James Balog’s *Extreme Ice Survey* publications and the absent stop motion photographs

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James Balog, director of the Extreme Ice Survey and dedicated to documenting the melting of some 200 glaciers, has successfully raised awareness of climate change. The stop motion photographs his team has produced, which have featured in the documentary film *Chasing Ice* (Jeff Orlowski, 2012), has demonstrated the significant reduction of ice on the surface of the earth over a relatively short period of time. Yet these photographs sit within his larger body of output that relies upon the conventional aesthetics associated with Balog’s time at *National Geographic*. The publication *Ice: Portraits of Vanishing Glaciers* (2012) focuses on the visual wonders of ice formations and include a few ‘before and after’ photographs from the stop motion sequences. In contrast, his earlier book *Extreme Ice Now* (2009) takes a stronger campaigning approach, albeit without substantially drawing upon the full potential of the stop motion ‘before and after’ sequences.

This short paper will argue that Balog seems encumbered by his visual training and context, and fails to realise the critical potential of his stop motion work. This perhaps says something about the hegemony of the publishing contexts (National Geographic and Rizzoli art publishers), the expectations of his audience and his own desire to be recognised as an artist. Using Buell’s argument (2004) that audiences have learned to look at representations of environmental apocalypse, and live with them in an uneasy and partial way, Balog’s output will be shown to be a partial and necessarily incomplete response to the effects of climate change on glaciers.

**Keywords:** James Balog, glaciers, stop-motion, environmentalism, climate change.

This paper argues that James Balog’s photographs in his latest book *Ice: Portraits of Vanishing Glaciers* (2012) reflects a persistent preoccupation with ecological modernisation that fails to enable viewers to imagine the current impossibility of overcoming the current and future impact of climate change. Although many visual environmental projects also fail to enable viewers to imagine future environmental crisis, Balog’s project, which remains indebted to the photographic tradition of the still photograph, remains resolutely tied to the past visually, conceptually and ideologically and focuses on a mournful response to the loss of specific environments. This is despite Balog’s campaigning for greater public and popular awareness of climate change, and despite his
experimentation with other, potentially more effective, means of engaging with ice loss and climate change. Moreover, although Balog situates his photographs with text and other forms of information, his indebtedness to the wilderness tradition and the resulting aesthetics of his images, seems to keep him firmly rooted in practices and conceptual approaches that make it hard for viewers to connect everyday lives to the impact of climate change on wilderness areas.

It is perhaps helpful to say why I’m looking at this material. Balog publishes much of his work through National Geographic, a magazine that is expressly conservative in its visual tradition and thoroughly middle class in its affiliation (Lutz and Collins, 1993). This offers a potentially predictable analysis of his work and there are, of course, other kinds of visual practice that engages with climate change, and with glaciers in particular, that potentially offers a more sophisticated discussion. However, these other projects sometimes reach smaller audiences and Balog’s express intention is to persuade a broader, mainly American audience, that climate change is real and that it’s already happening; indeed, he seems to want to reach the middle America that is in denial about climate change. Balog has argued persuasively that changes in glaciers are a way of providing evidence of the rising temperatures of the world that is visual and immediately understandable and one might also add, somewhat spectacular (Chasing Ice, 2012). His desire to reach and educate a popular audience is laudable, and perhaps also necessary given the dire ecosocial crisis now happening and about to happen around the world. Balog’s photographs for me, then, offer little that is formally interesting and engaging and of course the National Geographic framework is both frustrating and limiting. But understanding the potential impact of differing media presentations of his work is potentially instructive for the development of publically-minded visual practices.

