Arctic Perspective Cahier No. 2

Edited by Michael Bravo & Nicola Triscott

Arctic Geopolitics & Autonomy

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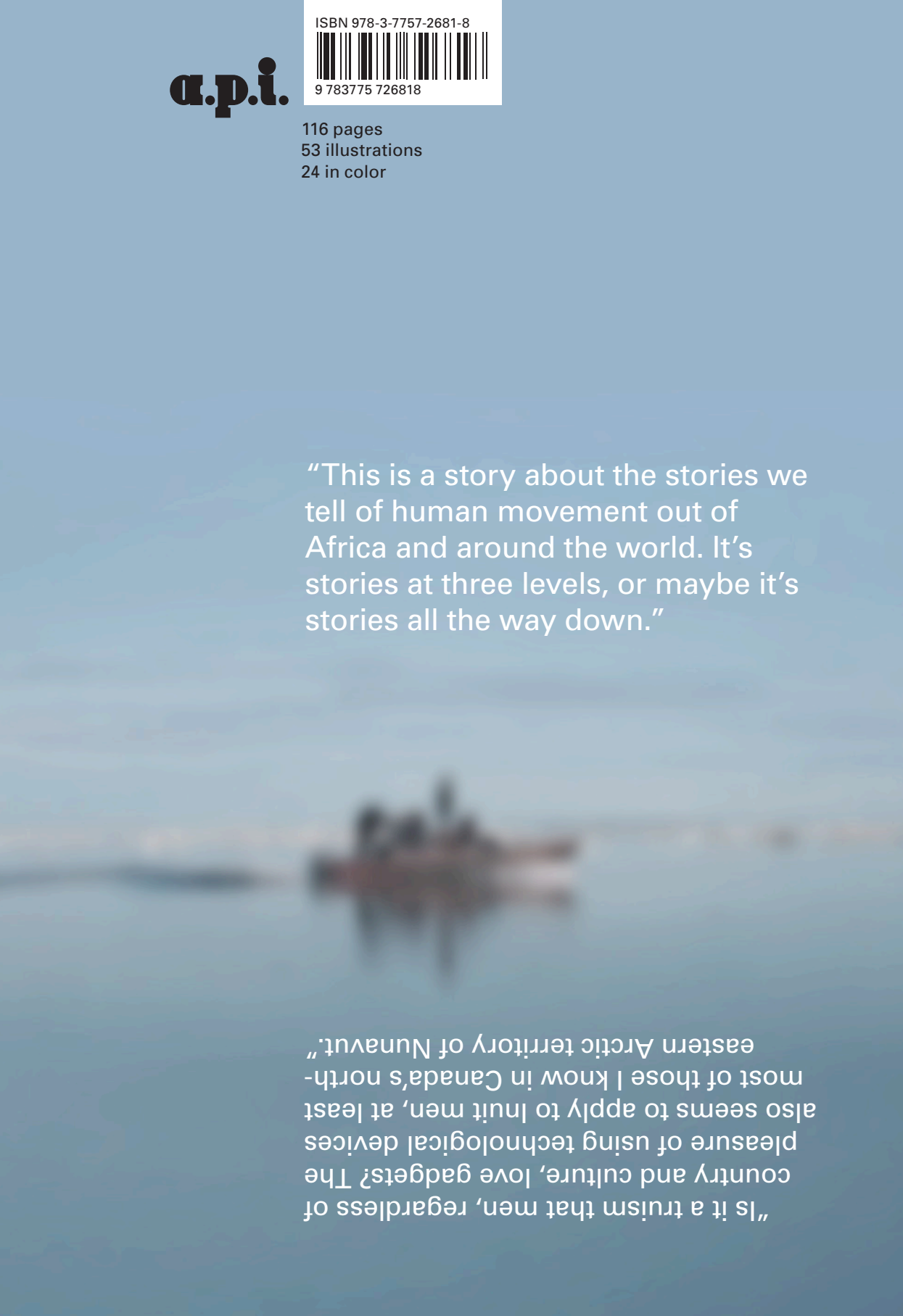
“This is a story about the stories we tell of human movement out of Africa and around the world. It’s stories at three levels, or maybe it’s stories all the way down.”



