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Capturing the Midnight Sun: Ernst Herrmann's Film and Photography of Svalbard in the 1930s

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1. Introduction

> On August 13th, we experienced such weather that the seals almost started singing, the gulls and ducks danced in circles, and we—sat in the folding kayak for 15 hours straight… Exhausted but cheerful, having just completed our most productive workday. Today alone made the entire expedition worthwhile (Herrmann, 1942, 109–111).[1]

Such was the mood of the German geographer Ernst Herrmann (1895-1970) on a fine summer day in 1937 while floating on the Wijde Bay in the northeastern part of Spitsbergen. Utilizing the recently developed Agfa colour film, Herrmann captured the first moving colour images of Svalbard and the Arctic, producing a short 12-minute documentary that featured scenes of snow-clad mountains, shimmering waters dotted with chunks of ice, arctic vegetation, and the midnight sun. Herrmann also took over 1,000 colour photographs on two separate expeditions to Spitsbergen in the summers of 1937 and 1938, which continued a long tradition of German research in Svalbard, including the expeditions of Wilhelm Filchner (1910), Kurt Wegener (1912), and the infamous Schröder-Stranz expedition (1912–13).[2] Along with Herrmann's documentary, this visual material has received little scholarly attention to date. I argue that Herrmann's work can benefit from ecomedia analysis, a system of mediation which embodies the relationship between media and cultural perceptions of the environment.

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[1] This and all of Herrmann's subsequent cited material are my translations from German.

[2] The Schröder-Stranz expedition had the aim of traversing the Northeast Passage. Yet, due to adverse weather and ice conditions, their ship the Herzog Ernst became entrapped in ice in Sorgfjorden. Four separate rescue missions set out to retrieve the crew. While seven crew members were rescued, eight expedition members were lost. Interestingly, one such rescue mission led by journalist Theodor Lerner aboard the Lövenskiold, which itself became trapped and crushed in the ice, produced a silent film of the mission released in German cinemas in 1913 (Steinhagen, 2012). For a collection of relevant photographs, see the online exhibition "Photos from the Schröder-Stranz Rescue Expedition, 1913," Leibniz Institute for Regional Geography, Leipzig, Germany, https://leibniz-ifl.de/en/home/research/research-infrastructures/digital-collections-1/schroeder-stranz-rescue-expedition

Utilizing new technologies, such as colour film and aerial photography, through the use of Agfa colour moving film and newly developed Fieseler Storch Fi 156 aircraft, Herrmann's expeditions and work showcased Germany's technical achievements but were circumscribed within broader national and expansionist policies at the time. Important to note is that all this occurred during the rise of National Socialism in Germany, which influenced Herrmann's support and research in specific ways. Employing ecomedia analysis, this article considers the impact and importance of Ernst Herrmann's film and photography in shaping a visual geography of the Arctic for German-speaking audiences, while arguing that Herrmann's work is of continued relevance today in a dramatically changing Arctic.

2. Ecomedia

First proposed by Cubitt, ecomedia highlights the relationship between media and the environment, and comprises a system of mediation that connects humans, technology, and nature (Cubitt, 2005; 2017). As Rust et al. further describe, "media, society, and the environment are inextricably entangled together, both in how media texts represent the environment and in the inevitable ways that media texts and systems are materially embedded in natural resource use and abuse." (2016, 2). All forms of media, both past and present, require the use of finite resources, with photography and cinematography in particular requiring silver and plastics from oil and coal, thus highlighting the dependence of media on energy and natural resources (Cubitt, 2017). More recently, López et al. (2024) describe ecomedia as media that are *of* and *about* the environment, with two broad areas of inquiry including how media grapple(s) with ecological issues and how ecology grapples with media. Taking film for example, its mediating function acts as a means of triggering slower, longer, cultural change in accepting, facing, and responding to global climate change, which makes environmental film (or ecocinema, a branch of ecomedia) a relevant research pursuit for both geography and the environmental humanities (Weik von Mossner, 2014).