For those of you who have not come across Balog’s work to date, it is probably helpful to take a brief overview of his work. Balog, a Canadian with a graduate
degree in geography and geomorphology, became a successful and self-taught photographer. His photographic career spans 30 years, 8 books and contributions to *National Geographic* amongst many other publications (Balog, 2014a). Balog also expressly reports that he was a climate change sceptic, but this changed when he worked in 2006 on assignment for the article *The Big Thaw* (Chasing Ice, 2012) [show slide]. As of 2012, this was *National Geographic’s* most read article and featured eight Balog photographs. The experience of travelling to places such as Iceland and Bolivia, as well as America’s own *Glacier Park*, brought to Balog’s attention how quickly glaciated regions were changing across the globe. The changes that Balog documented were significant and already impacting on communities and businesses dependent upon the glaciers’ existence for water or commerce. This experience, Balog reports, led him to establish the *Extreme Ice Survey*, a loose collection of photographers, adventurers, scientists and advisors who travel to remote places installing and periodically checking on cameras recording stop motion sequences of glacier shrinkage. The *Extreme Ice Survey* is funded by the National Geographical Society of America and sponsored by Nikon, although there are other numerous other supporters (Balog, 2009: 116). The *Extreme Ice Survey* currently has 28 cameras operating in the field observing 13 glaciers mostly in the northern hemisphere (Balog, 2014b).

A book of the *Extreme Ice Survey* material appeared in 2009 as *Extreme Ice Now*, [show slide] which *National Geographic* published. Balog also holds numerous talks both nationally and internationally on climate change and the impact on glaciers, some of which are available through YouTube. It is notable that Balog seems to model himself on Al Gore, a point to which I will return later in the presentation. In 2012 Balog published *Ice: Portraits of Vanishing Glaciers* and the film *Chasing Ice* directed by Jeff Orlowski, was also released [show slide]. One other cultural product relates to this multi-textual approach and was arguably made to increase the life-span of the ‘film event’; that is an i-phone and i-pad app, also called *Chasing Ice* and released shortly after the film screened at the Sundance Film Festival (Chasing Ice, 2012). Across these differing presentations
of Balog’s material we can see a range of approaches taken towards the presentation of his images and how this relates to the broader question of controlling climate change and carbon emissions in particular. In *Extreme Ice Now* there seems to be a clear intention to inform and educate as well as encourage readers to change their lifestyles.

**Example 1:** The book opens with some text laid over the images

**Example 2:** Graphics are used to show glacier deflation and some extra text is provided at the side

**Example 3:** Glacier retreat and its relationship to a broader timeline is shown. Again some extra text is provided.

**Example 4:** This is the only attempt to show glacier retreat in relation to the stop motion imagery. Although we have dates for each image I find this perceptually challenging as the weather and light changes in relation to the seasons, and of the course the amount of snow cover changes too. Over the course of a year, though, it is clear that the Columbia Glacier has retreated and not just in the warmer part of the year.

The book includes factual information about glaciers, climate change, locations of glaciers and “tipping points”. The book is clearly visually orientated but does contain quite a lot of information; it also encourages readers to influence friends, families and colleagues into acting more responsibly in regard to their carbon footprints, and there is encouragement for readers to write to policy makers and those who supply their local goods. At the end of the book there is a section advising readers on the personal action they can take at home. The book is very American in focus and concentrates on car usage – American cars, of course, being some of the least economical vehicles in the world (Rogers, 2010). There is no mention of carbon usage in relation to air travel at all!
In *Ice: Portraits of Vanishing Glaciers* Balog seems to be taking a much more mournful and melancholic approach to the subject of glaciers, whilst also celebrating the beauty of these environments. This book is clearly more concerned with the visual nature of ice and ice-bound environments and proportionally there is much less text. At the beginning of the book is some information about climate change but this is not substantially developed. Each photograph, though, is accompanied by a caption, many of which draw the reader’s attention to scientific or climate related information.

**Example 1:** There are many photographic examples that demonstrate the sweeping majesty of the glaciers; in this instance Khumbu Glacier at the foot of Mount Everest. This also demonstrates the installation of the camera equipment.

**Example 2:** This image of Columbia Glacier appeared in *Extreme Ice Now*, but the with the Empire State Building graphic. In this instance there is some text drawing the earlier ice level to our attention.

**Example 3:** This is a photograph of a melting ice sheet but clearly emphasises form and pattern. The caption for this image tells us that a Moulin has swallowed million of gallons of meltwater. Meltwater falls through moulins and speeds up the retreat of glaciers.