„Is it a truism that men, regardless of country and culture, love gadgets? The pleasure of using technological devices also seems to apply to Inuit men, at least most of those I know in Canada’s north-eastern Arctic territory of Nunavut.“

fifteen miles across the sea from Igloolik. The power of the API "media-centric" approach was beautifully demonstrated through a live real-time conversation about contemporary nomadism between Kunuk and Biederman at Siuraarjuk, and a panel of artists, authors, and curators at a public API event hosted by the Canadian High Commission in London, in May 2010. Kunuk and the panelists discussed the significance of access to new technologies for the next generation of Inuit. The successful satellite-linked conversation raised an obvious question: why is high-bandwidth digital telecommunications access not *always* available throughout northern Canada rather than just in the centers of habitation? These other spaces of tundra, coast, and sea are the Inuit Arctic, and in the new logic of the cross-platform digital world not being digitally connected increasingly implies economic marginalization. No wonder Kunuk's top priority is to have a full media center capability at his traditional camp. The contributors agree: new media technologies are essential for maintaining the vitality of narratives that give places meaning.

Since narratives lie so close to the heart of northern indigenous societies, it is tempting to ask how far they really can reach into the geopolitical domains of state-dominated power. David Turnbull invites us to pose the question differently and with profound implications. It's not that technologies carry narratives to new and difficult places. Narratives, he explains, are themselves technologies by which societies have for millennia navigated. The special quality of narratives, he argues, is that they are uniquely suited for traveling because they are able to hold complex combinations of knowledge in tension—and therefore together.

In keeping with the spirit of API, Turnbull's account is itself a story about the stories we tell of human movement out of Africa and around the world. Highlighting the role of movement in the ways we have come to know the world, he argues, destabilizes the dominant narrative of the journey out of Africa culminating in the sedentary civilization of Western Europe. Instead, he brings to the fore the last two great feats of human exploration—the Polynesian occupation of the Pacific and the Eskimo occupation of the Arctic. His essay contends that not only were the Eskimos and the Polynesians making real voyages of discovery, moving into literally unknown and unoccupied regions, they also developed socio-technical complexes enabling them to move in extremely difficult environments that are still central to their cultural identities today.

Technology complexes are social, cognitive, material, and narratological; these are the basis of the complex adaptive systems that have enabled nomadic peoples to live strategically and flexibly. The absence of these qualities and the considerable reliance of the world's major economies on systems of standardized, mono-crop agrarian societies is conversely reflected in a loss of flexibility and responsiveness that endangers our capacity to survive unprecedented change. Finally, we return to Lassi Heininen's explicitly geopolitical reflections as he calls for an environmental "awakening" as the Arctic becomes more tightly coupled than ever with the rest of the globe. Can we learn from the kinds of media experiments in narrative taking place in Igloolik and elsewhere? Can international discussions about the Arctic environment move beyond political lobbying and jockeying for position of familiar vested interests? Our narratives and collective self-understanding enabled us to prosper in Polynesia and the Arctic. Do we have the narrative technologies for equitable sharing that will enable us to navigate through uncharted waters in the coming decades and perhaps centuries?

Michael Bravo
with Nicola Triscott

Critical Art and Intervention in the Technologies of the Arctic

Nicola Triscott

Arctic Perspective exhibition, HMKV at PHOENIX Halle Dortmund, June 18 – October 10, 2010.
Curated by Inke Arns, Matthew Biederman, Marko Peljhan. Photo: Thomas Wucherpfennig, www.laborb.de

Heading north toward the pole, disparate worlds collide. High-tech electronic fortresses and entrenchments are sited here, and submarines glide beneath the ice. Oil extraction plants, mines, launch sites, and nuclear reactors dot the fringes of the Arctic landmasses, interspersed with scientific research stations and remote settlements. On this harsh, sparsely populated landscape, people still live, travel, and hunt across the softening tundra and sea ice. Livelihoods have profoundly changed since these technological structures came to the North, and now the impact of global warming threatens further change.