Visual media play a prevalent role in shaping contemporary human culture. Ecomedia analysis seeks to decipher how various forms of media facilitate ecological discussion, contemplating the way the planet is framed, and drawing attention to its physical and representational impacts (Soles and Chu, 2016). Further, it can determine to what extent the medium promotes ecological consciousness, what Fraile-Jurardo et al. (2024) define as the level of an individual's ecological knowledge, attitudes towards nature, and environmentally oriented behaviour. "Eco-affects" also explore the ways in which humans feel and experience being part of our environments in and through media (López et al., 2024). Ultimately, ecomedia studies align with ecocriticsm's commitment to combine science, cultural analysis, and ecological politics (Ivakhiv and López, 2024).

While ecomedia has been a relatively new development over the last 20 years, I argue that early forms of media can also benefit from ecomedia analysis as they too accomplished a great deal in facilitating ecological discussion, promoting ecological consciousness, and developing eco-affects, while being inextricably linked to the use of finite resources. By considering the body of Herrmann's visual work from the 1930s, this article employs ecomedia analysis to analyse samples of colour photography and cinematography. I argue

that Herrmann's work represented an avant-garde form of ecocinema, a precursor to popular nature documentaries that would appear in sizeable numbers decades later. Before delving into Herrmann's 1937 film *Svalbard* and his colour photography, it is important to understand the background of his filming and work on the archipelago.

3. Film on Svalbard

As Rogatchevski (2020) points out, film crews have been coming to Svalbard since the technology's invention. In his study of Soviet films of the archipelago from the 1920s to the 1970s, Rogatchevski identifies key themes, such as the visually arresting yet potentially lethal nature of the islands and the abundance of wildlife, such as arctic foxes, birds, seals, walruses, reindeer, and polar bears, which currently outnumber humans on the archipelago. Interestingly, filmmakers from the days before colour film lamented the fact that they could not properly capture the shimmering colours in the Arctic. For example, the Soviet cameraman Sergei Lebedev, when referring to capturing the colours of the midnight sun, shared his frustration with the reader: "my movie camera was of no help. Colour film did not yet exist" (Lebedev, 1974 as cited in Rogatchevski, 2020, 150).

The German cinematographer Sepp Allgeier who had accompanied the Lövenskiold crew in its attempt to rescue the ill-fated Schröder-Stranz expedition in 1913, became the first cameraman in Germany to join such a ski expedition to the Far North at just eighteen years of age.[3] The film he produced from the rescue expedition was met with praise from German newspapers, serving as a testament to the high level of interest in such nature, cultural, and expedition films (Allgeier, 1931). While on the UFA expedition, which travelled from Svalbard to Greenland in 1926, Allgeier filmed what would ultimately became *Milak, der Grönlandjäger* (Milak the Greenland Hunter, 1928). Allgeier was taken aback by the beautiful colours of the Arctic landscape. In his autobiography, Allgeier (1931, 71) describes the scenery bathed in the midnight sun. "The peaks of the snow-capped mountains flowed crimson, and the shadows took on a blue-green hue. A fine, cold mist hung over it all, lending the colours a more delicate and ethereal radiance." However, he was in Svalbard ten years before the development of Agfa colour moving film and thus unnable to fully capture the enchanting colours. Still, his films undoubtedly served as an inspiration for Herrmann's later work.

While black and white films and photographs started circulating in the 1890s, the advent of colour film and photography represented the next major technological leap (Millar, 2019; Watkins, 2018). As Gunning (1996, 39) suggests, even in films with little narrative to discern, "colour seems to function as an attraction, a very direct visual stimulus. It's something to look at, something to surprise you, to amaze you."

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[3] Interestingly, Allgeier was the same age as Herrmann, originating from Freiburg im Bresgau in present-day Baden-Württemberg.



Figure 1. Picture of midnight sun over Wijde Bay, Svalbard, taken by Dr Ernst Herrmann on 15 August 1937. Source: Leibniz Institute for Regional Geography, Leipzig, Germany, Ernst Herrmann Collection, Box 993a.[4]

This speaks to the power of film and photography. A camera in hand can heighten awareness of the visual and material aspects of space, it can make us look at space and think about it in different ways (Hunt, 2014). Images (both moving and still) can capture texture, affect, experiential qualities, and sense of place, and assist in visually conveying what might be more difficult to express in writing (Arnold, 2019). Thus, early films and photographs attempting to capture the beauty and magnificence of Svalbard's polar landscape sought to bring these images to a wider audience. For some countries, it was also a means of communicating an Arctic myth, constituting a form of nation building (Rogatchevski, 2020). This aspect will be later explored. Interestingly, as Herrmann remarked while in Svalbard in 1938, the cinema is the only public form of entertainment aside from occasional sports, swimming, and attending church on Sunday mornings (Herrmann, 1942). Thus film was a novelty both as a form of capturing Svalbard's landscape and as a form of entertainment, showcasing it to local residents, as well as the wider public. The following section explores Herrmann's use of new technologies to explore and document Svalbard, ultimately creating a visual geography of the Arctic to be communicated back to German audiences.

