



Seeing the Climate?

The Problematic Status of Visual Evidence in Climate Change Campaigning

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New visual evidence of the impacts of climate change was released by Greenpeace in Patagonia today. Dramatic new photos of Patagonian glaciers taken by the research team on board the Greenpeace vessel, Arctic Sunrise, show the extent to which climate change has caused the ice to melt this century, when compared to photos of the same glaciers taken in 1928.

—Greenpeace International, “Pictures of Climate Change”

The important thing is that the photograph possesses an evidential force, and that its testimony bears not on the object but on time.

—Barthes, *Camera Lucida*

As forms of visual evidence, photographs of melting glaciers function as powerful and persuasive signs of the visible impacts of climate change upon the landscape. Indeed, such photographs have figured as vital tools in historical efforts by environmental campaign groups to bring public and political attention to the reality of climate change over the past two decades.¹ Since Greenpeace first photographed the crack in the Larsen B ice shelf in Antarctica in 1997, images of melting and retreating glaciers have been used both in campaign group literature as well as reproduced in the popular media as proof of the reality of global warming, and the resultant climate change.² It would appear, then, that photographs used as a means of documentary evidence function





as powerful signs in the struggle against climate change, signifying the indexical proof of a world visibly scarred by a warming planet. Yet the persuasive force of these images, reliant as they are upon the referential status of the photograph as truth and reality, also illustrates the limitations of photographic representation as effective tools of communication in environmental politics. On the one hand, the visible evidence of climate change is recorded by the camera and given the status of truth by what Barthes calls the “*noeme* of photography,” the referential proof that “the thing has been there” (Barthes 2000, 76). At the same time, however, the temporality inscribed in the photographic evidence of “what has been,” or what Barthes identifies as the coexistence of “reality and of the past” (ibid.), proves catastrophic in the context of climate change campaigning, which necessitated action to prevent climate change *before its effects could be seen*. In other words, photographs of retreating glaciers depict an already affected environment, illustrating the current reality of climate change through the image, and at the same time signifying the failure of preventative action required to halt its acceleration. The temporal nature of climate change as an environmental issue of the greatest magnitude is thus made evident by the limited temporality of the photographic medium as a privileged form of representation within environmental campaigning.

My intention in this chapter is to examine the limitations of (documentary) photography as a discourse of evidence and truth within the context of the history of climate change campaigning. I argue that the problem of global warming, the scientific evidence of which was growing in the late eighties to early nineties, prompted a crisis of representation, and thus communication, for environmental groups. This crisis can be read in part as a consequence of the privileging of the visual within much environmental discourse; a privileging that is called into question when examined within the context of a historically “unseen” issue such as climate change. Reliance upon prediction and forecasting in the early days of climate change communication foregrounded the need for preventative action before climate change impacts could be seen. Thus it is the temporal nature of climate change that signals a crisis of the visual in environmental discourse. Here the communication of the temporality of climate change is limited by the temporality of photography as a representational medium whose evidential force is reliant upon its “certificate of presence” (Barthes, 2000, 87), which depicts “what is” or “what has been” rather than “what may be.” This chapter traces the problematic relations of the visual and the temporal within environmental discourse and its visual communication, a relationship brought to the fore by the current force of comparative photographs that document





the impacts of climate change upon the landscape, the consequences of which demonstrate failures to prevent climate change made evident by its currently seen status.

First, I examine the problematic history of the science of climate change and establish this as a contributing factor to the historical difficulties experienced in communicating this issue beyond the scientific community, and the role of environmental groups within this communication process. I then move on to explore the privileged role of the visual, in particular, photography, as a means of communication within environmental discourse and how this can be understood to be in conflict with the temporal and nonvisual aspect of climate change. I next discuss a specific analysis of the role of (documentary) photography within the communicative strategies of Greenpeace, more specifically, its climate change campaigning.³ Through an analysis of current comparative photographs of glaciers produced by Greenpeace, I explore the temporal limitations of photography identified by Barthes, arguing that these limitations are brought to the fore in the specific context of climate change communication.