In the *Arctic Perspective* exhibition (ill. p.20) at the PHOENIX Halle in Dortmund,[1] the visitor enters through a darkened gallery, divided into two anechoic chambers. In each chamber, to either side of the viewer, lurk model submarines—one side, Russian, the other, American. The soundtrack in these rooms is of Inuit throat singing *(kattajaq),* a duet in which two women engage in a vocal contest to see who can outlast the other. The Arctic was the front line for the cold war, and it is still, it has been argued, an arena of tension. Interest in the high latitudes of the North has sharpened in recent times because of climate change and the need for energy and mineral resources.

Where the development, use, and trajectory of technology leads society is a critical issue anywhere in the world, but it has a particular urgency in the Arctic, where military, commercial, and political stakes are high. These stakes are amplified by the technological demands linked to the extreme climate. In this essay, I look at the cultural and political character of technology in the Arctic, through the lens of investigations and representations in the work of contemporary artists, to explore how they and nonaligned citizens, more broadly, are intervening in the politics of technology. I want to consider the significance of these interventions in relation to ideas of nomadism and autonomy in contemporary culture and the specific milieu of indigenous Arctic people's lives.

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The *Arctic Perspective* exhibition documents the work of the Arctic Perspective Initiative (API). PHOENIX Halle, Dortmund, June 18 to October 10, 2010. Organized by HMKV and the API partners.

The "political character" of technology—as it has been termed by Langdon Winner—in the Arctic has tended to be shaped by forces controlled by strategic interests and commercial exploitation, rather than by the needs of the peoples of the Arctic or by the challenges presented by climate change.

In the Canadian High Arctic, Inuit societies—the small societies or *miut* groups of clusters of extended families within the Inuit world—for many centuries followed traditional patterns of a subsistence-led life that moved between well-known camps according to the seasons and the movements of the animal populations they were reliant on. Inuit long ago developed sophisticated technologies for surviving an environment that provided food, clothing, and shelter to satisfy all their needs, and

yet was also tinged by uncertainty and dangers that required respect and constant observation. By the early twentieth century, whalers and missionaries had traveled north into the High Arctic from Labrador and west from Greenland, bringing with them new materials and technologies—ships, guns, medicines, and luxury goods—as well as new laws, Bibles, and diseases. All of these were to exert a deep and lasting impact on Inuit. They showed themselves to be accomplished at adopting new technologies for their own needs and taking advantage of new economic opportunities.

The strategic importance of the Arctic for Canada's sovereignty grew in the decades following the First World War. The Arctic landscape for Inuit was traditionally a highly complex but well known network of trails across land, sea, and ice. It had been regarded by maritime powers as a maze of islands and channels, open at one moment and inaccessible at the next. The arrival of modern aircraft, however, heralded the promise of a new era of visibility and access from the air. Governments built airbases and radar stations in the Arctic to monitor the military movements of rival states, and new permanent settlements were developed around them. In the nineteen-sixties the government of Canada decided that all Inuit children should attend schools (and these schools emphasized different cultural traditions) and be enrolled in the principal institutions of the welfare state. Through incentives most Inuit were forced to vacate their traditional camps in order to meet the obligations that increasingly were attached to the settlements: wage labor, healthcare, and schools.

Across the Arctic Circle, Russia—and formerly, the Soviet Union—has long been northward looking and has regarded Siberia and the Russian Arctic as strategically important to the security of its heartland. Before World War II, the Soviet Union established many meteorological and radio stations in the Arctic. The Soviet Union placed military-industrial assets in the North, and this is the main reason why the Russian Arctic is so populated compared with the Canadian North. The ice-free waters surrounding the port of Murmansk gave it unique importance as the home of the Soviet Northern Fleet.

Energy and mineral resources have been key to the intense interest of Arctic-adjoining states in the High North. In the nineteen-sixties, the Canadian Arctic became the focus of an intensive search for oil, natural gas, and minerals. Oil fields were discovered in Alaska and on Canada's Ellesmere Island, accelerating efforts to explore further. Around the same period, huge reserves were also discovered in western Siberia. The Soviet Union constructed pipelines and created industrial centers for oil exploration and extraction, the beginning of economic dependence on exports from the region. The impact of the oil industry had a great impact on indigenous peoples across the

Circumpolar Arctic: in Canada, Scandinavia, Russia, and Siberia. In Siberia, the Khanty, traditional hunters and reindeer herders and once the ethnic majority in the region, are now a small minority among the settlers and migrant workers in the oil rich republic. Their once clean wilderness has been polluted by oil and damaged through deforestation, undermining the resilience of their traditional ways of life.