4. Film, science, and technology

Ernst Herrmann was a passionate geographer who had a knack for organizing self-funded expeditions to explore geology, glaciology, hydrology, and meteorology of remote regions. He obtained his PhD in geology in 1924 and subsequently led expeditions to Sweden, Norway, and Iceland (German Biographical Archive, 2006; Lüdecke and Summerhayes, 2012). Following these initial travels, Herrmann wished to systematically explore the

[4] All photos are reproduced with the permission of the Leibniz Institute for Regional Geography (Leipzig, Germany) and the Bundesarchiv (National Archive of Germany, Koblenz, Germany). Please contact the institutions for authorisation to use the artwork.

Arctic, with the intent of utilizing new technologies to achieve this goal. Notably, he sought to use an airplane to test a new method, systematic landings on pack ice to study the Arctic Ocean from there (Herrmann, 1942). In April 1937, he turned to the German Reich Air Ministry and received favourable news: they would provide him with an airplane, the newly designed Fieseler Fi 156 Storch, that had a slow-flight capability (ideal for film and photography) and could land and take off in relatively short distances (30 to 50 metres), which would prove indispensable for pack ice (Herrmann, 1942). With this assurance, Herrmann hastily organized, with his colleague Harald Vollmer, a preliminary expedition to Spitsbergen in the summer of 1937. The expedition with the Fieseler Storch would then take place in the summer of the following year.

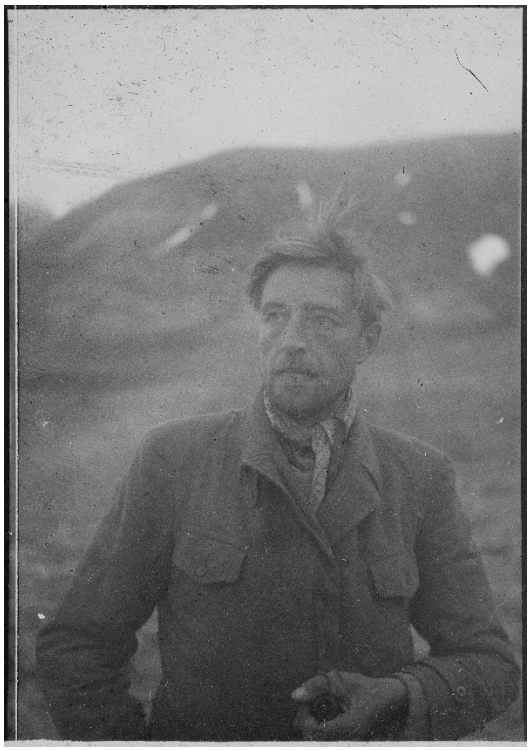


Figure 2. Ernst Herrmann on Spitsbergen, summer 1937.
Source: Bundesarchiv, Koblenz, Germany, Collection N 1576 Picture-2641A.

Herrmann and Vollmer arrived in Longyearbyen in July 1937 and were soon transported by steamer to Billen Fjord and dropped off at Brucebyen where they unloaded their sleds and supplies for a five-week expedition. The goal of this initial expedition was to cross the Nordenskiöld Glacier to the Mittag-Leffler Glacier, and thereupon continue to Wijde Bay to explore and map features of the landscape. To accomplish this, the duo spent a month hauling 550 pounds of luggage (including a folding kayak) on two sleds 750 metres up to the ice divide, then down to Wijde Bay, then back up and down again (Herrmann, 1942).