Establishing Climate Change: Temporal and Visual Limitations

While it would be fair to say that there is now broad scientific consensus over the reality of human-induced climate change, historically this issue has been difficult to prove as posing a real threat. One aspect of this difficulty was the “unseen” nature of climate change, in a Western culture invested in the notion that seeing is believing. A further aspect of doubt was that the science of global warming was based upon predictive modeling and forecasting rather than observable impacts (Wilson 1992). Given the investment of scientific epistemologies in the discourse of empiricism, which privileges observable “fact” over prediction and the unseen, both the science of global warming and its effective communication were limited by the discursive frameworks of scientific knowledge.⁴

From the outset, then, prediction constituted a key basis in establishing the science of global warming as the outcome of anthropogenic activity, that is, the increase in CO₂ from the burning of fossil fuels. In 1979, the WMO (World Meteorological Organization) organized the first World Climate Conference to address concerns about the effects of human activity upon the climate and to call upon the world’s nations “to *foresee* and to *prevent potential* man-made changes in climate that *might* be adverse to the well-being of humanity” (IPCC, 2004, 2, emphasis added). This was followed in 1988 by the establishment of the





IPCC (Intergovernmental Panel on Climate Change) by UNEP (United Nations Environment Program) and the WMO “to provide independent scientific advice on the complex and important issue of climate change” (IPCC, 2004, Foreword). Conducting no new research, the role of the IPCC was, and is, to assess existing scientific reports published by the international scientific community in order to provide a comprehensive overview of the scientific basis of human-induced climate change. Comprised of scientists from a broad range of countries and a number of scientific disciplines, the IPCC has constituted the most authoritative scientific voice on the causes, impacts, and effects of climate change (Houghton 2004).

When the first assessment report of the IPCC was published in 1990, “an unequivocal statement that anthropogenic climate change had been detected could not . . . be made at the time” (Houghton 2004, 104). With the science still based upon prediction, in 1995, the Second Assessment Report stated, “There are many uncertainties and many factors [which] currently limit our ability to project and detect future climate change. Future unexpected, large and rapid climate system changes (as have occurred in the past) are, by their nature, difficult to predict. This implies that future climate changes may also involve ‘surprises’ ” (IPCC, 1995, 6). However, during the mid-to-late nineties, there was increasing evidence of climate change and its impacts to support the prediction graphs and computer model simulations.

By the time of the publication of the Third Assessment Report in 2001, the causes and impacts of climate change were identified as “robust findings,” while “key uncertainties” were related to “model projections” of future emissions of greenhouse gases and changes to global climate (IPCC, 2001, 30). Robust findings were related to “the existence of a climate response to human activities and the sign of the response,” while key uncertainties were “concerned with the quantification of the magnitude and/or timing of the response” (ibid.). In other words, the observable signs of the existence of climate change were undeniable, while the exact magnitude of change, as well its effects, was less quantifiable. The reality and impact of climate change were thus established. The robust findings stated that the “earth’s surface is warming”; that globally the “1990s is very likely [to be] the warmest decade in instrumental record”; that “atmospheric concentrations” of human-induced greenhouse gases have “increased substantially since the year 1750”; and that “most of the observed warming over [the] last 50 years [is] likely due to increases in greenhouse gas concentrations due to human activities” (IPCC, 2001, 31). By 2001, the science and reality of human-induced climate change were undeniable, with visible signs of its impacts.





It is important to acknowledge that the complexity and historical uncertainties over the science of climate change, alongside the predictive nature of its magnitude/effects, had a limiting effect on the successful communication of climate change beyond the scientific community. However, this is certainly not the only reason climate change has taken so long to establish itself in the consciousness of the public and international governments. The most obvious reason is the necessity for major economic, political, and social changes to occur on an international level so a reduction in CO₂ emissions could be achieved by moving from fossil fuel energy sources to renewables such as wind, wave, and solar. These changes impact on the everyday lifestyles and consumer habits of all citizens. However, one important means of communicating the risk and types of changes needed is through the work of NGO environmental pressure groups. Environmental groups play a key role in communicating science to the public, and thus in defining the risks and the nature of these. Analyzing the relationship between scientists, journalists, and environmental pressure groups in the mediation of climate change in three national contexts (Germany, Belgium, and France), Mormont and Dasnoy characterized the role of pressure groups “as mediators between public opinion and scientific expertise” (Mormont and Dasnoy, 1995, 56). In the context of climate change, historically an issue that was “not directly observable” and most likely accessible “via an immense scientific, technical and institutional network,” environmental groups play an important role in informing the public and making the issue relevant (49). However, Mormont and Dasnoy identify the problems inherent to the effective communication of climate change as a result of the predominance of scientific fact and hypothesis upon which the issue is based.