Another significant area of technological development in the Arctic is maritime transportation, driven by both commercial and strategic imperatives. The USA, Canada, and Russia have all been active in employing coastguard icebreakers, government research vessels, or military submarines to patrol the region. Commercial ships in the Arctic range from small fishing vessels to large cruise ships to gigantic container ships. The major shipping lanes currently run along the Norwegian coast into the Barents Sea and around the Kola Peninsula of northwest Russia. As global warming reduces the extent of multiyear Arctic sea ice, new shipping routes over northern Russia are opening up, while some local and north-south routes in northern Canada are becoming more navigable.

The Arctic is also a significant platform for science. During the International Geophysical Year (1957–58), more than 300 Arctic stations were established by northern countries. A major focus of scientific attention now, of course, is the effect of global warming on the cryosphere, and the impact of retreating glaciers, collapsing ice shelves, and shrinking concentrations of sea ice on the interlocking terrestrial, atmospheric, and ocean climate systems.

Despite this complex and inhabited technological landscape, representations of the Arctic in the media, popular culture, and the arts have tended to draw a rather different picture. Striking images of collapsing glaciers and polar bears adrift on icebergs in the media have shaped many people's perceptions of the Arctic as a remote, challenging, beautiful, and fragile expanse of ice sheet. This Arctic of the imagination occupies an important place in the thinking of many who will never go there, but it is also perpetuated by many who have. Rarely, despite the increasing interest in the Arctic, does the political complexity of the region find visual representation as a contested arena of aspirations—a fragile set of ecosystems that are simultaneously a storehouse of resources, both renewable and nonrenewable, a transport zone and a theater for military operations, as well as homelands to dozens of different indigenous groups.

I can think of many artworks by artists who have visited the North in recent years that reinforce the perception of a uniform landscape dominated by ice, stark beauty, and emptiness. I include some of those who have visited the Arctic with a specific and well-meaning "climate change" brief. However, in

recent years there has been a growing number of artists' works that recognize a more complex situation in which the Arctic is understood as a territory with a history of large-scale scientific and technological experimentation and industrial exploitation. Oil exploration, mining, nuclear testing, cold war surveillance stations, advanced research installations, scientific and meteorological stations, and military bases in the Arctic region have all been the focus of attention, as have the impacts of these technologies on the Arctic's ecosystems. These are forming a group of works that counterbalance the body of representations depicting the Arctic as a parade of melting icebergs.

Nathalie Grenzhaeuser's photographic series *The Construction of the Quiet Earth,* 2007, (plates 3 & 4 p. 6, ills. p. 25) confronts us with the industrial transformation of the Arctic landscape. The photographs were taken in the Arctic archipelago of Svalbard. They show infrastructure from its mining history and modern scientific and research facilities. Grenzhaeuser's photographs are neither simple nor passive documentaries. Single moments and parts of the landscape are digitally recombined and over-layered. While giving an impression of beauty, with striking skies and wind-blown landscapes, the contrast of man-made industrial plants and high technology with cold, seemingly inhospitable landscapes is unsettling. Man is here, but not in human form, his presence detected from stark structures, metal buildings perched precariously on icy slopes, containers strewn across a plain, large pieces of machinery, bleak impersonal huts, high-tech satellite dishes, and strange domes scanning the skies.

The theme of industrial exploitation of the land is taken up in the Center for Land Use Interpretation's (CLUI) exhibition *The Trans-Alaska Pipeline* (ill. top p. 26). CLUI is a nonprofit research and education organization studying the nature and extent of human interaction with the landscape in North America. Without being explicitly critical, CLUI artists produce detailed photographic evidence and other forms of documentation of contested sites—nuclear test sites, military installations, oil fields. CLUI's *Trans-Alaska Pipeline* exhibition was an extensive series of photographs and maps examining in detail the four-foot wide, 800 mile-long pipe, which spans the entire state from top to bottom, bringing the entirety of oil extracted from Prudhoe Bay in the Arctic Circle—the largest oil field in the United States—to market. The pipeline, the exhibit explains, "created overland access across the Last Frontier . . . and brought billions of dollars to natives, Alaskan residents, construction workers, and, of course, the oil companies."