As Herrmann writes in his account of both the 1937 and 1938 expeditions (1942, 90), "we took advantage of the weather to take measurements because we wanted to create a map as accurately as possible. Every bit of good weather was used for photography and film." When Herrmann and Vollmer finally arrived at Wijde Bay in mid-August, they were mesmerized by the scene. Herrmann (1942, 90–91) observes: "the mountains stretch along

the eastern shore there, which have been waiting for millennia to be mapped and described by us, of all people. They probably even need to be named." Returning back to the initial quote of this article, this was the day both Herrmann and Vollmer spent 15 hours straight in their kayak capturing much of the landscape on Agfa colour moving film. The footage would ultimately become the short 12-minute silent documentary *Svalbard*, which Herrmann would later screen across Germany, including during WWII, when he toured frontlines giving lectures to soldiers (Herrmann, 1937; Leibniz Institute for Regional Geography, 1947).

The sepia-toned film documents Herrmann and Vollmer's 1937 expedition to Svalbard. It shows them aboard the steamer *Lyngen* departing from Tromsø on a sunny day (Herrmann, 1937, 0:28–1:32). Soon after, they arrive on Spitsbergen and commence their expedition across the Nordenskiöld Glacier to the Mittag-Leffler Glacier and Wijde Bay (ibid., 7:41–8:33). What is particularly remarkable about the film is its portrayal of ice both on land (as they pull their large sleds across the glaciers) and on water (as they use a foldable kayak to explore and document their surroundings). Arctic terns and a seal make appearances, and on the shore, they portray the bright yellow flowers of silverweed (*Argentina anserina*) (ibid., 5:30–6:32; 9:46–10:00). As a silent film, text frames are interspersed throughout, providing descriptions of the scenery specifically and of the Arctic more generally. The final scene of the midnight sun shimmering over Wijde Bay on 15 August 1937 is prefaced by a text frame that states "The Arctic is not dead," nor is it "grey on grey" speaking of the landscape's life and colour and the documentary's contribution to capturing these scenes on colour film (ibid., 11:23–56).

After what was considered a successful preliminary expedition in 1937, Herrmann returned in 1938 with the Fieseler Storch plane and two companions, the pilot Fritz Utech and the mechanic Ernst Alisch, on what was officially called "Dr Herrmann's 1938 German North Polar Expedition" (Herrmann, 1942, 135–36; see Figure 3, note the large swastika on the vertical stabilizer, which will be further discussed in the following section). As Herrmann (1942, 173) states, "my main priority is also testing a new method: the first systematic landings on ice floes. The exact location of the ice is less important to me at this stage. Any new data that enrich the existing geographical information about the inner Arctic is valuable." Herrmann, Utech, and Alisch first travelled by steamer to Longyearbyen where they tested out the Fieseler Storch. Following successful initial testing, they continued north aboard the *Vårglimt* to Ny Ålesund, where several airborne expeditions, including those of Amundsen and Nobile, had set off a decade earlier. Herrmann was giddy with excitement at the prospect of flying in the Fieseler Storch above the Arctic Ocean and documenting the journey on film and camera. He writes: "I myself am trying to capture as many individual scenes as possible in photos and videos" (ibid., 181), one of which can be seen in Figure 6.



Figure 3. The Fieseler Storch.
Source: Bundesarchiv, Koblenz, Germany, Collection N 1576 Picture-0132.

On this initial flight, Herrmann and Utech reached the 82° north latitude. Herrmann, almost lost for words, shares his impressions:

> The view from this height is breathtaking. We have long since crossed the 82nd parallel. […] What's important is that we are floating above the solid pack ice and that the landscape below us, as far as the eye can see, consists of a single ice floe. This endless white is uninterrupted. Cracks, fissures, and wakes created by the current are barely visible from this altitude (1942, 183–184).

With this description and the accompanying film and photos Herrmann took, I argue that he was producing some of the first ecocinema of the Arctic as he framed this remote environment for a distant audience, namely a German-speaking one. Unfortunately, Herrmann's test flights could not go further north as the plane experienced an oil leak, which prevented it from establishing fuel depots for further subsequent flights (Herrmann, 1942). Nevertheless, Herrmann maintained that the expedition was a success establishing that the Fieseler Storch could land on virtually any ice floe and from there take valuable measurements, thereby expanding one's knowledge of the Arctic Ocean. He writes: "the Fieseler Storch gained the confidence to be a particularly useful tool for all kinds of geographical research" (ibid., 11).