When it comes to climate change, the facts completely escape common experience, for it is only by communication that the issue is given meaning (as opposed to a daily occurrence such as a road accident, which ordinary experience has several ways of interpreting). The taking account of these facts (or hypotheses) by public opinion presupposes an interpretative context, one that may designate the risks and victims, in short, the social context which gives these facts meaning. (1995, 61)

Establishing interpretative frameworks could be argued to be one of the key functions of environmental campaign groups—informing and making a particular issue relevant.

How, then, to make climate change relevant, given the nature of the issue being scientifically complex, based upon predictive forecasting





and model simulations? To pose this question is to foreground the more general problems of scientific empiricism, whose validity of observation/prediction is itself limited by the methodological and epistemological frameworks through which knowledge is presented and authorized. More specific to my argument, however, the question foregrounds the limitations of environmental discourse, understood as the means by which the environment is made meaningful. In short, this necessitates examining the cultural frameworks through which we interpret the environment and environmental risks; the ways in which climate change is made meaningful as a real risk and as being relevant to the public. The lack of visual evidence and the temporal nature of climate change, two key strategies in the discursive construction of the environment, constitute key limitations for its effective communication. It is the role of environmental groups in the visual construction of the environment that I now examine.

Visualizing the Environment—Seeing Climate Change?

Above all, environment stories really need good pictures . . . global warming is very difficult because you can't actually see global warming.

—Former BBC news environment correspondent,
in Anderson, *Media, Culture, and the Environment*

Pictorially it's a tricky one to show global warming, because obviously they're showing something of the future.

—Former ITN news environment correspondent,
in Anderson, *Media, Culture, and the Environment*

Anders Hansen has argued that “environmental issues do not ordinarily articulate themselves” (Hansen, 1991, 449). The means by which environmental issues gain public and political attention thus has more to do with how the issue is articulated, or made meaningful, than the actual magnitude of the threat posed. Indeed, while climate change poses the greatest global environmental threat of modern times, this has not been matched by the extent of political will, public consciousness, or media coverage. An important reason for this lack of urgency can be examined through the nature of climate change communication, or articulation. In terms of the news media, the aforementioned epigraphs highlight how the “here” and “now” format of news discourse autho-





rized by the visual image is in conflict with the nonvisual and temporal characteristics of global warming as an environmental issue, making it difficult to communicate and to make relevant within news format constraints (Allan 1998, 105). Much work has already been carried out analyzing media representations of the environment, calling attention to its privileging of the visual immediacy of events-based issues rather than longer-term environmental problems (Hansen, 1991, 1993; Anderson 1997; Allan 1998). While my intention here is not to focus on media representations, I do, however, want to acknowledge how the nonarticulation of climate change within the media contributes to a general interpretative framework that makes climate change meaningful (and ultimately unarticulated) through visual and temporal framing, validated by the immediacy of the image. This privileging of the visual and temporal, while characteristic of contemporary news discourse, I would argue has a longer history in relationship to environmental discourses that have themselves come to be shaped by the campaign strategies of environmental groups, whose role is to call attention to, and to define, threats to the environment. Specifically, environmental groups have come to privilege visual representations of the landscape and environment as indicative of the need for its protection. The power of the image to persuade through documentation, and to evoke an emotional response, forms a key strategy of environmental communication.