Several artists have looked at the legacy and contemporary existence of military technologies in the Arctic. Charles Stankievech's *The DEW Project*, 2009 (ill. bottom p. 26), for example, is a multimedia work inspired by the joint US-Canadian military

Nathalie Grenzhaeuser, *Schmelze,* 2007, from the series *The Construction of the Quiet Earth.* LightJet print, Diasec matte, 120 x 160 cm, edition 5 & 2 AP

Nathalie Grenzhaeuser, *Zuckerhut,* 2007, from the series *The Construction of the Quiet Earth.* LightJet print, Diasec matte, 120 x 160 cm, edition 5 & 2 AP

Center for Land Use Interpretation, *The Trans-Alaska Pipeline.*

Charles Stankievech, *The DEW Project,* field Installation at the Yukon and Klondike River confluence, 2008.

radar network, Distant Early Warning Line. This was a system of radar stations in the far northern Arctic region of Canada, with additional stations along the north coast and islands of Alaska, the Faroe Islands, Greenland, and Iceland. The DEW Line was set up to detect incoming Soviet bombers during the cold war. The field installation component of Stankievech's project featured a geodesic dome on the frozen confluence of the Yukon and Klondike Rivers, a remote sculptural installation which also acted as a distant listening station, allowing people to listen to the river flow and ice shifting via submerged hydrophones, and broadcasting those sounds via radio station and the Internet.

Another of CLUI's projects documents Thule airbase in Greenland. This isolated American outpost is the largest, northernmost community on the planet, home to 1,100 people, all of whom live and work at the base. Built in 1951 as a refueling station for American bombers, Thule airbase caused the forced relocation of Inuit to the neighboring location of Qanaaq. Thule exists today to support two radar and telemetry stations and a long runway capable of servicing large military aircraft. CLUI's aim is to make a documentation project, with little critical interpretation, leaving the viewers to form their own interpretations and opinions.

In those spaces beyond our familiar world, such as those of advanced technology, the polar regions, oceans, and deep space—where cultural imaginaries have long competed with more factual reports—we are perhaps as apt to believe the storytellers as the scientists or spokesmen. In 2009, the Palais de Tokyo in Paris organized the exhibition *Gakona*, featuring artworks by Micol Assaël, Ceal Floyer, Laurent Grasso, and Roman Signer, which played with facts, rumor, science, and imagination surrounding modern technology. Gakona is a village in Alaska, home to the American HAARP research program (High-frequency Active Auroral Research Program), which studies the transmission of electricity in the uppermost portion of the atmosphere. HAARP is surrounded by a cloud of rumor and conspiracy theory; its forest of antennas have been blamed for disrupting climate, beaming hazardous electromagnetic waves, influencing human behavior, and feared as an advanced weaponry, able to disrupt weather and communications over large parts of the planet. Laurent Grasso's work *HAARP* for the Gakona exhibition looked very like the field of antennas at the Gakona facility, a large construction of metal poles and wires, connected to black boxes on the floor. Visitors were not allowed to enter the room, although the antennas were apparently not connected to receivers. Was this to elicit a frisson of paranoia, simply to avoid damage, or to echo the discourse of security that surrounds many modern technological installations?

In contrast, Bureau d'Études, a French art collective specializing in mapmaking, produced a map that purports to offer a

factual and objective display of military and industrial activity in the Arctic, *Conquête du Grand Nord*, for the @rt Outsiders festival in 2009. The map shows military bases, nuclear reactors, radar stations, posts, sites of nuclear tests, mines, oil extraction plants, and polluted areas.