Figure 4. The Fieseler Storch landing on an ice floe.
Source: Bundesarchiv, Koblenz, Germany, Collection N 1576 Picture-0352.

Following these test flights, the *Vårglimt* returned to Ny Ålesund. There, the Fieseler Storch was loaded onto the *Lyngen* and, along with Utech and Alisch, returned to Germany. Herrmann stayed behind and was joined by his wife Margarete to carry out further measurements, to draw maps and graphs, and to further explore the area. In a foldable kayak, both Margarete and Ernst travelled to the base of the King's Glacier, examining the moraines of the glacier and conducting studies of the soil structure (Herrmann, 1942). Following a month of observations, they returned to Ny Ålesund and from there travelled back to Longyearbyen and subsequently to mainland Europe. War was on the horizon in the fall of 1938, although Herrmann was still concerned with exploring polar regions and would soon be leaving with the *Schwabenland* as co-leader for the Third German South Polar Expedition, a Nazi-sponsored research pursuit with deeply nationalistic undertones. While the latter expedition is outside the scope of this paper, the influence of nationalism on Herrmann's expeditions to Svalbard will now be considered.

5. Nationalism

While Herrmann was adamant about his passion for science and research, his work coincided with the rise of the National Socialist regime in Germany. Herrmann himself was not a party member. Important to note is Herrmann's membership in the Freemasons starting in 1923, which explains why he never joined the National Socialist Party (as both organizations were bitterly opposed) and why he was never promoted in his profession as a teacher in Berlin (Lüdecke and Summerhayes, 2012). However, in the 1920s and 1930s, the work of geographers provided scientific legitimacy for revanchist and expansionist policies such as those espoused by National Socialism (Glasze, 2013). This was more the case during Herrmann's co-leadership in the 1938–39 *Schwabenland* expedition to Antarctica, but nationalist sentiments underscored his research in the Arctic in 1937 and 1938 as well. Such an attitude was not restricted to German explorers or sailors but

common across the polar world, with countries such as the United Kingdom, Russia, Denmark, Norway, Sweden, the Netherlands, the United States, and Canada launching various expeditions with scientific, economic, and political aims (Markham, 1921). Starting in XX century if not before, national prestige and patriotism became a hallmark of polar exploration (Millar, 2019; Robinson, 2015).

Polar regions represented a final frontier for explorers to fill in the last blank spaces on the map. They also played key roles in the geopolitical struggle for access to resources, transportation routes (such as the search for the Northwest Passage), and strategic security reasons, as exemplified by heightened tensions surrounding the Arctic in the Cold War and increasingly present today through processes of nationalism, securitization, and remilitarization (Farish, 2010; Sergunin, 2021). From an individual perspective, the Arctic also served as a territory to be conquered, a feat through which one could prove one's heroism. In the 1930s, new types of polar enthusiasm emerged, which presented polar regions as liberating, mind-expanding realms (Wråkberg, 2015). This section briefly explores the influence of nationalism on Herrmann's work and how it influenced his contribution to ecomedia.

Nationalism is imagined, internalized, and performed in myriad ways (Koch, 2023). Undercurrents of nationalism are present in Herrmann's written works and observations of his travels. On both his 1937 and 1938 expeditions, he brought along the Nazi flag that featured in the photographs on his kayak, tent, and the Fieseler Storch airplane itself (which was of course lent to him by the German Reich Air Ministry). On a spectacular day in Wijde Bay, Herrmann (1942, 102) writes: "surely this is the first folding boat in Wijde Bay. Banner out! Even if there are no spectators except for seagulls and terns, the flag still boosts our self-confidence." Herrmann knew he and his companion were not the first to see the eastern shore of Wijde Bay but ascertained that the area had yet to be mapped. Here, while doing the mapping, Herrmann and Vollmer bestowed several placenames on prominent features. As Herrmann describes, "the most beautiful mountain massif on the eastern shore of Wijde Bay, rising steeply 700 metres from the fjord, we call the 'Hermann Göring Hill.' The large, south-flowing glacier is named the Amann Glacier" (ibid., 109–110). As such, Herrmann attached names of prominent Nazi Party members Hermann Göring, head of the Luftwaffe, and Max Amann, the head of the Eher Verlag, the official Nazi Party publishing house, to geographical features on Svalbard (although they did not catch on).[5] This speaks to the fact that names with clear national identity conveyed provocative claims to land and scientific recognition (Wråkberg, 2015).