The visualization of the environment as a structuring principle of environmental discourse—how we understand, interpret, and respond to the environment—has been discussed by a number of theorists, particularly in relationship to a growing tourist industry during the nineteenth century (Urry 1990; Wilson 1992; Macnaghten and Urry 1998). Since the Enlightenment, seeing our environment has become metonymic for understanding and valuing it: a visual aesthetics and an epistemology promoted and inscribed through nineteenth-century landscape painting, photography, and, since the 1960s, satellite images from space (Ingold 1993). Visualizing the environment in order to comprehend it is a constitutive aspect of making the environment meaningful. Visual representations of the environment as a means of defining it can be taken as a “cultural given.” As Hansen explains, a “cultural given” is a set of beliefs or practices of a society, through which environmental issues are made meaningful (1991, 452). One such given would be the belief in science to validate claims to authority about (environmental) risk; a distinct problem within the history of climate change science and, therefore, its effective communication. Other cultural givens are dominant ideologies, such as those about technological progress (e.g., the belief that [certain kinds of] technology will rescue the world from





climate change, undermining the viability of existing technologies in the form of renewable energies).⁵

The cultural given of “seeing is believing,” I would argue, is part of the means by which the environment is made meaningful, apparent in the visualizing activities of landscape painting and more recently photographic images of the beauty of our environment, used by tourism as well as environmental campaign groups. Where the cultural given of Western culture may be a belief in scientific discourse, this is intimately and historically entwined with our investment in visualizing knowledge and experiencing the world, and thus the environment, through the visual. It is not difficult to see how this investment in the visualization of the environment as a key feature of environmental discourse poses problems for the effective communication of an environmental issue such as climate change, which historically could not be seen. Indeed, besides cultural givens such as belief in science and the visual, Hansen identifies the necessity of “cultural resonances,” understood as “powerful, historically established, symbolic imagery,” in the articulation of environmental issues, through which they gain legitimacy (Hansen, 1991, 453). Given the privileging of the landscape as a powerful symbolic image of nature since the Enlightenment, global warming and climate change have limited symbolic resonance, signifiable only when their impact has been seen on the landscape, thus effectively too late.

Photography as a specific medium of representation whose discourses articulate the notion of visual truth as well as a visual aesthetics has played a crucial role in defining the environment as visually knowable. The photographic image and photography thus occupy a privileged position within the communicative strategies of environmental campaign groups, most famously Greenpeace. Photographs are used to document environmental destruction in order to persuade the public and governments to take action by their truth function, inscribed by an emotive aesthetic. Indeed, the history of photographic theory has pointed out the discursive functions of photography as truth/reality and aesthetic/creative, arguing that both coexist in all photographic images to varying degrees (Barthes, 1977a; Sekula 1982; Burgin 1982). This also can be read in terms of the signifying function, or the denotive and connotive, of all photographs (Barthes, 1977b). While more recent photographic debate often has centered on the impact of digital photography on the truth claims of analogue photography (Mitchell 1992), other theorists have pointed out that such debates deny the already contested and culturally specific nature of photographic meaning (Lister 1995; Kember 1998; Rötzer 1996). I do not intend here to enter into debates about the meaning of analogue imagery in relation to digital, and I would concur





that all photographic images are contextually and culturally dependent for their meaning. More importantly, I focus on the use of the photograph as tool of documentation, which arguably persists as a dominant factor in photographic meaning, particularly in the context of environmental campaigning (Robins 1995). In this specific context, photographs still function as powerful documentary records whose purpose is political, intended to persuade governments and the public to take action to save the environment. It is for this reason that the representational limitations of photography as indexes of reality and as effective forms of political engagement need to be addressed in light of the nonvisual and temporal aspect of climate change. It is the role of photography in climate change campaigning that I will now examine.

Photographing Climate Change—The Problem of Present and Past

Greenpeace make pictures. Pictures make Greenpeace.

