of film and still photography. As a result, most accounts were produced using “faithful rendering” [MacDougall 1995: 116], and tended toward illustrative fragments, observational cinema, and documentary [Young 1995; Grimshaw 2005: 19–24]. Overall, an emphasis on illustrative, realist conventions produced accounts that were treated as tools for “anthropological note-taking” [MacDougall 1995: 122], which was indicative of the fact that anthropology, despite the prevalence of image-making among its practitioners, was seen as “a discipline of words” [Mead 1995: 5]. Since the 1990s, a broader focus in visual anthropology has resulted in a proliferation of accounts that attempt to advance beyond the level of the “visual notebook” [Edwards 1997: 53]. Elizabeth Edwards advocates an expressive rather than a realist documentary photographic practice, reflecting the qualities particular to photography, to reconstitute its usefulness in anthropology [1997: 285]. Anna Grimshaw and Amanda Ravetz, claiming that a focus on text radically excludes ways of knowing that are specific to visual modes of representation, find the production of visual accounts essential for constructing a different way to know the world [2005: 1–14]. Following Barbara Stafford [1996], they ask the important question, “How can we study contemporary forms of visual culture without translating them into a different conceptual register?” [Grimshaw and Ravetz 2005: 5]. Recent volumes suggest anthropologists should move beyond current disciplinary boundaries and either become involved in art practice or collaborate

with artists [Pink 2004a: 3–5; Grimshaw 2005: 27–28]. Current writing about visual practice indicates a mounting interest in having anthropologists experiment with creative and aesthetic uses of film and still photography, and expand on their use of techniques of visual art, hypermedia, and digital video [Grimshaw and Ravetz 2005: 6, 13; Pink 2004: 2–5, 166–83]. As the products of visual ethnographic practice become more expansive, the potential to push at the boundaries of present processes, or methods of producing knowledge, becomes possible.

Central to the process of ethnographic fieldwork is a personal immersion into ongoing social activities [Wolcott 2005: 4]. Visual ethnography, as an embodied practice, allows the anthropologist to gain experiential knowledge from a “distinctive form of ethnographic encounter” [Grimshaw 2005: 26], which comes from a position in the world that is constituted by and actively constitutes visual practice. This can be accomplished by holding a camera [Grimshaw 2005: 23], sitting drawing, or sketching out a plan for a painting [Ramos 2004]. These acts diverge from discursive approaches as “other sensed ways of knowing” [Grimshaw 2005: 26]; they evoke aspects of experience in a different way than text does [Pink 2004a: 4]. Arguing that bodily engagements are key in anthropology, yet difficult to incorporate due to a “history of apprehending objects and actions of all kinds as if they were texts” [Schneider and Wright 2006: 5–6], Arnd Schneider and Christopher Wright suggest that crossing the boundary into art practice allows for a specific encounter with sensual practice and for new possibilities in the generation of knowledge.

In visual art practice, Boris Groys identifies a broad social transformation from the production of artworks to art documentation, an activity that emphasizes documenting life as a “pure activity” [2004: 1]. Like anthropologists, artists who investigate the activities of life put themselves “in the field.” Likewise, Nicolas Bourriaud identifies a similar trend in art as postproduction, where artists investigate and use existing material to translate (and retranslate, mix, and sample) culture into works of art [Bourriaud 2002: 18]. The work of art is transformed from its traditional status as the “receptacle” [Bourriaud 2002: 20] of the artist’s unique vision into an active place of production that “seizes all the codes of culture, all the forms of everyday life” [*ibid.*: 18] and inhabits them. In this way, artists align themselves with anthropologists both through the study of material culture and in translating culture. Artists use anthropology because, as Hal Foster argues, anthropology is the science of alterity; it takes culture as its object, it is contextual, it is thought to arbitrate the interdisciplinary and finally, it emphasizes reflexivity and has self-critique built in [Foster 1995: 302; 1996: 182]. Visual ethnographers share their “field of culture” [Foster 1995: 305] with visual artists.

HOW ARE ARCHIVES ENCOUNTERED IN VISUAL ANTHROPOLOGY AND VISUAL ART?

The use of historical archival collections to produce knowledge about culture is found in both visual anthropology and art. In visual anthropological practice, rethinking historical still photography and film collections has resulted in the discovery of what Joanna C. Scherer calls “forgotten worlds” [1995: 201] that “when