[5] Today, the mountain is called "Einsteinfjellet" after Albert Einstein and the glacier is called "Smutsbreen" after the South-African statesman Jan Christian Smuts.



Figure 5. Folding kayak on Wijde Bay,
with what Herrmann named the "Herrmann Göring Hill" in the background.
Source: Bundesarchiv, Koblenz, Germany, Collection N 1576 Picture-0543.

As mentioned, Herrmann also utilized the most modern film and photography equipment to capture Svalbard's scenery. By featuring the swastika on his kayak in the film (as seen in Figure 5), Herrmann, although perhaps inadvertently, was showcasing the technological reach of the Third German Reich. His short documentary *Svalbard* also coincided with the use of the latest film technology to further advance the pernicious political project of National Socialism, as exemplified by other German films released at the time, such as Leni Riefenstahl's 1935 *Triumph des Willens* (Triumph of the Will),[6] showcasing the Nuremberg Rally of 1934, which (some argue) played a central role in glorifying the rise to power of the Nazis and demonstrates how art can be used in the service of tyranny (Steans, 2022). While *Svalbard*, a short twelve-minute nature documentary, is by no means comparable to a 114-minute propagandist film such as *Triumph des Willens*, it is important to recognize the inclusion and subsequent circulation of Nazi symbols across German films and documentaries at the time.

During Herrmann's 1938 expedition to Spitsbergen, National Socialist symbols were even more present, given the large swastika on the Fieseler Storch (as can be seen in Figure 3). Herrmann noted his concern about this, when the plane was being transported aboard the *Vårglimt* from Longyearbyen to Ny Ålesund. On the way, they passed Barentsburg, a Soviet mining settlement to the west of Longyearbyen. Herrmann (1942, 169) observed: "A while later, we're even further away from Barentsburg. With a certain intention. We don't want our Storch, with the large swastika on the helm, to get too close to Russian eyes." This highlights the tension between Germany and the Soviet Union at

[6] Of interest to note is that the Arctic and alpine cinematographer Sepp Allgeier also acted as the lead cameraman for the film.

the time and demonstrates Herrmann's reluctance to flaunt the swastika. Nevertheless, as was the case with the banner out on the kayak, Herrmann was proud to hoist the German flag while landing on the ice floes of the Arctic Ocean. During the test flights, Herrmann (1942, 189) writes, "we'll be at approximately 82° north latitude. And that's the northernmost point a German flag has ever reached! In this age of records, that's not insignificant."

Following the successful test flights and return to Ny Ålesund, the Fieseler Storch was sent back to Germany. Switching from geographical to military purposes, Herrmann (1942, 244) shares his emotions:

> After a brief overhaul in Kassel, my Storch, D-IFMR, was immediately able to perform a few impressive parade flights at the Nazi Party Rally in Nürnberg. Where could it be now? In Norway? France? In Russia? I don't know. I haven't heard anything more about it. But one thing I know: wherever it is, it will prove itself just as well and bravely as it did on the glaciers of Spitsbergen and the pack ice of the Arctic Ocean!

This demonstrates the link between nationalism and technology, whereby the Fieseler Storch, developed for eventual wartime purposes, was initially used by Herrmann to carry out extensive geographical research in the Arctic. Herrmann also utilized other new technologies, capturing much of the scenery of Spitsbergen using Agfa Colour film at the same time as other filmmakers were using film and photography to praise the Third German Reich. Thus Herrmann's work and influence on ecomedia through his films, photographs, and written accounts must be understood within the zeitgeist of the period.

6. Observing climate

Just as Herrmann was a precursor of ecocinema, he too was at the forefront of climate observations, which will now briefly be discussed. His expeditions also observed changes in the landscape. He writes that "the retreat of the Svalbard glaciers—the same exposure of old terminal moraines, which can be observed at numerous other glaciers in Svalbard and elsewhere in the Arctic—runs parallel to a general warming of the Arctic over the last few decades" (Herrmann, 1942, 208). While at the time the effects of global warming had not yet been tied to anthropogenic impact, Herrmann was unsure of the future, stating: "it is impossible to predict how long this currently observed warming will continue in the coming years" (ibid.). As a result, Herrmann's collected works, in the form of colour photographs, films, and written accounts in several books, not only captured an arctic landscape, fashioning an environmental imaginary of the polar regions, but also served to shed light on the changing environment of the Arctic well before contemporary discussions about climate change.