Two films by the Russian artist Pavel Medvedev have explored the impact of technology and industrialization on people living in the Russian Arctic. Medvedev makes short yet complex and intensely visual documentary portraits of some of post-Soviet Russia's most isolated people and places. In his 2002 film *Vacation in November*, landscapes of white snowfields in northern Russia contrast with scenes in the blackness of the region's mines, seen through the headlamps of the miners. But this initial visual contrast between the traditional snowscapes populated by reindeer herders and the gritty dirt of the mining industry is gradually peeled away in Medvedev's film, uncovering a more complex, interlinked reality. The reindeer herders, it turns out, are in fact miners on vacation, and at the end of their round-up of the reindeers, they slaughter the creatures with clubs, skinning the carcasses for fur and meat. They must do this because the mine has cut their wages in the post-Soviet years, and they can no longer afford to live on their salaries alone.

Medvedev's 2006 film *On the Third Planet from the Sun* is a haunting picture of life in the country's Arctic Arkhangelsk region, where inhabitants forage in swamplands for scrap metal left behind from rocket launches in a region where H-bombs were tested. "I present ordinary people in problematic situations," Medvedev says, "but I don't try to elicit pity. I see these people as fully developed, living their lives as they find them. My task is to respect them and show how they are interesting. I dream that the lives of my characters might be better, but my only job is to film them. The more films like these are shown, the more public opinion would pressure for change."

Langdon Winner (1986) developed an analysis of the political character of technology, arguing that the physical arrangements of industrial production, warfare, communications, etc., have not only transformed the exercise of power and the experience of citizenship, but they have also introduced "inherently political technologies" which are, by their very nature, centralized or decentralized, egalitarian or inegalitarian, repressive or liberating.

Following this analysis, one way to look at emerging technologies is to consider the extent to which they lock people into certain systems or, conversely, enable users to adapt them to fit their own purposes, resources, knowledge, and culture. There are highly centralized and controlled technologies, such as centralized nuclear power and genetically modified (GM) crops, that offer very little, if any, flexibility for how they are used, and require very specific infrastructures and systems to support them. At the other end of the spectrum, there are examples of participatory technologies that provide an open platform for new sorts of use, such as microrenewable energy, intermediate technologies for agriculture and the Linux operating system, technologies that place control for usage and further development in the hands of the user (Stilgoe, 2007).

A question, therefore, that could be asked of any emerging technology is whether it is locking us into one system or providing scope for openness and autonomous use. Another is whether the technology has been developed specifically to benefit people—the users—or to serve commercial or military interests. Most science and technology is not human-centered. It is developed for a range of economic, military, and social reasons, but rarely any that put the long-term good of people in general and the planet as the primary objective. The operational framework for scientific development primarily derives from the strategic and commercial importance attached to advanced technologies, including nuclear energy/weaponry and space technology. The spread of technology, particularly in the developed world, then comes through a partnership between science and industry. Often, new technologies are developed through military applications, for warfare, before gradually filtering into civilian industries, and then into civilian use. (Chapman, Yudkin, 1992) This can be seen in the cases of the personal computer, the Internet, imaging systems, and telecommunications.

These processes seem to be out of the control of the wider citizenry, whose everyday lives are nonetheless shaped by the systems, products, and discoveries resulting from scientific and technological research. The question then arises as to how people, encouraged to be passive in the face of powerful knowledge elites, can reassert some autonomy by shaping the content and direction of science and technology.

The strategies by which citizens have tried to affect, or disrupt, the centralized systems of science and technology, have been explored—and in some cases pioneered—by artists whose work intervenes socially and politically in the public realm. Tactics include involvement in early stage research and development (which Winner identifies as the critical point for shaping an emerging technology), the sharing of expertise and knowledge between specialists and non-specialists, illegal or unregulated use, civil disobedience, citizen appropriation of scientific and technological applications, independent or collaborative development, political action, and diplomacy.

The artist Ashok Sukumaran has produced a series of projects developing and exploring the concept of "leakage," the illegal or unregulated use of technology. He considers that an alternative history of many technologies could be written as a series of attempts, not to communicate information or transfer

benefits, but rather "to insulate, or isolate, unwanted forces or state or commercial secrets from others." Often this notion of insulation has a practical dimension in the nature of the technology, such as in electrical insulation or in isolating nuclear waste, but it also includes the commercial imperative to control the products of technology, and to control knowledge and expertise. In all this, Sukumaran notes: "the phenomena of 'leakage,' such as the stealing of over 30% of electrical power in the Indian grid, or the constant stream of 'pirate' production of digital resources, exists as a continuous mirror. Power flows, leaks, out of the official system into various 'illegitimate' venues."[2]