systematically analyzed can create whole new areas of inquiry" [*ibid.*]. Proposed strategies to work with historical collections in ethnographic settings range from analyses of photographs as cultural texts (revealed through tracking production, circulation, and consumption of the object), to analyses of photographs as artifacts (used as primary documents to reconstruct details), to use of photographs in eliciting cultural information (what Scherer has called "memory ethnography" [1995: 207]). Such uses of archival material emphasize process, the fieldwork component of ethnographic practice. In these cases, the archival collection is the field site. Yet by broadening approaches to images in archival collections, visual anthropologists have the possibility of turning the archive from an "excavation site" into a "construction site" [Foster 2004: 22]. The use of existing social forms such as archival materials is part of a shift in contemporary art practice toward considering "global culture as a toolbox" [Bourriaud 2002: 92] and entails an art that inventories, selects, uses, and downloads [*idem.*]. Hal Foster has identified an *archival impulse* in visual art that "probes into particular figures, objects, and events in modern art, philosophy and history" [Foster 2004: 3] to reveal culture. There are echoes of anthropological/ethnographic practice in the process through which archival art is produced; it is not cynical but seeks to "distribute ideas" and "liberate activity" [Foster 2004: 6], implicating reflexivity, emphasizing human interpretation, and re-placing displaced historical information. Yet archival art diverges from anthropological practice in terms of the particular attention paid by the archival artist to the physical presence of the archive. Utilizing the theme of cultural artifacts such as the archive as the "engine" [Bourriaud 2002: 9] of artistic process, Foster argues that the archive is laboratory, storage, and product—a "matrix of citation and juxtaposition" presented in "quasi-archival architecture" [Foster 2004: 5]. The archival artist plays on the category of the collection, creating material that reproduces, questions, or liberates texts and objects. Thus the archival impulse in art emphasizes not only the act of drawing upon but also the production of archives in a way that "underscores the nature of all archival materials as found yet constructed, factual yet fictive, public yet private" [Foster 2004: 5]. Archival artwork can range from the tracing of the genealogy of a single historic photograph, which entails the creation of an archive that acknowledges the complicit relationship the artist has to that photograph through the addition of film, photographs, installations, sound, and drawings (*e.g.*, the coincidences tracked by Tacita Dean in *Girl Stowaway*, in Foster 2004), to critical revising and responding to existing artworks through reworking or reinterpreting (see Sam Durant's poorly built models of late modernist design, *Chair#4*, in Foster [2004]).

WHAT IS REPEAT PHOTOGRAPHY?

Those who have experienced the excitement of finding the site of an old photograph after a century of time know the thrill of standing in the footsteps of a pioneer photographer, seeing the landscape he chose to photograph and trying to comprehend his impressions of the scene. The intellectual effort of seeking to understand the perception of an early photographer is often as scientifically rewarding as identifying how the landscape has changed. [Rogers, Malde, and Turner 1984: xiii]

Repeat photography is a significant and particular kind of engagement with both a subject and a photograph, usually beginning with locating relevant archival materials (such as photographs, paintings, and drawings) and culminating in taking a photograph of the same scene from the exact original location. Between these acts, the photographer tries to determine the historical conditions—such as weather, time of year, and time of day—as well as the historical technical setting, such as the camera format and the lens's focal length used to make the photograph. The repeat photographer may look at secondary documents (such as maps or historical accounts) and discuss the project with local people in an attempt to identify and refine the geographic or social context. Once one is in the field, accurate repeat photography becomes a study in generating a camera position, or photo-point, using the principle of parallax to match foreground, midground, and background features seen through the lens of the camera with those in the historical photograph.

Photography has always been used quite extensively in field documentation [Rogers, Malde, and Turner 1984]. Characterized as “the final culmination of a Western quest for visibility and scrutiny” [Pinney 1992: 74], photography “was used extensively in the colonial effort to categorize, define, dominate, and sometimes invent” [Scherer 1992: 33]. Today the camera remains aligned with the discipline of natural science as a tool of precision for creating revealing records of the physical and the biological world [Rogers, Malde, and Turner 1984: ix]. Nowhere is this obsession with measurement more evident than in repeat photography. The first systematic use of repeat photography as a method of observation began in the 1880s, when initiatives were undertaken in both the United States and Europe to study glacial advance and recession [Harrison 1974: 469; Webb 1996: 30; Malde 1973: 193–194]. Today the majority of North American repeat photography projects focus on qualitative and quantitative evaluation of landscape-level change [Webb 1996: 30; Rogers, Malde, and Turner 1984: xiii; Malde 1973: 194].¹ Repeat photography, understood as a straightforward, elegant tool for measuring transformations in environments such as vegetation change, allows scientists to create a new visual record of the landscape for future studies. These are considered benchmarks and as such provide valuable information for investigating particular places through time.

In addition to its uses in natural science, repeat photography defines but also invents space and place through art practice. The visual artist Mark Klett's repeat photographic projects investigate human connections to place through time, investigating change and allowing reexperiencings of iconic western U.S. landscapes [Klett 2004]. Klett, beginning in the 1970s, has collaborated with photographic historians, photo-theorists, visual artists, and computer programmers to produce rephotographic surveys of famous American landscape artists such as William Henry Jackson. Jackson photographed Pulpit Rock in Echo Canyon, Utah, in 1869. Widely circulated, the photograph shows a bluff on the right hand side, evidence of a highway and looming rock on which three people perch in the center, and a railway line to the left. Klett visited and rephotographed the site in the summer of 1978 and then again in the summer of 1997. Comparing Klett's photographs with Jackson's, the unchanged appearance of the bluff on the right-hand side is the only indicator that the image shows the same view: the