Figure 6. Aerial photo of King's Glacier and King's Bay, east of Ny Ålesund, summer of 1938. Source: Bundesarchiv, Koblenz, Germany, Collection N 1576 Picture-1600.

Returning to ecomedia and ecocinema, as Weik von Mossner (2014) affirms, film performs a mediating function as a means of triggering slower, longer, cultural change in accepting, facing, and responding to global climate change. I argue that Herrmann's works can benefit from ecomedia analysis, as they were both *of* and *about* the environment, utilizing new media technologies (which required significant resources), while framing a visual geography of the Arctic for an audience that most likely never encountered glaciers before. Visuals play a key role in developing imaginaries, given that humans are particularly visually-oriented animals, and visual media play a powerful and prevalent role in shaping contemporary human culture (Soles and Chu, 2016). While Herrmann's films and photographs were restricted to a relatively small audience, namely soldiers during his wartime lecture series on the frontlines, followed by lecture circuits throughout Germany, his "Pole to Pole" presentations helped fashion environmental imaginaries of the polar regions and stirred curiosity of these far-off places in the 1930s and 1940s (see Figure 7), thus contributing to the development of eco-affects, when humans feel and experience being part of environments in and through a use of media (López et al., 2024). One question that does arise in this context is what do the landscapes Herrmann captured on film and photographs look like today? The next section explores a possible answer.



Figure 7. Poster from Herrmann's public lecture of 18 October 1946. Main text reads: "Slide show presentation, polar explorer Dr Herrmann, 'From Pole to Pole,' experiences in the Arctic and Antarctic with his own colour slides." Source: Leibniz Institute for Regional Geography, Ernst Herrmann Collection, Box 990, Item 157.

7. A case for rephotography

How have the Nordenskiöld, Mittag-Leffler, and King's Glaciers that Herrmann visited in the summers of 1937 and 1938 changed in recent years? Returning to Billen Fjord and Wijde and King's Bay could address this question where the retreat of these glaciers could be studied through the practice of rephotography (also known as repeat photography). As Boyer et al. (2010) state, repeat photography is a valuable tool for evaluating long-term ecological and/or geological change in landscape. It is a technique in which a historical photograph (such as those taken by Herrmann) and a modern photograph, both having the same field of view and taken at the same time of year, are compared and contrasted quantitatively and qualitatively to determine their similarities and differences (Molnia, 2010; Inkpen, 2023).

Originally developed in 1888 by the Bavarian mathematician Sebastian Finsterwalder to survey the mountain glaciers of the Tyrolean Alps, rephotography was initially used as a means of documenting changes in glaciers (Boyer et al., 2010). Finsterwalder established camera stations and returned to them the following year, obtaining repeated images of the same view, whereby he could then document change to the glaciers over time by comparing the old and new images, using rudimentary photogrammetry (ibid.). Since the 1940s, however, repeat photography has become a technique frequently used to document landscape change, particularly changes induced by land use, and is now considered to be an excellent technique for evaluating landscape evolution over time (ibid.). It can also cast off technical language and communicate beyond the silo of expertise to the general public (Inkpen, 2023).

Specifically relating to the poles, Wråkberg argues that rephotography in Arctic regions enables attempts at reconstructing difficulties and ambiguities in original observations, and can also demonstrate the rarity of suitable conditions for a crucial sighting, as well as reflect on a rediscovery of the somehow familiar in the previously unseen "wilderness" (Wråkberg , 2015). As alluded to, this can be a challenging enterprise for many reasons

other than the weather. As Molnia (2010) considers in his study of rephotography of Alaskan glaciers, a major challenge when dealing with historical photographs is that they often lack metadata. It can therefore be difficult to determine the precise location in order to recreate the accurate field of view portrayed in the initial photograph.