—Boettger, “The Role of Photography
in Greenpeace’s Strategy”

Greenpeace is arguably the most image-centric environmental campaign group, a view made explicit by a former picture editor who states, “Greenpeace can be regarded as an organisation with photography as its vital medium” (Boettger 2001, 12). The key feature of photography that makes it such a vital tool of communication for the organization is the notion of the photograph as a form of evidence and witness. The evidential force of the photograph is used not merely to document environmental damage but, more importantly, to capture moments of nonviolent direct action and resistance: for example, images of activists in inflatables trying to stop whaling, or activists chaining themselves to Land Rovers to call attention to the high fuel consumption of 4 × 4s. As such, the photographs document “an act of resistance, a political act” (Boettger 2001, 12). The indexical properties of the photograph, its *noeme*, are made explicit here as being fundamental to effective environmental communication.

As photographic theorists have pointed out, however, belief in the photograph as an objective record of reality is part of the discourse of photography, what Sekula calls “the established myth of photographic truth” (1982, 86). The meaning of a photograph is dependent upon an interpretation of the photographic signs which are always culturally and historically specific (Barthes 1977a, 1977b; Sontag 1977; Sekula



1982; Tagg 1982). Thus the supposed truth and objective status of the photographed landscape are reliant upon understanding the visualized landscape as representative of nature. In the context of environmental discourse, the visualized beauty of the landscape is always understood as threatened. Likewise, the activist photographed mid-action can only be interpreted as a defender of the environment and as carrying out a political act through cultural perceptions of governmental and institutional failures to protect the environment. Greenpeace assigns photography the normative role of witness and seer, subscribing to the myth of photographic truth, inscribed by the discourse of science.

If we understand one aspect of the role of environmental groups as being the communication of science and risk in an accessible manner, and photographic images as being a central means of doing this, then we can already see the problems inherent to the communication of climate change science through image. Although not reliant upon image alone to convey matters of environmental concern—indeed, Greenpeace has already been acknowledged by Mormont and Dasnoy as having played a crucial role in establishing the science of climate change through its own scientific research and publications—within the philosophy of the campaign group, photography is specifically identified as the key aspect of its public communication. As stated earlier, the crack in the Larsen B ice shelf in Antarctica was first detected and photographed by Greenpeace in 1997. Such a strong visual image of a landscape, seeming to be undeniably affected by global warming, demonstrated by the breakup in the ice sheet, proved a pivotal image in communicating the reality of global warming through its impact on the landscape. Prior to this image, Greenpeace climate change communication had focused on rising temperatures represented by images of the scorched earth as well as through computer-model simulations of a red-swathed globe to signify a warming world. Anticipated weather pattern shifts also were imaged by photographs of storm damage, hurricanes, and floods (Greenpeace International 1993, 1994; Greenpeace UK 1997). However, the photograph of the crack in the Larsen B ice shelf can be regarded as the first influential and recognizable photographic evidence of global warming. Since then the polar ice caps, alongside the world's glaciers, have become the dominant visual language of climate change impact, functioning as effective images in establishing the reality of the problem. With proclamations such as “Arctic environment melts before our eyes” and “Glacier retreats are one of the most visible and reliable signs that warming and climate change is real,” information presented on the Greenpeace Web site highlights the link between seeing the impact of climate change as evidence of its reality and the central role of glacial ice as part of the symbolic landscape of climate change impacts (Greenpeace International 2002).





Problems over the effective communication of the immanency of climate change prior to 1997 can be understood in part by the lack of visible evidence of climate change, illustrated in the language of a Greenpeace publication on climate change from 1994, which stated that “the first impacts of human-induced climate change are in fact already *being felt*,” but not yet seen (Greenpeace International 1994, emphasis in original). While the reality of climate change is in part identified by images of impacts, the temporality inscribed in the photograph as both present and past further problematizes the privileging of photography as an effective form of communication in the context of an environmental issue that required preventative action in the present, before future effect. Such a representational problem corresponds to the temporal conditions of the photograph identified by Barthes. Barthes’s understanding of the noeme of photography as the “superimposition . . . of reality and of the past” (2000, 76) inscribed in the photographic image has a particular poignancy in the context of communicating climate change through the photograph. The temporality of climate change as both an ongoing and a future environmental condition can be said to be in conflict with the temporality of the documentary photograph as a fixed record of a particular moment in time. In other words, once climate change can be photographed, the future has been made present and authenticated as real while simultaneously being relegated to the past, a distinct problem, given the urgency with which climate change action is needed.