view of Pulpit Rock has been replaced by a local road and a Union Pacific Railroad line, while the middle of the frame is taken up by a highway sign that becomes the focus of the images. Here repeat photography's importance lies in the unique relationship it establishes between historical and contemporary photographic records, as they are brought into a comparative setting where the two images together form a new whole. Questions about social or environmental history, or about what happened to the iconic Pulpit Rock, arise from the pairing. This produces "a new context in which neither photo exists in its time alone" [Klett 2004: 3], and the two images hint at a story linking a "moment in the past with intervening unseen events" [Rogers, Malde, and Turner 1984: xiii]. The pairing makes what is not seen in the modern photograph (*e.g.*, Pulpit Rock, hanging over the road and rail lines, was considered a threat and so removed by explosives in the 1930s [Klett 2004: 56]) as important, if not more important, than what can be seen.

Yet repeat photography is more than an illustration of glacial recession, vegetation change, or the effect of cultural change on a landscape. Repeat photography can produce ethnographic knowledge; it is an embodied experience that allows the researcher to ask questions that can only be posed by identifying, as closely as possible, the original site, looking through the camera lens, and retaking a photograph. It is a multilayered and complex way to make the past present and to present the past, which, through this intricate relationship, allows us to investigate historical and contemporary social realities.

REPEAT PHOTOGRAPHY IN WATERTON LAKE NATIONAL PARK: WHAT CAN A STUDY OF THE FIELD SITE TELL ABOUT REPEAT PHOTOGRAPHY AS A METHOD TO PRODUCE KNOWLEDGE?

My research site, Waterton Lakes National Park, is the southernmost park in the Canadian Rockies and reflects a North American approach to management of national parks that has evolved over the past 125 years [Searle 2000: 14]. Here one sees a strong commitment to preserving ecological integrity while emphasizing public understanding, appreciation, and enjoyment. This approach puts an emphasis on both the protection of nature and on human use and, as a result, national parks are seen as icons of wilderness, imagined and represented as empty, pristine nature [Higgs 2003: 13–46], while existing as highly impacted cultural spaces. In Canada, national parks are "understood as a part of a grand Canadian symbol of identity. Citizens flock to national parks and feel Canadian in them" [MacLaren 1999: 5]. National park landscapes are "created by people—through their experiences and engagement with the world around them. They may be close-grained, worked up, lived in places, or they may be distant and half-fantasized" [Bender 1993: 1]. In Canada they at once emerge as both types of landscape, simultaneously close and distant. Donna Haraway argues that these dualisms, with their ties to colonialism, racism and sexism, are embedded in cultural constructions of nature as an "enduring part of the lexicon" [2004: 200]. The lexicon of the national park space is powerfully contained within and produced by photographs, postcards, and family albums representing the park

space. The space and place of Waterton is documented in an extensive and wide-ranging visual record found in local, national, and international archives. For these reasons Waterton emerges as a good study site for inquiry into the use of repeat photography as a method in visual anthropology, as it will allow the investigation of particular forms of space and place as they are rendered in visual images.

ARCHIVAL RESEARCH: HOW CAN REPEAT PHOTOGRAPHY MOVE BEYOND THE ARCHIVE AS DATA?

In my work, repeat photography begins as an archival exercise. Most repeat photography projects define certain limitations within the archives, such as a geographical area (*e.g.*, the Canadian Rockies), a geographical or ecological feature (*e.g.*, glacier movement or tree-line change), or a historical collection (*e.g.*, survey photographs or photographs of the American West by William Henry Jackson). Each of these strategies uses the archive as a source of data. I modify this archival search by treating repeat photography as an ethnographic project and turn the archive into a field site. Instead of functioning solely as a source for specific data (the existence of which is often known before one has entered the archive), the archive becomes a place to initialize thoughts about the space and place of a particular landscape, to discover connections, to find similarities, and to draw together sets of photographs whose patterns can ultimately produce narratives about the landscape. I use the archive to determine dominant views and to see how the landscape has been represented. As certain views become more prominent in one archive or collection, this affects the focus of research in other archives and collections, and the process becomes recursive.

While searching the Parks Canada archives in Waterton, I encountered a large collection of photographs by park naturalist Kurt Seel. Dating from the 1960s, the collection is important both in terms of how Seel represented and documented the park and in showing how the interest and mandates of Parks Canada became evident through photographs. Seel's vision of the park shows the town site, the impact of visitors, landscape features (such as the limber pine described at the outset of this paper), and park disasters such as floods, fires, windfalls, and automobile accidents. When visiting other archives, I began looking for images analogous to those of Seel, or images connected to Seel's presence in the park. The presence of his images in the Waterton archive affected my selection of images housed in other archives. By working back and forth in the matrix of the archive, this search component of repeat photography refines large, diverse, and often ambiguous collections of images. Through this recursive process of archival research, a more nuanced and specific view of park realities, as represented in archived photographs, emerges.

