

Impact case study (REF3)

Institution: Sheffield Hallam University		
Unit of Assessment: UOA32 - Art and Design: History, Practice and Theory		
Title of case study: Enabling dialogue on the risks of uranium mining and the need for improved democratic processes in Greenland		
Period when the underpinning research was undertaken: 2013 – 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Professor Lise Autogena	Role(s) (e.g. job title): Professor of Cross-Disciplinary Art, Head of Art, Design and Media Research Centre (ADMRC)	Period(s) employed by submitting HEI: July 2012-present
Period when the claimed impact occurred: 2013 – 2020		
Is this case study continued from a case study submitted in 2014? No		

1. Summary of the impact

In her film *Kuannersuit; Kvanefjeld*, Professor Lise Autogena investigated and documented potentially devastating environmental and societal risks from uranium mining in Greenland and exposed how cultural taboos in dealing with conflicts, prevented democratic participation. The resulting arts-led interventions have: 1. Illuminated and confronted the issue of flawed government stakeholder engagement; 2. Highlighted cultural taboos in dealing with conflicts in Greenland and enabled democratic participation; 3. Provided a route to greater awareness of the risks of uranium mining and to the democratisation of radiation monitoring; 4. Enabled collaboration between indigenous communities and increased understanding of the complex issues contextualising uranium mining and traditional land use; 5. Created new reference points in contemporary art discourse.

2. Underpinning research

Professor Autogena's research considered the cultural and societal issues impacting on a consultation process concerning uranium mining in South Greenland. This was achieved by direct engagement with local communities, experts and government officials in Greenland, Denmark and the EU. Through filmed documentation, artworks and artistic interventions, the research aimed to identify key issues in the flawed relationship between the democratic stakeholders.

Since 2000 Autogena has developed a significant body of cross-disciplinary work that involved communities and organisations in large-scale dialogues. Since 2013 she has been part of the research programme, Nuclear Culture, that explored how the arts might facilitate wider public conversation with the nuclear industry [R1]. In 2013, she presented a position paper to an audience of nuclear anthropologists, physicists and stakeholders at the International Socio-technical Challenges for Implementing Geological Disposal (InSOTEC) conference in Berlin. It highlighted the secrecy surrounding the nuclear industry, and subsequent impact on democratic debate and engagement with radioactive waste storage and argued for the value of cultural approaches to bring these issues into the public realm [R2].

Next, Autogena started to follow the political and democratic process in the establishment of a foreign-owned, large-scale uranium and rare earth mining project at Kvanefjeld, a mountain located in South Greenland. The region is characterized by small towns and a widely dispersed indigenous population of sheep farmers, keen to maintain their traditional way of life. The project revealed the challenges faced by the Greenland Government as it deliberated on using mining to diversify the country's economy while pursuing independence from Denmark.

Born in Denmark, Autogena was acutely aware of the colonial history between Denmark and Greenland. This helped her to address, and mitigate for, levels of mistrust from the Kvanefjeld

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community. In 2015, she began to capture narratives, stories and testimonials that exposed the conflict between progress and tradition that surrounded the siting of an open-pit rare earth and uranium mine close to the town of Narsaq. The investigation revealed that the community was particularly vulnerable because of an inability to articulate and platform their fears.

Following conversations with Danish experts in nuclear science and history, Autogena visited the Kvanefjeld region to understand and document the relationship between decision-making, long-term sustainability, ecological and economic equity, and cultural identity. Over a month in 2016, using documentary film making as an artistic and ethnographic tool, she captured vital visual and oral evidence of the possible environmental and societal impact of uranium mining. The film portrayed a community, struggling to understand the potential risk and consequences to their traditional way of life, divided on the issue of uranium mining.

The resulting film, *Kuannersuit; Kvanefjeld* (2016) brought together interviews with farmers, residents and politicians to create a video work and an art installation [R3]. The issues identified by the film were further contextualised in 2020 by Autogena's online archive, kvanefjeld.net/ which visualised the layers of complexity of the Kvanefjeld mine in the wider geo-political context of Greenland [R3]. Significantly, the work highlighted the potential impact of cultural taboos in Greenland; major disagreements are avoided rather than confronted and Autogena saw evidence that this has resulted in a democratic vacuum, widespread anxiety and depression. The film documented the failure of government stakeholder consultation in developing an inclusive and informed process, which caused mistrust and suspicion of the underlying agendas. It highlighted the vulnerability of a community with no resources and little scientific literacy. It emphasized that little had been done to communicate factual information about the risks of the planned major mining operation.