In the case of Herrmann's photographs, much metadata does exist, which can be particularly helpful in retracing his steps over the course of both his expeditions to Spitsbergen. While some information (e.g. precise geographical coordinates) is missing, prominent features in the landscape, such as certain mountains or glaciers and a general location description, make it possible to determine where his photographs and films were taken (as can be seen in Figure 6). In addition, his rich account of both expeditions in Herrmann 1942 provide a wealth of data and information about the different places he visited over the course of summers of 1937 and 1938.

Martinsson's rephotography of the Northwest coast of Spitsbergen (on Magdalenefjorden, Fuglefjorden, and the area around Amsterdamøya and Danskøya) is of particular interest to me, given that he compared photographs and sketches of these areas spanning 120 years (see HDK-Valand - Academy of Art and Design, 2023; McLeod et al., 2015). Through his project "Extended Rephotography: Immersive visualization of climate change," he explored changes to Svalbard's landscape through rephotography and storytelling, which provided a possible blueprint for further studies of rephotography on Svalbard (HDK-Valand - Academy of Art and Design, 2023). Therefore, in the context of this paper, an area of further research would be to retrace Herrmann's steps and study changes in the landscape that have occurred over the last approximately ninety years, primarily at the three glaciers he visited and documented through his film and photographs. This would shed light on Herrmann's historical contributions to polar research and demonstrate how his work contributed to the development of ecocinema more broadly.

8. Conclusion

This article introduces the visual and written accounts of Herrmann's expeditions to Svalbard in 1937 and 1938. What makes Herrmann's films and photographs truly remarkable is that they were some of the first colour images of the Arctic to be taken at a time before widespread anthropogenic climate change began impacting glacial landscapes. Producing a 12-minute short documentary, *Svalbard* (1937), and taking over 1,000 colour photographs, Herrmann left behind a rich collection of visual materials that contribute to shaping polar imaginaries. As a result, I argue that this body of work constitutes an early form of ecocinema and benefits from ecomedia analysis, as it engages with media and cultural perceptions of the environment, and can contribute to the development of ecological consciousness, environmentally oriented behaviour, and eco-affects (Fraile-Jurardo et al., 2024).

Employing ecomedia analysis to decipher how media facilitates ecological discussion, the article provides an overview of Herrmann's two expeditions to Spitsbergen and traces the (potential) impact of his visual material. It also contributes to pushing ecomedia analysis, which was developed in the early 2000s, one step further by considering early forms of media such as the first colour film and photography (Cubitt, 2005), i.e. well before the term ecomedia was coined. Herrmann's work was not only *about* the environment but

also *of* the environment, as his filming equipment (and by extension his travel to and surveying of Svalbard) were only made possible by the use of finite resources such as oil and coal. *Svalbard* (Herrmann, 1937) portrays views of Billen Fjord, the Nordenskiöld and Mittag-Leffler Glaciers, as well as Wijde Bay, for the first time capturing in colour the beauty of snow-clad mountains, shimmering water and ice, Arctic wildlife and vegetation, and the midnight sun, which contributed to the formation of a visual geography of the Arctic. How this tied into popular conceptions of the "Far North" at the time and how this can be problematized by ecomedia analysis represents a further line of enquiry.

This article also considers the time during which Herrmann carried out his expeditions, which coincided with the rise of National Socialism in Germany. While not a member of the Nazi Party, the influence of nationalism is clear in Herrmann's work, which features several swastika flags and the bestowing of place names to geographical milestones in honour of prominent Nazi officials. Indeed, Herrmann's use of aerial photography during the course of his 1938 expedition was only made possible by the lending of a newly developed airplane, the Fiesler Fi 156 Storch, from the German Reich Air Ministry, demonstrating the clear link between science, technology, and nationalism.

Herrmann's photos and films capture a moment in time in the history of Svalbard, which proves to be relevant in the context of today's changing climate, something Herrmann observed already in the 1930s. The use of rephotography to retrace Herrmann's steps, while utilizing metadata from both his photographs and written accounts, would prove to be a valuable research pursuit. Herrmann was inspired by the landscapes he visited. As if inviting us to discover them for ourselves, his films and photographs communicate and share the beauty of the Arctic, enabling audiences to develop a polar imaginary and, by extension, a relationship with the polar regions, which is something of great importance in today's changing climate and climate change.

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