In approaching historical material in Waterton, the research also recognizes that the archive itself is a structure for investigation, as it creates the place of Waterton through images and through the archive structure, practice, and history itself [Kiendl 2004: 9]. Archival research is not a source of raw, objective data but is its own particular kind of representation, one that is a way of seeing *now*, a way

of knowing, and a symbol or form of power [Derrida 1996; Steedman 2001]. The archive is itself part of the field site, in providing a way to understand how a culture collects, narrates, and circulates images. The archival collections themselves become part of the investigation into how Waterton is represented, and how archives construct this knowledge.

Using the archives is anthropological fieldwork, insofar as they enable one to find specific information about a culture through immersion into—and analysis of—photographic collections. However, this fieldwork is concurrently archival art practice, as it uses the archive to discover narratives. As with the photograph of Jean Jeinnie in the work of Tacita Dean, I use the archive to find connections and then create sets of images using coincidence (*e.g.*, the coincidental discovery of the same tree image by Kurt Seel as my own has led to an increased prominence for this particular account). As a process, I return to the photo locations to discover and create narratives and then produce a subsequent archive about particular photo locations in Waterton.

HOW DO WE LOCATE A HISTORIC VANTAGE-POINT ACCURATELY?

To demonstrate the process of locating a vantage-point for rephotographing a historical image, I provide an example from my involvement in a large-scale repeat photography project conducted in Waterton between 2002 and 2005. The Rocky Mountain Repeat Photography Project uses a comprehensive collection of photographs that were made by Canada's Dominion Land Survey in the early 1900s [Figure 1]. As part of an efficient technique to create the first detailed topographical maps of the Canadian Rockies, the survey incorporated a series of black-and-white photographic images that together create a 360-degree record of an area. While the Dominion Land Surveyor, M.P. Bridgland, produced maps for the government, he also illustrated books and articles for such organizations as the Alpine Club of Canada, using the same photographs. Thus the photographs and maps were circulated widely in Canada and contributed to the formulation of the Canadian public's initial knowledge and understanding of the space of the West. When we returned to Waterton in 2002 along with the historic photographs, it was to create data for measuring landscape change and considering restorative possibilities within the park space.

To begin the search for the photo-point of a historic image, repeat photographers look at associated metadata, coordinate place names (often found on the photos), and talk to locals who may know the approximate location of the photograph. Because the primary aim of the Dominion Land Survey was to produce maps from their photographs, map sheets provided location information indicating a general area within which photographs were taken. Repeat photographers can thus identify the approximate site location and then refine their reading by walking around the landscape with copies of the historic photographs. Once the vantage point is located (within a few meters), the camera is set up, beginning a process of comparison between what is in the photograph and what is seen through the camera lens. Most repeat photographers take advantage of parallax, the apparent motion of an object against a background due to a change in



Figure 3 T. J. Hileman photograph from the early 1900s with grid structure placed (left) (author's collection) and looking through the camera viewfinder showing corresponding grid structure (right).

observer position, in order to site their cameras. Points move in relation to one another when the observer or camera moves, and much time in the landscape is spent lining up foreground boulders with one another and with distant ridgelines. The method we developed to locate the historic photo-point accurately begins before entering the landscape with the construction of a grid structure derived from the dimensions of the camera screen. This is then digitally placed on the archival photograph, and a new copy is printed to carry into the field [Figure 3]. The grid creates intersections in the photograph that allow the repeat photographer to see or create relationships between landscape features where none previously existed. Two features that were only broadly related before, such as a foreground rock and a distant ridgeline, are brought into relationship by intersecting lines passing through them. The spatial structure of relationships between landscape features guides the repeat photographer, enabling him or her to line up points in a landscape as seen through the camera viewfinder with those in the historical photograph on which the grid has been superimposed. Then a precise vantage point is refined through minor camera movements involving raising, lowering, and shifting right or left within centimeters, if foreground features are present, or within meters if only background features are visible.

INGOLD'S SENSORY EDUCATION: WHAT PARTICULAR TYPE OF LOOKING DOES THE ACT OF RELOCATING A HISTORIC VANTAGE-POINT PRODUCE?

Repeat photography creates a particular type of looking. The act of using a photograph to try to locate a particular point in space, the act of working back and forth between a set of intersections (both in the landscape and using the grid), and the act of comparison derived from this endeavor, focus the anthropologist's attention, fine-tuning his or her perceptual skills and producing what Tim Ingold calls an "education of attention" [Ingold 2000: 23]. Christina Grasseni describes the exercise of looking through the lens of a camera as a catalyst of her attention, as an education in better understanding her subjects while they were conducting skilled practices [Grasseni 2004: 17, 21]. Repeat photography, in reenacting a

spatial photographic moment, likewise facilitates a way into a perceptual environment [Grasseni 2004: 18–21; Ingold 2000: 13–26].