The book seems to celebrate the majesty and beauty of ice fields, glaciers and icebergs. Although there is some information regarding climate change, and there is some information at the back of the book about the social impact of deglaciation (notably the displacement of people caused by rising sea levels), it is clearly not a book associated with any sense of campaign. It is clear, I think, that the viewer is meant to enjoy the photographs visually (although I also find them quite boring). There is also some mention of time made in the book and its relationship to photography and the subject of ice [show slide]: 
We humans assume that we see the world in three dimensions. In fact, we also see in a fourth: time. Time is with us every moment of every thing observed. It is with us every time a camera clicks. In snapshot photograph, or the street photography made famous by Henri Cartier-Bresson, that’s obvious. But a different relationship with time is at work in EIS glacier photography. Time is an active character, visually explicit at time, implicit at others, constantly re-sculpting every molecule of frozen water. Everything you see on these pages will have changed substantially, if not vanished entirely, by the time you hold this book (Balog, 2012:10).

Balog seems to celebrate the very aspect of photographic representations of wildernesses that has also been identified as being one of its most problematic: Julie Doyle, who has analysed the use of photography in Greenpeace campaigns, for example, has pointed out that photographs can only show what has already happened, or what things were like in the past and they can have limited use in terms of “inspiring hope” (Doyle, 2007). So although the photographs are, perhaps, a joyful celebration of the beauty of these places it is because we are meant to understand that these places are in decline that I would suggest that they are mournful.¹

The film, however, is more ambiguous in its intentions, although references to the history of glaciers and the photographic relationship to memory are made and this perhaps reflects the nature of how the film came into being. [Orlowski, the director, was hired by EIS to record fieldwork activities; later Orlowski persuaded Balog to let him make a film about him. Later in the film’s production the film became more focussed on the glaciers and climate change but it has retained some of its earlier characteristics.] The film’s dominant narrative, then, is part biopic of Balog’s life and his commitment to the Extreme Ice Survey, but it also clearly attempts to educate and persuade the audience regarding climate change through showing excerpts of Balog’s talks. There are a number of similarities to the film An Inconvenient Truth (Davis Guggenheim, 2006), which
turns Al Gore’s ‘slideshow’ into a cinematic event. Balog even borrows some of the language, phrases, visual graphics and the presentation style of Al Gore. So on the one hand the film seems to portray Balog as an explorer-hero, and the other, there is a clear attempt to educate or persuade the audience in regard to climate change. However, in the film we do see use made of the stop motion sequence of glacier retreat, which features less markedly in the book publications. However, viewers are not presented with the stop motion sequences early in the film and there is a gradual building towards the drama of glacier retreat. There are two brief glimpses of the scale of glacier reduction earlier in the film, but these are hinted at whilst the film concentrates on the main narrative of the challenges of installing lots of cameras in remote and demanding locations. The longest stop motion sequence is finally made manifest in the illustration of Balog’s ‘Ted’ talk given in Oxford in 2009. Through the build up of the talk and through the cumulative narrative of the film, which has taken nearly an hour to reach this point, the final revelation of the shrinking glaciers is revealed, and I think, also achieves an affective impact.

[Show clip]

The stop motion sequences have a fairly limited circulation. As you have seen some are evident in the film and there are a couple more available through YouTube and the Extreme Ice Survey website. Inviting Balog to speak may possibly offer more opportunities for viewing the stop motion images. Given how many cameras are operating in the field, though, and the number of images the Extreme Ice Survey has amassed so far it seems strange that there is not greater access to this material – especially as it was generated with the express intention to raise awareness and change behaviours.

I want to take a closer look, then, at the eco philosophy underpinning Balog’s practice as it possibly explains why Balog is tied more to the still image rather than the stop motion sequences. Although I do not usually focus on intentionality in analysis of cultural artefacts there are two reasons why it is useful to do so on this occasion. Firstly, Balog seems to thoroughly understand his audience and remains in some control of the contextualisation of his images and how they are
used. Secondly, as Helen Hughes argues in *Green Documentaries*, eco-docs are intrinsically tied to and reflect the ethical dispositions of their makers (2014). Ecological modernisation was, and still is, seen as a way of overcoming global environmental problems, addressing all “spheres of human society” and working within the “main institutional arrangements of society” (Hajer in Buell, 2004: and 48 and 46). Ecological modernisation, then, was seen as a stable rather than revolutionary means of resolving environmental problems that importantly allowed businesses to continue to use growth as a model of health and success; it was also a model that encouraged businesses to be creative in its thinking and problem solving potentially stimulating new business opportunities. Economically, too, ecological catastrophes and the cost of the cleanup in America could also be included in the calculation of Gross National Product (Buell, 2004: 48). New products, new technologies and new ways of thinking about old problems became business opportunities that added to growth opportunities.