During 2018, Autogena's findings led to research, on a European scale, into risk perception and environmental monitoring, with scientists responsible for nuclear safety at The European Commission's Joint Research Centre (JRC). She highlighted a lack of monitoring data from Greenland and identified an opportunity for an EU-supported community-owned radiation monitoring strategy for the Kvanefjeld region. To develop this, she used socially engaged and site-specific methodological approaches developed for Foghorn Requiem [R4] (2013) and Black Shoals; Dark Matter [R5] (2016), to establish long-term relationships with community, government and scientific stakeholders. Community-based tools for gathering and sharing data, plus data visualisation strategies, were developed to help increase the density of environmental monitoring through community engagement.

In 2020, Autogena established Narsaq International Research Station (NIRS) in South Greenland. This provided a vehicle for the exploration of how the findings might be translated to other contexts and communities facing similar issues.

3. References to the research

- R1. AUTOGENA, Lise, *Kuannersuit; Kvanefjeld* (2016), curated by Ele Carpenter for Nuclear Culture <https://nuclear.artscatalyst.org/> in partnership with Arts Catalyst and Bildmuseet, Sweden.
- R2. AUTOGENA, Lise (2013). 'Cultural challenges of visualising radioactive waste storage'. In: International Socio-technical Challenges for Implementing Geological Disposal (InSOTEC) Berlin Stakeholder Seminar 2013, Berlin, 12-13 November 2013. <https://sites.google.com/a/insotec.eu/insotec/publications/berlin-2013>
- R3. AUTOGENA, Lise; PORTWAY, Joshua. *Kuannersuit; Kvanefjeld*. The research has produced a body of work that includes a documentary video (29mins) and installation. Commissioned for Perpetual Uncertainty - Contemporary Art in the Nuclear Anthropocene", Bildmuseet, Sweden (2016) and [Kvanefjeld.net](http://kvanefjeld.net/), an evolving research archive of interconnected artefacts and texts that refract the different facets of the complex debate surrounding the construction of the mine. Commissioned for Critical Zones - Observatories for Earthly Politics. ZKM | Zentrum für Kunst und Medien Karlsruhe, 2020). *Kuannersuit; Kvanefjeld* is submitted to REF2.

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- R4.** AUTOGENA, Lise Frandsen, PORTWAY, Joshua and GOUGH, Orlando (2013). *Foghorn Requiem*. [Performance] <http://www.foghornrequiem.org/>
- R5.** AUTOGENA, Lise and PORTWAY, Joshua (2016). *Black Shoals; Dark Matter*. [Show/Exhibition] <http://www.blackshoals.net/>

The film installation has been exhibited continually between 2017 and 2020 in 13 high profile exhibitions, curated by established curators at major international museums and art venues. The research was supported by funding from Keck Futures, National Academies of Sciences, Technology and Medicine (US), The British Council, Arts Council England and Danish Arts Council and ZKM, Germany. The work was nominated for the French Ministry of Culture /European Commission funded COAL Art and Ecology Prize 2018 and presented at COP24 in Poland.

4. Details of the impact

The research findings have encouraged and enabled democratic stakeholder engagement for an indigenous community. They provided a mechanism for dialogue and highlighted cultural taboos, through the engagement of politicians, government officials, scientists and community members.

Illuminated and confronted the issue of flawed government stakeholder engagement

Autogena's 2016 documentary film, *Kuannersuit; Kvanefjeld* [R3], has played an important role in articulating and bringing to attention the concerns of people living in the Kvanefjeld region of Greenland. In so doing it illuminated and confronted the issue of flawed government stakeholder engagement. A member of the Greenland Parliament, and resident of Narsaq, wrote: "*Kuannersuit: Kvanefjeld* has been incredibly important in bringing the potentially disastrous uranium mining at Kvanefjeld to public attention and it has highlighted that the Government has not included the local population in the democratic process" [E1]. In 2020, the former Greenland Government Minister for Industry and Mineral Resources wrote: "*I showed the film to senior members of my party last year. We felt that the film was very important in terms of showing the problems that the Kuannersuit mine poses in Greenland right now, and the lack of a democratic conversation we feel is taking place in our society. The problems with the mine are one of the decisive factors in the [...] (parliamentary) election in Greenland, and we have therefore asked [Autogena] if we can post the film on the party's website in connection with the election* [E10].