The comprehensive nature of the Dominion Land Survey images entailed our repeating more than 400 photographs in the area of Waterton. During the course of the consequent three field seasons, I was chased off peaks by lightning storms, bushwhacked my way out of locations in the dark, and was forced to return to the same peak day after day due either to bad weather, poor lighting, or an elusive camera location. It became apparent that repetition manifested itself not only in the single repeating of a photograph but was inherent in the entire activity of the project. Tracking the original photographic survey produced knowledge of a particular relationship to the environment. Tim Ingold would describe such activity as a “sensory education” insofar as it showed us reflexively how our perception of the world is guided by specific “orientations, dispositions, and sensibilities that we have acquired through having had things pointed out or shown to us” [2000: 23]. The sheer number of images that we repeated forced us into a particular relationship with the original photographer and his original historical views. Viewing the park from the same place from which the photographs had been taken and using the same camera technology² that had originally produced them provided access to historical conditions of photographic production. The Dominion Land Survey photographs were usually taken from heights, particularly the peaks of mountains, and relocating those vantage points confirmed for us the early surveyors’ commitment to “surveying views” whence they believed they could capture photographically the entire scene, thereby “gathering all requisite topographical information more accurately than by actual investigation” [Wheeler 1920: 81]. Locating historic vantage-points reveals how the view of Waterton was produced before being circulated to a Canadian public, and thus provides an access point for how Canadians understood and understand nature.

By mimicking the original photographers, I gain access to the historical conditions of their photographic production. Reoccupying historic photo-points produced more refined information about the particular survey, such as the height and character of the tripod mounts and the sorts of filters used. Problems that arose from trying to repeat views provided insight into how the surveyors structured the original survey. It is, for instance, difficult to expose properly either for a hill in shadow or for clouds in the sky, yet the surveyors used filters and concocted emulsions with broad enough latitude to expose ground features properly and include dramatic sky features as well as expose the data they needed.

GROUND TRUTHING: HOW IS LOCATING A HISTORICAL VANTAGE-POINT AN EMBODIED ACT?

Finding a historical photographic location is an act of *ground truthing*, a strategy used in the natural sciences (most commonly in physical geography) to confirm or validate directly data that may have been derived indirectly. Ground truthing typically checks the reliability of remotely sensed information, verifying abstracted data or representations of space and place (such as aerial photographs). I see

this as parallel to ethnographic practice. In Waterton, places are visited because they were photographed, and places are photographed too because they were photographed. A tourist may only visit a place as a result of seeing a photograph taken by a previous visitor, whether in a postcard, personal album, or travel guide. To some degree, therefore, photographic acts of the past direct contemporary park use. Archival searches tracking dominant views in Waterton turn up a set of photographs all taken from the side of Mt. Crandell that feature the town site and the hotel with lakes and mountains in the background. Taking such photographs back into the park and relocating their vantage-points to produce repeat photographs, I was able to see how these views relate to the present park configuration. It became clear that in the archival photographs there were two popular locations for image making: an early batch of photographs shows that photographers hiked up the Tick Trail and took photos from the northeast side of the mountain, while a later set is taken from Bear's Hump on its southeastern side. Today, the top of Bear's Hump is one of the more popular destinations and is frequently the subject of photographic views; it is therefore easy to relocate and repeat views from there. By contrast, the Tick Trail is no longer a prominent vista from which the casual visitor might make photographs (although the general trail area is still in use as a scramble). Reoccupying the historic location of images taken from the Tick Trail meant bushwhacking and often having views interrupted or totally obscured by tree growth. While this leads to questions about why the Tick Trail is no longer a popular vista, it also connects cultural and ecological histories. Questions arise, such as, "When did the tree succession obscure the view?" and "Did tree growth influence the vista or did the trail popularity of the Bear's Hump override use of the Tick Trail so that the trees ended up filling in the vista?" Although repeat photography uses generalization and extrapolation to detect patterns about the world (e.g., to generate a theory about how nature is represented in Waterton), it also provides opportunities to collect representational data through attention to a small area. Closest to the location of a historic vantage point, the repeat photographer can verify the most specific information, and as the repeat photographer moves away from the point, the information becomes broader and more general. Thus questions about the use of and abandonment of popular hikes and prominent vistas in the park can enable us, in turn, to map key sites of use through time and so to understand the central locations through which wilderness is understood in Waterton. Thus repeat photography is the ethnography of a point.

The *Oxford English Dictionary* defines ground truthing as "a fundamental truth influenced by sense" [OED online 2005]. A key aspect of the practice of locating a historical vantage point is that it is an embodied process that requires presence in, and engagement with, the world. Anthropologists studying embodied space attest to the role of body movement in the creation of place, and the significance of spatial orientation in the definition of events [Low and Lawrence-Zúñiga 2003: 5]. Repeat photography produces a nonhomogenizing, specific, and particular investigation of how a particular body in space formulates and produces the space of the national park. At the same time, the repeat photographer can explore the way the photograph may have contributed to the configuration of the body in