Although there is not sufficient time today to outline fully why I think Balog aligns himself with eco modernisation I will highlight four points. Firstly, Balog seems to closely model himself on Al Gore who was an express advocate of eco modernisation (Buell, 2004: 46), although Balog distances himself expressly from politics; secondly, in interviews Balog is rather vague about his ideas for curtailing and reversing climate change despite wanting to educate and persuade audiences; thirdly, Balog in an interview with Bill Moyers, and in his talks, suggests that technology, combined with economic, social and policy decisions will offer ways of rectifying or accommodating climate change (*Chasing Ice*, 2012) and lastly, technology and consumption plays a prominent feature in all his outputs although this is most visible in the film *Chasing Ice*, where the use of helicopters, cameras and other forms of technology are illustrated in relation to the role they play in the project. As Helen Hughes notes, all eco-docs face significant challenges both practically and ethically in the production of their films, raising significant questions of how it is possible to make a film about the environment, when the products and processes required to make the film also contribute to the environment’s demise. Yet Balog and the other members of the
Extreme Ice Survey have not publicly reflected on the use and impact of technology in their work to date. This is unlike other eco-doc productions where reflection on these issues is part of the production process; the most notable occurrence of this, perhaps, is in Jennifer Baichwal’s film on Edward Burtynsky where Burtynsky explicitly links the resources required to make photographs with what he is photographing (Hughes, 2014: Loc 210 and Manufactured Landscapes, 2007). With these points in mind, then, technology in the space of the film, and in enabling the other photographs and artefacts to exist, are important to Balog both practically but also ideologically as Balog has expressly aligned himself with technological solutions to environmental problems.

Eco modernisation, although popular in many contexts, overlooks the unintended and unpredictable consequences of technology and growth. Although it proposes that global patterns of behaviour can be changed for the better, as a philosophy it fails to adequately address a number of important economic, social and environmental issues. As already noted it actively supports growth for businesses and proposes that consumption can be sustained, as long as this happens more sensibly; indeed, sustainability for the business world is expressly the sustaining of growth, profits and their industries or economies. But eco modernisation does not account for how resources are found, mined and distributed across the world, the impact of resource extraction on environments and communities and whether equality of access to resources is guaranteed. Eco modernisation also overlooks how there is unequal access to technology – how some people are likely to be able to afford the new technologies that will protect us from the effects of climate change or other significant environmental problems such as toxification, pollution, decreased nutrition in foods and the overall decline in public and environmental health. Any solution requiring technology, especially in our increasingly conservative world, is likely to be associated with increasing disparity economically and socially in regard to access to safe and viable living and working environments.
In addition to that, Eco modernisation and its association with technological responses to climate change and other environmental or toxicity issues, has been associated, especially by commentators such as Frederick Buell, with living with greater and undelimitable risks across society.\textsuperscript{iv} This has led to some environmentalists revisiting express commitments to the decreased consumption and resource exploitation not only because of a belief in finite resources but also as a means of trying to bring environmental, technological and societal risks under control (Buell, 2004). Balog, then, seems to identify with a movement that probably has the most appeal of the environmental models, one that enables us to imagine our societies existing largely in their current formation, but one that also fails to fully imagine the future impact of an increasingly technologised and risk associated world. The implications of this are that we are more and more likely to be mourning the loss of known environments as these considerable encroachments continue.\textsuperscript{v} Balog's photography, then, in keeping to its pastness, enables this mourning to be practically realised and also celebrated. It also enables the loss of these environments to become manifest. But the limited use of the stop motion imagery arguably prevents the full awareness of the current crisis to be contained and prevents imagining, and perhaps facing up to, the scale of environmental and consequently social changes that face everyone in the future. Although in his talks (in similarity to Al Gore), Balog mentions the wider social impacts of living with climate change this is not systematically addressed in his publications.