The current popularity of comparing historic photographic images of glaciers to those taken in the present as a means of documenting, and making real the effects of global warming on the landscape illustrates the temporality of photographic discourse and the limitations of this for environmental politics. Figure 14.1 shows one of the “[d]ramatic new photos” (Greenpeace International 2004) taken by Greenpeace of the melting Patagonian glaciers, placed underneath a photograph of the same glacier taken in 1928. Separated in time, these comparative photographs of the same glacier are intended to signify visual evidence of the effects of climate change as a result of rising temperatures. Dependent upon the indexical properties of the photograph for authentication, visible changes to the landscape (the referent) over time are made evident by the contrasting images. Thus where the photograph, unlike a moving image, captures and freezes time of a particular moment, it is this signifiatory power to attest to the real (moment) through which the comparative photographs gain their evidential and affective force as documentations of a changed landscape. Time, and the passing of it, is quite literally inscribed in these photographs.

Yet it is the temporal inscription and authentication of past and present through which the photographs gain their legitimacy that also



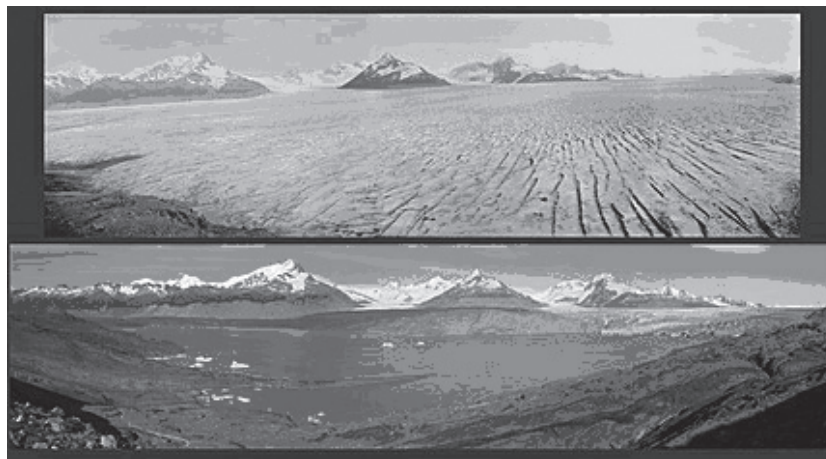


Figure 14.1. Comparative photographs of Upsala Glacier, Patagonia, Argentina. Top image taken in 1928, bottom (composite) image taken in January 2004 ©/top image: Archivo Museo Salesiano bottom image:©Greenpeace/Daniel Beltra

represent the limitations of photographic discourse within environmental discourse and politics. These limitations become more apparent if we firstly examine the photographs in isolation. As separate images, they depict particular, and possibly different, locations. The black-and-white sepia style photograph at the top appears to illustrate a hostile environment. This panoramic photograph was taken on a geological mission, and thus it signifies within the discourse of scientific truth. Viewed on its own, the color photograph below could easily be read as an advertisement for tourism. Beautifully colored, the bright blueness of the lake and sky set against the white snowcapped mountains could depict an idyllic tourist destination. It is only when these photographs are placed together, however, that their role as documentary photographs depicting a visibly altered landscape over time gains legitimacy. Through comparison of present and past, they appear to document a process of change—change captured and made evident through retrospective viewing. Although intended as comparisons between past and present, they also can be read through the convention of before and after shots, inviting the viewer to inspect the changes that have occurred seemingly after something has happened. Given the environmental context within which these photographs gain some of their meaning, the photographs of a changed landscape due to global warming worryingly position the viewer as looking onto a landscape before climate change and after. This



temporal positioning thus represents climate change as an event rather than an ongoing environmental issue, misleadingly promoting the view that climate change began after 1928 (when the top photograph was taken) rather than the reality of its development since the mid-nineteenth century. The photograph beneath this, as an image after climate change “has happened,” renders redundant the potential for present and further preventative action to halt the acceleration of climate change.