national park spaces. By physically standing in the place from which the photograph was taken (*i.e.*, by ground truthing), the person links to the past through connecting his or her body to an imagined body, and compounds the complexity of the relationship between “image and bodily involvement of the perceiver of the image” [Taussig 1993: 21]. The person holding the photograph, repeating the photograph, realigns his or her body, and realigns the past, and thereby enables a new view of Waterton to emerge through a particular, specific, and active engagement with a significant place. The photographic record of Waterton is tied to a legacy of survey, beginning with the International Boundary Survey in the 1860s, and the images that were produced were intended to explore resources, delimit boundaries, and lay claim to the wilderness within. As a result, contemporary photographs of the park, often taken from the same places, are part of the exploration and empire-building of early surveyors, and perpetuate colonial ideologies and assumptions about wilderness. The photograph and the act of return translate place into a specific event, location and experience that enable the anthropologist to probe into the archive in a particular way, producing knowledge about a culture by utilizing the visual “to construct works that give a richer sense of how culture permeates and patterns social experience” [MacDougall 1997: 288]. The specificity of ground truthing enables a reimagination of the park space, one that has the power to dislodge what seems to be immobilized inactive photographs of wilderness. As Low and Lawrence-Zúñiga write about understanding space and place, “body experience and perception become material by considering how we transform experience to symbol and then make experience into an object, such as an artifact, a gesture, or a word” [2003: 5]. The act of relocating historical vantage points is an act whereby I use my body and vision to understand how we transform experience into a photograph from a viewpoint. I return to the exact site from where these prominent records were initially created to assess and reassess place and perception of place. I ground truth, I confirm and validate, literally standing in the place from which the photograph was taken. From here I can ask: What does this show? What is in place? What is out of place? From these spatially immediate questions I gain ideas about patterns and then can generate questions such as: What experience of nature is provided by scientific (or popular) destinations or photographic locations? How do particular conditions of production (*e.g.*, biases toward particular lighting, weather, or time of year) influence an understanding about wilderness in national parks?

The questions and the answers might be articulated by visual products, created out of the experience of being in place. I may make a photograph of a scene outside the frame of the repeat photograph, providing an image of what might have been over the historical photographer’s shoulder, or behind him or her. I can ask questions that I wouldn’t otherwise be able to, such as: What conditions were present in the production of this account? Are they typical conditions? In asking why did the photographer stand here, ground truthing allows the researcher to think, literally, as Judith Okely has written, “on the spot” [2005: 124]. I contend that ground truthing through the act of locating historic photographic points is in accordance with a visual anthropology that “seeks to re-inscribe the body and senses into ethnographic practice” [Grimshaw and Ravetz 2005: 7]. Here it



Figure 4 Limber Pine, Waterton Lakes National Park. Left – 1960s photograph by Kurt Seel (Courtesy Waterton Lakes National Park). Right – repeat view 2005, Trudi Smith.

enables a narrative about Waterton to emerge through a particular and active engagement of spaces and places made significant through their presence as subject matter in photographs.

TAKING A PHOTOGRAPH: WHAT ARE THE POSSIBILITIES FOR IMAGE-MAKING FROM THE HISTORICAL VANTAGE-POINT?

In my repeat photography practice there are two primary departure points for image-making that I loosely define for comparative purposes as *reflective repeat photography* and *interpretive repeat photography*. Reflective repeat photography is the strategy of conventional repeat photography projects that seek to copy the original, historic photograph as closely as possible, so as to measure changes in landscape or cultural features both qualitatively and quantitatively. These repeat photography projects hold to realist conventions in their attempt to objectively reflect the world in front of the lens [Figures 1 and 4], and often seek to record as much detail as possible for future studies of landscape change (so they might use color emulsions or new camera technology). The Rocky Mountain Repeat Photography Project photographs provide a good example of reflective repeat photography insofar as they offer a detailed view of a space through time and generate an access point to consider values about nature and an understanding of landscape. The discourse surrounding these photographs of national parks in Canada is typically about change, and shows a contradiction between the idea of a pristine, unchanging wilderness and the changing space of the park. Repeat pairs allow for an investigation into how the view has changed—or, indeed, how it hasn't. The impact of viewing such a set is significant and, as the principal investigator of the Rocky Mountain Repeat Photography Project, Eric Higgs, asserts, "the mind's eye is marked indelibly" [2003: 139].

An alternative departure point for repeat photographic practice is what I call *interpretive repeat photography*. This departs from reflective, realist repeat photographic strategy. While driven by the same method of locating the historical photographic point (archival research, ground truthing), this strategy, rather than creating a repeat photograph using realist conventions, seeks to "recover" vision



Figure 5 Limber Pine, Waterton Lakes National Park. Left – 1960s photograph by Kurt Seel (Courtesy Waterton Lakes National Park). Right – repeat view July 22, 2004, Trudi Smith.