Highlighted cultural taboos in dealing with conflicts and enabled democratic participation

Statements in the documentary such as "*when we disagree, we don't discuss that subject*" (14':44") increased awareness of how, in Greenland, cultural taboos, and silencing of issues of major disagreement, had serious ramifications for the democratic system. This increased awareness has empowered the community to participate in discussions concerning the Kvanefjeld mine. The local Greenland MP wrote "*[Autogena] enabled us to become more aware, [...], that the right to speak is something we, as citizens in this country, will need to work on if we are to develop our country as we would like.*" She had also been influenced personally, "*Lise has been incredibly important in making me understand that I have a right to freedom of speech*" and had changed her philosophy "*[She] increased my awareness, that we need to change the way we understand [...] citizen involvement [...] not just now but also in the future. I am now working to make citizens more aware that citizen involvement should be something we take for granted, and not a topic to be fought for*" [E1]. A farmer, who appeared in the film described how the work gave her a voice. She wrote "*[...] it has been difficult to express our feelings about the mine, because for many years our concerns were not listened to. [...] I feel that Lise's film gave me a voice that I didn't have before*" [E4] (2020).

The research has stimulated public debate. In 2018, Autogena presented her research at a public hearing at the University of Greenland, followed by a panel discussion. Autogena's pre-publicity highlighted urgent questions and issues identified by the research, such as "*How can a democratic conversation take place, when the political desire [stands] in contrast to the desire of a large part of the population [...]*?" Although announced only five days in advance, 155 people expressed interest in the event. Attendees included six MPs, the PM's personal secretary, the head of the opposition party and the Minister for Mineral Resources, plus representatives from two government agencies, the Chairman of Tanbreez Mining, heads of Human Rights Council and

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Red Cross, academics, members of the public and anti-mining activists. An associate professor at the university commented *“The event’s turnout was unusually outstanding”* [E3].

The official responsible for stakeholder engagement for the Environmental Agency for Mineral Resource Activities (EAMRA) wrote that she *“prioritized showing up [despite] another appointment”*. She added *“Many [people] were asking for more factual information [...] and finally a new documentary was launched [...] and there was going to be a debate between the audience and a panel”*. The presentation, *“strengthened my understanding that we must develop our citizen involvement in Greenland. [It] asked many questions [...] that have not yet been properly addressed, either by the government, research-wise or by a wider population group”* [E2] (2020).

Provided a route to greater awareness of the risks of uranium mining and to the democratisation of radiation monitoring

In 2018, Autogena was commissioned to work as an artist with the EU science policy unit, JRC, which monitors background radiation data in Europe. Realising that the EU did not receive any data from Greenland, Autogena and the curator of Nuclear Culture at Bildmuseet, proposed an artist-led collaboration to enable the community in the Kvanefjeld region to take ownership of monitoring the impact of uranium mining. By democratising data collection and submitting data directly to the EU and the Danish Emergency Management Agency monitoring systems the community would have an early warning system for any increases in radiation and develop enhanced localised scientific knowledge. The resulting Kvanefjeld Community Radiation Monitoring strategy represented a shift from the centralized environmental-evidence model to a distributed community-based approach. It was a major conceptual change that was supported by the environmental consultants for the Government (EAMRA). They became collaborators in the project and on their recommendation, Autogena was invited to present her strategy to the Greenland Government.

Later, the government official responsible for stakeholder engagement in mining projects, acknowledged that the consultation process was flawed. She was inspired to leave her job to focus on Autogena’s idea. She noted, *“I felt there was an urgent need to carry out this alternative project. In short, this [Autogena’s] alternative proposal- combined with how the Greenland Mineral Agency, the ministry of Raw Materials and the Environment handled the stakeholder consultation process in allowing mining projects-made me decide to get actively involved in the consultation process as an ordinary citizen-it also motivated my interest in starting to research how we Greenlanders can develop the democratic conversation [...] between foreign mining companies [...], the government [...] and [...] citizens”* [E2] (2020). She now works with Autogena.

Using methodologies developed for her large-scale art collaborations, [R4, R5] Autogena involved stakeholders (including local residents, sheep farmers, activists, schools, health experts, EU scientists and government consultants) in developing an inclusive and informed approach to community-based environmental monitoring. One sheep farmer wrote that they had encouraged other farmers to support the initiative *“because it will give us an early-warning system [...]. Our school is part in this [so the children can] learn that we all have to take care of the nature that we live in together”* [E4] (2020).