His publications, it seems, address a very particular type of audience and one that wants to continue to see his spectacular images of glaciated wildernesses. Although this is a somewhat anecdotal point, I note that one Amazon review of his \textit{Extreme Ice Now} book expressed dismay at not being able to see the images without the text and diagrams encroaching on them! In addition to that Balog also has misgivings about using graphics to explain his images, saying that 'no self respecting photographer would place 'cheesy graphics' on their photographs' (Balog) One of the implications of this wilderness imagery is that
we can imagine, especially if we fail to pay attention to some of the captions, that glaciated regions are still wilderness regions and indeed the parts of the film that document the practical difficulties and hardships of working in glaciated regions emphasises the remoteness and ‘wild’ aspects of the landscape. But attending to the stop motion images means admitting that these environments, remote as they are, are drastically altered by human intervention and that they are therefore now man made landscapes. The regions in the stop motion imagery are changed from beautiful but declining landscapes into rapidly disappearing and obviously degraded landscapes. Indeed, in the photographs of Solheim Glacier in Iceland, the ice and snow features seem to transform into something of a muddy puddle [show slide].

Balog, though, knows his audience. The National Geographic, which has an expressly middle class readership, is probably read by many people who agree that climate change is happening, indeed, the magazine seems to run many features dedicated to the topic. In addition to that, Balog is clearly aiming to reach a section of the audience who do not believe in climate change, especially as some media outlets in America, notably Fox News, propagate misinformation about climate change and climate science. Whether one ‘believes’ in climate change or not, though, many viewers probably cannot face the scale of changes yet to come. Perhaps wealthy economies will be able to hold off some of the larger impacts of the displacement of people or the erosion of everyday life in terms of health and toxicity, but there is no doubt that these challenges will not be faced equally by all members of these societies. However, Balog’s express distanciation from politics, his alignment with ecological modernisation and his beautiful but conventional images clearly makes him a fairly friendly face of climate change advocacy, one that probably enables viewers to imagine a future based on the present that we already know. However, for me, this raises questions, as I’m sure it does for other climate change advocates, about how to create change without wholly demoralising audiences.
An Inconvenient Truth, (US, Davis Guggenheim, 2006), [DVD]


Chasing Ice, (US, Jeff Orlowski, 2012), [DVD]

Chasing Ice, (US, Ben Cunningham, 2012), [i-phone/i-pad app]

Hughes, Helen (2014) Green Documentaries, Bristol: Intellect Publishing


Manufactured Landscapes, (Can, Jennifer Baichwal, 2007), [DVD]


I have wondered whether Balog had imagined that the people who had purchased his first book would purchase the second volume. He did have some buyers comment that they wanted to see more of his photographs, and they also wanted to see the photographs without the interruption of text. If people buying the first book also bought the second book a section advising readers on how to reduce their carbon footprint could be seen as overkill or patronizing!

As noted earlier in the paper Balog has provided readers of *Extreme Ice Now* with suggestions for curtailing their carbon footprint, but this is similar to other simple means of curtailing carbon and fails to conjure up the ‘policy’ and ‘technology’ aspects of suggesting that carbon emissions can be substantially reduced.

Balog has admitted in interviews (notably with Bill Myers) that technology is important to him personally and that he couldn’t do without it. He also stated that he wasn’t expecting society to live without technology.

This is a whole new section in itself – see Ulrich Beck’s *Risk Society*, Eugenie Shinkle and Frederick Buell. Buell in particular argues that risks have become “undelimitable” – that is, risks and consequences do not remain confined within geographic or sociopolitical boundaries (2004: 193).

I was really struck by Al Gore’s proposition that carbon emissions could be reduced to 1970s levels, but of course this still means that we would be adding more carbon to the atmosphere (just at a slower pace). This measure in no way enables the current levels of carbon, and its consequent impact on climate change, to be addressed (*An Inconvenient Truth*, 2006).