[Grimshaw 2001: 51] by creating a new way of seeing that allows the viewer to know the world differently. Steven Feld, describing the filmmaking style of Jean Rouch, talks of Rouch's attempts to "dissolve and obliterate parochial distinctions between fact and story, documentary and fiction, knowledge and feeling, improvisation and composition, observation and participation" [Feld 2003: 50]. Figure 5 shows the historic view of the tree by Kurt Seel, paired with a repeat view that was recorded on Polaroid film on a large-format pinhole camera over the course of two hours. This kind of repeat photography produces imaginative interpretive results that are a form of inquiry into the space that emphasize "experience as it is lived, felt, reconstructed, reinterpreted, and understood" [Sullivan 2005: 96]. Taking an exposure over the course of several hours produces a possibility to challenge perceptions of how space may be apprehended and experienced and, as a result, how it is recorded on film.

WHAT IS THE NATURE OF INTERPRETIVE REPEAT PHOTOGRAPHY?

The production of interpretive repeat photographs began with a pinhole camera because its system emphasizes process, time, and unpredictable exposures. The result of a pinhole repeat is a creative depiction of Waterton that acknowledges and emphasizes some of the complexities of representation, hinted at by Rogers, Malde, and Turner in their *Bibliography of Repeat Photography*: "a photograph may truly show the presence of a boat on a lake, but the boat may be grounded on the bottom. Hence, both the objective truth of a photograph and validity of what it may imply are matters of possible concern" [1984: XVIII]. The suggestion here is that photographs, imagined as objective, are somewhat unreliable records. This statement implicates some larger issues about the nature of repeat photographs as records. For instance, what happens when the realist structure of comparison breaks down? During summer 2004, I used the pinhole camera to repeat historic views of the park. I relocated a photo-point for an image of the popular and much-photographed Prince of Wales Hotel. During the long exposure time, a storm came in and obscured the hotel. This, in combination with overexposing



Figure 6 View of the Prince of Wales, Waterton Lakes National Park. Left – early 1900s image, courtesy of Waterton Lakes National Park. Right – 2004 photograph by Trudi Smith.

the image, caused the hotel to disappear [Figure 6]. While I created a structure of comparison by using archival records locating a historical vantage point, and producing a repeat view, the unpredictable nature of the pinhole camera (*i.e.*, no viewfinder, and exposure latitude issues) interrupts the comparative structure. What happens when an image doesn't deliver an objective repeat? Such images subvert realist assumptions in photography. Yet studying the complexity of archival photographic records through repeat photography as art is not cynical. Rather than undermine repeat photography as a practice, archival art and anthropological investigation come together to force a close look at the nature of records themselves. Repeat photography allows for this relationship and, as with Klett's Pulpit Rock, it is the structure of comparison that produces questions about repeat photography, the constructed nature of archives, and photographic views. From here, the ethnographer (or viewing public) can ask what counts as a repeat photograph and, by extension, bring up questions of what counts as nature, as a scenic view, a national park. By pushing beyond realist conventions, the construction of accounts is made more visible.

PROCESS AND PRODUCT: HOW DOES REPEAT PHOTOGRAPHY PRODUCE A SHARED ETHNOGRAPHIC SPACE?

While producing a repeat photograph can be understood as a way of generating a product providing knowledge for anthropological study or for a public anthropology that wishes to address problems beyond the discipline (such as illustrating issues of the environment or producing a museum exhibition³), the great strength of repeat photography as method in visual anthropology is the process of doing it, rather than the product itself. The process of repeat photography, including archival work, finding and reoccupying a historic location, and ground truthing produces new ways of looking at and using images to understand not only how we look at images but also how we understand space and place. The emphasis on process in repeat photography draws together anthropology and art onto "shared ethnographic ground" [Grimshaw and Ravetz 2005: 15]. The

use of repeat photography in art is, like anthropological research, driven by the study of existing social forms (historical photographs) and guided by the everyday activities of life (taking photographs). Documenting and investigating the “field of culture” [Foster 1995: 305] results from one’s retracing the original photographic moment as closely as possible and reproducing a document from that site.

The limber pine tree described at the beginning of this paper became a location and image that I return to over and over. Art is a laboratory [Van Alphen 2005: xiii] from whence I produce multiple accounts and build an archive around images. As Tacita Dean did in her archival work, I have used the coincidental discovery of an image to drive my ongoing investigation of the archive and the place, and as a result I produced an archive that builds on the park naturalist’s photographic baseline/archive to render more dense my understanding of the place. Ground truthing the limber pine produced some questions: What was the connection between the first photographer and myself? Why did I photograph the same tree? What are the aesthetic and place-based reasons that maintain the limber pine as a chosen subject? The answer at first seems obvious, as the lakeshore path passes by the tree. Yet the lakeshore path meanders between several hundred trees, so why choose this particular tree? I considered the ease through which I could position it into a formalist aesthetic (the tree, with its distinct architecture, stood apart from other clumps of aspen and willow). These broad questions seemed only to scratch the surface of my investigation, so I returned over and over to the same location to conduct repeat photography and to build an account and archive about the photo location. I used the historical archival photograph as well as photographs I added to the archive to provide insight into why I was enticed to this place. Standing at the intersection of subject matter and place, I used repeat photography imaginatively to probe into understanding nature in Canada, both through the process of investigation and through the images I produced, collected, and archived [Figure 7].