In 2020, Autogena established the Narsaq International Research Station (NIRS), which hosts research projects in dialogue with residents, education, museums, and community centres in the region. The initiative was widely endorsed. The Director of Kunsthall Aarhus in Denmark noted that the NIRS *“applies important artistic research to everyday problems”* and for that reason in 2020 *“decided to become a board member of NIRS-in my [professional] role [and] also as an individual citizen”*. [E5]. Researchers and academics, from disciplines including art, political science and anthropology have asked to collaborate with NIRS [E6]. The former Government Minister for Industry and Mineral Resources remarked that the NIRS *“is of great importance to Narsaq [...] because it is the local community that helps define which research takes place [...]. It is a whole new way of launching research”* [E10]. A radiation expert who worked as consultant for the Greenland Government wrote: *“For decades, worldwide scientists have traveled to Greenland to study Kvanefjeld. However, their work has never been presented to the local community in a language they can understand. The Research Station has made this possible”* [E6].

Enabled collaboration between indigenous communities

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The research created links between activists, scientists and artists of the indigenous populations of Greenland and the Navajo in the US. It led to a sharing of experience and learning and increased understanding of the complex issues contextualising uranium mining and traditional land use. In 2018 the International Nuclear Film Festival invited Autogena to present her research at Navajo Nation, US Indian Reservation, in locations blighted by uranium mining. After she delivered a message of shared concern from a Kvanefjeld resident to Navajo politicians, environmental activists and communities, the festival director wrote, *“I felt a great spirit of solidarity in the indigenous audience with their counterparts in Greenland”* [E7]. A Navajo film festival organiser and influential member of her community added, *“After the presentation [we decided] to travel to Greenland to present our experiences to the Greenland parliament”* [E7]. A Navajo scientist wrote, *“[we] started planning a Navajo/Greenlandic knowledge exchange on community monitoring of radiation from mining sites, I am now in contact with a sheep farmer in Greenland who will be coordinating my [visit] to Greenland”* [E7] (2020). The Covid-19 pandemic has so far prevented the trips from taking place.

Created new reference points in the domain of contemporary art discourse

The documentary demonstrated that an arts-based methodology can enable dialogue, expose difficult truths and galvanise action. The film has been viewed online more than 3,300 times since 2017 and was a fundamental part of a major exhibition series. The film installation was exhibited continually between 2017 and 2020 in 13 high profile exhibitions, curated by established curators at major international museums and art venues, including Critical Zones, Observatories for Earthly Politics (curated by Bruno Latour) at ZKM, Germany (2020 ongoing), and the major touring exhibition (Perpetual Uncertainty / Contemporary Art in the Nuclear Anthropocene), including exhibitions in Norway (exhibition voted Critics Choice in 2019), Denmark, Holland, UK, Spain, Belgium and Lithuania. Total visitor numbers exceeded 230,000 [R3, E9].

Curator of the Aarhus Kunsthall wrote that the work *“represents a significant new research approach that builds entirely new infrastructures”* [E5]. In 2020, the curator of three exhibitions, Bildmuseet, Malmö Kunsthall and Contemporary Art Centre Vilnius, wrote, *“Historically artists usually respond to the nuclear industry after the event: after a mine has closed or after a nuclear accident. [...] Autogena and Portway have taken an original approach to working with a community before a nuclear event. The artists methodology is pre-emptive [...]”* [E5].

The work has increased understanding of the issues from outside of the arts world. A 2019 essay by an economist on the website of Polar Connection (a UK-based Polar Think Tank) said, *“This piece displaying ore and imagery [...] sums up the trade-offs facing Greenland’s future in mining with stark brilliance”* [E8].

5. Sources to corroborate the impact

- E1. Testimony from Greenland MP and resident of Narsaq
- E2. Testimony from official responsible for stakeholder engagement at Greenland Government’s Environmental Agency for Mineral Resource Activities (EAMRA)
- E3. Evidence from Associate Professor from University of Greenland
- E4. Evidence from sheep farmer in Kvanefjeld region
- E5. Testimony from curators, including Director of Aarhus Kunsthall, Denmark
- E6. Testimony from researchers at the Narsaq International Research Station
- E7. Corroboration of engagement with Navajo community (Scientist and film festival organisers)
- E8. Article in Polar Connection by economist, Professor Brooks Kaiser, on Kuannersuit; Kvanefjeld installation, 23 August 2019.
<https://polarconnection.org/greenland-is-greenlandic/>
- E9. Evidence from screenings and exhibitions
- E10. Quote from former Minister of Industry and Raw Materials (Greenland Government)