Confronted by these two images of present and past, they both quite quickly appear as belonging to the past as a consequence of photographic meaning (i.e., of reality and of the past). Indeed, the top sepia-toned image, read alongside the brightly colored image below, constructs a nostalgic view of a forever-lost landscape, where the glacial ice can never be regained. As photographs intended to document environmental damage, they construct for the viewer a sense of loss, and one that appears to be irretrievable. In the context of environmental discourse promoted by Greenpeace, they function on the level of witness and seer, as well as the emotive. They appear to invite us to look at the beauty of the landscape, to experience shock, and to feel loss. The problem with this, however, is that while they may generate a feeling or an emotion through the sense of loss, they do not contribute to understanding the causes of climate change or relate them to everyday life, that is, on a level where people can actually make a difference. They say little about the future.

Another style of comparative photography used by Greenpeace in the communication of climate change impacts is shown in Figure 14.2. Here a person appears in the present landscape holding up a photograph that depicts the same landscape in the past. In this type of comparative photograph, it is more difficult to see the differences between the present landscape and that shown by the photograph held by the person. Therefore, the reality principle of this photograph is in part reliant upon authentication by the person holding the historic image. The fact that the person in the landscape, Jorge Quinteros, actually took the photograph he is holding in 1955, during an expedition sponsored by the London Royal Society, further authenticates the reality of the image, inscribed by the discourse of scientific knowledge (Greenpeace International, 2004b). At the same time, the real landscape in which Jorge stands also acts as the authentication for the truth of the photographic referent of the historic image. The indexical nature of the historic photograph and its visual documentation of an earlier time, compared to the present landscape as a means of authenticating change, is supported by the role of the person in the photograph as witness and seer, validated by his role as scientist.





Figure 14.2. Jorge Quinteros at the HPS31 glacier in Patagonia, Chile, holding the photo taken during his expedition in 1955 ©Greenpeace

In some ways, the distancing effect of the comparative photographs in Figure 14.1 is mitigated in Figure 14.2 by the presence of a human within the narrative. Rather than the camera becoming the apparently unmediated eye of the landscape, as in the previous images, where the photographs become substitutes for the real landscape, here the role of the camera is made more obvious, and therefore less estranged, as a mediator between the real landscape (in which the person stands) and the photographed landscape (which the person holds). The posed style of Figure 14.2 is more familiar with personal snapshots rather than objective documentary and calls attention to the act of taking a photograph. Yet this seemingly obvious foregrounding of the subjective act of photography serves to reinscribe the very notion of photographic truth through the act of taking a photograph. As David Green and Joanna Lowry explain:

The very act of photography, as a kind of performative gesture which points to an event in the world, as a form of designation that draws reality into the image world, is thus itself a form of indexicality. (Green and Lowry 2003, 48)

Green and Lowry argue for the performativity of photography, and thus of photographic meaning, as a positive intervention into photographic





debate by identifying not only the continuing strength of “indexical inscription” but also highlighting the contextual and performative aspect of photography upon which the indexical inscription of photography is dependent. However, in the context of environmental campaigning, the photograph still functions as a powerful and persuasive form of evidence and truth. In a sense, the performative aspect of photography is found to be limited when used in the services of climate change communication.

Both sets of comparative photographs present themselves as a form of witness and documentation, inscribed by the discourse of photographic truth. They say what is, but in doing so they render climate change as a past event, captured and contained by the photographic medium. They call upon the observer to acknowledge the negative impact of climate change through visual evidence of a changed landscape, yet they do little to enable the viewer to do anything about this, given the apparent magnitude of glacial loss documented by the images. Yet such images used as testimonies of the changing landscape have become commonplace in the fight to halt the acceleration of climate change through photographing its impacts. Environmental photographer Gary Braasch began a project in 1999 committed to “The Photographic Documentation of Climate Change,” within which the intention was to “repeat historic photographs to show the changes” (Braasch 2005). The repetition of images taken at specific sites in order to document and prove environmental degradation seems to have taken on an unprecedented role in current efforts to communicate the reality and rapidity of climate change, yet they remain bound by their own temporal limitations.