There are differences between the production of knowledge at the Tick Trail and the production of knowledge at the tree. From the Tick Trail I generated particular, specific knowledge to track park use in the area. In contrast, art is an imaginative way of framing cultural issues. From an art perspective, the single tree image produces a strong allusion to the Group of Seven, Canadian landscape painters of the early 20th century whose contributions to Canadian art explored and created a cultural iconography that formulated a sense of wilderness in Canada. I began to imagine connections between the tree and the history and lexicon of art, and this suggested a link between the single tree image in Waterton and Canadian nationalism. Beginning in the 1920s, nationalist painters Tom Thomson and the Group of Seven popularized the single, windswept tree (especially the pine) in Canada. It has found its place in the Canadian imaginary as a symbol of untamed and virtuous nature, articulating Canadian nationalism and identity as “a pioneering spirit crystallizing at the edge of an unknown space” [Teitelbaum 1991: 71]. Thus what began as a visual investigation of Waterton that unconsciously perpetuated a particular view of a particular tree in the park became an active relationship between both archival records and the construction of new visual records. This in turn produced and reproduced a



Figure 7 *Archive of Limber Pine. Installation view 2005 (top) and detail—a 4" × 5" Polaroid (bottom).*

dominant, iconic view of nature in the Canadian imaginary. Producing a repeat photograph opens up a space to ask questions about such views. I connected with a relationship that Canadians still feel today, and am putting my experience up against these symbols.

Repeat photography is related to an archival impulse in visual art practice. It draws on and produces archives and makes historical information physically present [Foster 2004: 4]. As a result, repeat photography instigates a different way of knowing how we understand and see park spaces. Not only does repeat photography reinterpret the past through producing photographs, it transforms the archival photograph by generating a new relationship with the contemporary photograph. Repeat photography, by probing into the archive and actively producing a relationship between archival and contemporary records, produces ethnographic knowledge. Repeat photography activates and reactivates the archive. I would suggest, using Scherer's conception of the study of archival records as the recovery of "forgotten worlds" [Scherer 1995: 201], that repeat photography transforms "forgotten worlds" into what Hal Foster might term "liberated worlds" (see Foster [2004] for a discussion of how archival art "liberates activity"). Living in a new context, the historic photograph is liberated; like our own and Klett's photographs of Pulpit Rock, neither photograph lives in

its time alone. In this, both reflective and interpretive repeat photography are expressive practices that provide a reply to Anna Grimshaw's call to see visual culture translated into a different conceptual register. Repeat photography can both produce and break down comparative structures; it can tell stories about the nature of landscape as well as the nature of photographic records in a different way than can words.

CONCLUSION

In *Ethnography through Thick and Thin*, George E. Marcus argues that problems in ethnographic writing can only be solved by thinking about how fieldwork is conceived and designed. Marcus claims that what is lacking in ethnographic practice—in both process (fieldwork) and product (writing)—is a “research imaginary” [Marcus 1998: 6], a sensibility that provokes to “alter or experiment” [*ibid.*] with the orientations that govern existing ethnographic practices. He asks for ethnographic practice to be reimagined. I propose that repeat photography reimagines ethnographic practice and realigns product and process in visual anthropology while it examines the photographic record of a place and subjects it to contemporary analysis. Repeat photography reworks the double meaning of ethnography for visual anthropology. The process, or the fieldwork component of ethnographic practice in repeat photography, is a visual, embodied strategy that emphasizes looking, insight, and reenactment. This process is matched with the product, the reflective or interpretive construction of a visual representation based on archival records.

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NOTES

1. There are as well a number of repeat photography projects charting urban change in North America, China and Europe, including “New York Changing” [<http://www.newyorkchanging.com/imagelist.html>], but in a bibliography of repeat photography from 1984, 90 percent of the 450 listed entries addressed changes in vegetation and the effects of geological processes [Rogers, Malde, and Turner 1984].
2. The use of a camera technology was the same, but the particular camera the Rocky Mountain Repeat Photography Project used to produce repeat views was a medium-format digital technology (Hasselblad HI and Imacon Iexpress 96 digital back, rather than a 4.5" × 6.25" box camera that produced glass plate negatives for the Dominion Land Survey).

3. My interdisciplinary (visual anthropology, environmental studies) M.A. research revolved around the creation of an exhibition about scientific photography in Jasper National Park, Canada, and brought historical Dominion Land Survey and Rocky Mountain Repeat Photography Project photographs together into the gallery space to explore the role of scientific photography in the construction of the Canadian cultural imaginary. The exhibition was treated as an “event, object, and interactive process at one and the same time” [Kratz 2002: 91], as a field site to reveal how landscape is social process [Hirsch 1995: 1–30]. Tracking experiences and responses in the gallery space revealed that values and beliefs about nature are produced as multiple narratives intertwined with social histories of a people(s), land, memory, space, and time.

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