2
Ashok Sukumaran (unpublished, untitled, 2008).

These concerns invoke questions of property, ownership and of access rights. Sukumaran's work *sharing_01*, 2007 (ills. p. 31), part of his ongoing project on electricity in the urban environment, involved a ninth-floor resident of a block of apartments on the wealthy Carter Road in Mumbai who agreed to "share" two electrical connections in her house with a temporary occupant of the road below. A switchboard on a wall by the road gave control of the electrical connections in the house and, on the road, a 60 watt bulb and a standing fan were located. The light and the fan were made available to street food vendors. Passers by could also determine the "balance" between the two consumers. The two supplies were moderated to ensure that the total consumption did not exceed what the house would use normally. For instance, when the vendors took more electricity, the house received less and its lights dimmed.

Sukumaran's project is a useful source of reflection for the purpose of this cahier in that it demonstrates a technology (the electrical system) with an infrastructure so inflexible and controlled that even those with the necessary wealth (the vendor) cannot easily benefit from it. However, by a small artistic intervention and act of cooperation, the system is shared, for a while at least. In "real life," the vendor would either need to join those members of Indian society who illegally tap the electrical system or set up his own generator or—in the spirit of API—purchase a solar panel.

"Leakage" and interception activities extend across the spectrum of the informal economy, from the unregulated to the illegal. The history of the informal economy, as with the history of leakage, has been integral to continuing attempts on the part of governments and institutions to control and regulate aspects of their economies, which increasingly include technological developments. No such regulation has ever been wholly enforceable.

Since 1993, the American arts collective Critical Art Ensemble (CAE) has critiqued through its writings and artistic practice the processes and politics of biotechnology, one of the least publicly understood technologies of our time, and an area that is highly controlled and regulated. CAE's actions aim to involve

Ashok Sukumaran, *sharing_01*, street vendor. A dimmer switch on the promenade wall gives control of the two connections in the apartment, and (on the road) a 60 watt bulb and a standing fan.

Ashok Sukumaran, *sharing_01*, view of the apartment, vendor's cart, and the shared connections. The fan and light by the cart and in the apartment are circled.

Critical Art Ensemble, Beatriz da Costa, Claire Pentecost,
Molecular Invasion, 2002

Makrolab mkII, overhaul, Projekt Atol / Marko Peljhan, Aljaž Lavrič,
Matevž Frančič, 1999, photo: Miha Fras

people in the routine processes of biotechnology, to let them see and use them, and realize that they can understand biotechnology if they wish and can participate in the discourse around it.

One key area in which CAE aims to stir debate is the appropriation of food production systems by major corporations, specifically by the promotion and distribution of genetically modified (GM) food systems. In their performance work *Free Range Grain,* 2003–4, CAE constructed a portable, public lab, inviting the public to bring food products labeled as "GM-free" or organic and to test them to see if this really was the case (often it was not). In *Molecular Invasion,* 2002–4 (ill. top p. 32), CAE developed this critique into a tactical response to corporate agricultural biotechnology and attempted to "reverse-engineer" genetically modified canola, corn, and soy plants through the use of nontoxic chemical disrupters. In an accompanying text, CAE presented their critique of corporate biotechnology and outlined a series of "contestational biology" tactics, taking ideas of civil disobedience into bioscience. Contestational biology must be conducted, according to CAE, by directly engaging biology (biotechnology) itself in order to disrupt the course of profit back to the biotech corporations such as Monsanto.

Notions of interception and leakage, and of direct engagement with technology, have been integral to some of the works of one of API's lead artists Marko Peljhan.[3] When Makrolab—Peljhan's nomadic research station developed and tested between 1997 and 2007 (ill. bottom p. 32)—was installed for the first time in 1997 at the exhibition Documenta X in Kassel, the lab residents using its broadcasting and receiving aerials, tapped into communications, routed via international Inmarsat tele-communication satellites, capturing private telephone conversations, satellite-controlled navigation systems, and military and economic communications.