Conclusion: Photography as Inaction

The camera, with its insistence on perspective and the narrow field, exaggerates the eye’s tendency to fragment, objectify, and estrange. Staring through a viewfinder we experience the physical world as landscape, background—the Earth as if seen from space, or as a map. At the same time, the snapshot transforms the resistant aspect of nature into something familiar, and intimate, something we can hold in our hands and memories. In this way, the camera allows us some control over the visual environments of our culture.

—Wilson, *The Culture of Nature*

Strictly speaking, one never understands anything from a photograph.

—Sontag, *On Photography*





It is difficult to deny the evidential force assigned to comparative photographs of melted glaciers, and one could argue that they have formed vital tools in the communication of climate change, making real through the visual a hitherto denied or ignored issue. The environmental and human catastrophe that threatens to be the outcome of continuing carbon dioxide emissions is represented by the photographs of already seen impacts. These photographs should alert us all to the need for action on an individual and a collective basis, yet there is something quite inactive engendered by the evidential force of these images. As Wilson (1992) explains, the very act of photography and the photographic image function to make distant an object, even if the intention is to bring it closer (see also Sontag 1977). In the context of climate change impacts, this distancing has worrisome implications, given the need for action on the everyday level. At the same time, the distancing is accompanied by an intimacy, a bringing closer, which can translate into the sense of control over that which is photographed. With the reality that climate change is not under control, the effect of these photographs may be the production of a feeling in the viewer that as long as the documentations continue, by Greenpeace or others, then that in itself is sufficient as a form of action and control.

Given the dominant ideology of Greenpeace's form of action being that of documentary witness, there is something inherently limited about this role based upon the visual (seeing translated as understanding) as well as the temporal. Adherence to the deployment of photography as an observational discourse of science is limited not only by the emphasis upon sight/seeing as truth but also the temporal limitations these pose concerning the inability to depict future scenarios as credible realities. Greenpeace's commitment to the indexical properties of documentary photography as the "here and now" marks the environment as always present or past rather than future. This is not to say that Greenpeace (or other environmental groups) does not forecast or communicate future issues. Indeed, Greenpeace was instrumental in identifying the science of climate change and forecasting future scenarios of climate change. However, the dominant visual language that forms the basis of its public communication does not enable the future to be understood in the present. The evidential force of documentary photography through which it gains its authority overrides that of simulated images that failed to alert governments and the public to what photography is now able to record and make real: visible climate change impacts. Photography cannot visualize the future as a present threat. In terms of climate change, the "what may be" is now captured as the "what is" by photography, but in doing so there is a danger that it is relegated to the past.





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Notes

1. The First World Climate Conference took place in 1979, at which it was "agreed that human activities had increased levels of CO₂ and that more CO₂ may contribute to global warming which could have damaging consequences" (Carter 2001, 233). However, I am taking 1990 as an approximate marker here, when the first Intergovernmental Panel on Climate Change (IPCC) assessment report was produced. In the same year, Greenpeace produced a reader's guide to the IPCC reports in an effort to translate and communicate the science of global warming to a wider audience (see Greenpeace UK 1990).

2. Angela Glienicke, current Greenpeace UK picture editor, commented that the picture of a stranded walrus atop a floating piece of ice became one of the key reproduced images in the media when it was first taken in 1997 and is still requested by news media today.

3. Elsewhere, I have examined in more detail the history of Greenpeace's climate change campaigning (from 1990 to 2007) in relation to the role of the visual within its communication strategies (Doyle 2007).

4. There exists a considerable wealth of literature that examines the discursive nature of science and scientific epistemologies, ranging from feminist critiques to those of cultural historians and social scientists. It would be impossible to refer to them all here. For a selection, see Benston 1982; Foucault 2003; Haraway 1989; Harding 1991.

5. U.S. President George Bush is particularly invested in the ideology of technological progress, for example, the use of carbon capture to reduce CO₂ emissions into the atmosphere. For a discussion of the limitations of carbon capture, see Greenpeace UK 1990.

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