Makrolab, as an idea, was born in 1994 on the island of Krk, off the Croatian coast, with the Yugoslav civil wars raging in the skies. Peljhan's initial purpose was to establish an independent, self-sufficient performance and research structure, an isolated outpost for survival and a critical reflection of the societal conditions in which he and his collaborators found themselves. The ultimate goal was to design a system that could work in a hostile environment, both for humans and for technology. Makrolab subsequently evolved in remote and isolated areas of Scotland, Australia, Slovenia, Italy, and Finland, with independent research projects undertaken by its changing crews in the broad zones of telecommunications, climate, and migration patterns.

In considering his response to the changing geopolitical and social circumstances in Eastern Europe and the world, and the unveiling of previously invisible divisions and political preferences, Peljhan became interested in the process of "conversion." This is the way in which military-industrial technologies

3
Marko Peljhan and Matthew Biederman set up the Arctic Perspective Initiative in 2007.

gradually filter into the civilian domain. Peljhan set out to short-circuit this process and convert these technologies for tactical and artistic/media use.

Interested in radio and telecommunications, and researching military strategy, Peljhan has been particularly aware of surveillance technologies and the ability of intelligence specialists to monitor the communications infrastructure and to precisely locate, record, and analyze much of what was being done in the electromagnetic spectrum. He has noted, too, that telecommunication laws and the interests of telecommunications monopolies tend to suppress new and independent media. He has developed a critical and practical interest in setting up autonomous communications networks for artists and progressive social advocates. Radio is key to his research: he founded and coordinates the Insular Technologies initiative, which proposed an autonomous high frequency radio network long before the advent of wireless Internet. As long ago as 1997, he suggested building a global independent satellite telecommunications network, an alternative to the Intelsat system. His interests have extended logically into developing citizen surveillance and sensing strategies, and have found a new home and exigency in the High North of Canada's Arctic.

While the tactics of artists and those interested in social change have frequently focused on empowering people by giving them information about technologies and access to them, increasing access to knowledge and information does not automatically enhance democracy. Genuine democracy, as Winner understood, involves the pursuit of common ends through discussion, deliberation, and collective decision-making. An additional tactic suggested by Bruno Latour in his book *The Politics of Nature*: *How to Bring the Sciences into Democracy* is the ancient art of diplomacy. Latour explains that there will always be conflicting versions of reality among different groups of people and deliberates about how this situation can best be handled. He suggests that diplomacy—the management of communications and relationships between nations or groups, or, in its modern form, the skill of resolving differences through agreement and harmony, provides one workable method.

API works with this notion of diplomacy on two levels: first, in its methodology it adopts an inclusive and open working strategy with the people of the Arctic. Second, it introduces free and open media systems to help enable indigenous peoples of the North to communicate directly between themselves and with people in the South.

Traditional technologies of indigenous Arctic peoples were designed for a flexible, nomadic lifestyle. Their technologies were mobile, resilient to harsh conditions, adaptable to changing

circumstances, and dependent on sharing skills, resources, and knowledge throughout the extended family and society. Within the span of just a few generations, Inuit communities have undergone a huge transition. New settled living and working arrangements, technologies, education, and commercial systems brought wholesale by external institutions have changed and threatened Inuit traditions, customs, skills, and languages.

Inuit and other indigenous Arctic people have adapted to these new circumstances and technological systems. Many Inuit have—as Michael Bravo notes—become accomplished technophiles, actively incorporating and adapting new technologies into their everyday lives. Rifles and snowmobiles are frequently cited examples, but the Inuit appropriation and development of broadcasting and filmmaking to sustain and promote their own culture and interests are also notable interventions in the politics of technology.[4] Likewise, Lassi Heininen has observed how indigenous groups have organized themselves using technologies associated with institutions of law and diplomacy to exert pressure on governments and corporations in support of their interests.

Despite these rapid changes to the fabric of their societies, Inuit have remained closely tied to the land. When the opportunity arises, some Inuit still leave their communities and live out on the land for a time. As Katarina Soukup's essay demonstrates, there is a very active interest in utilizing new technologies that can enhance and enable a "contemporary nomadism," the ability to move, work, and live on the land while remaining in contact with communities and having access to new media and environment-monitoring technologies.

In recent decades, the concept of "nomadism" has had a popular makeover in contemporary culture and cultural studies, in North American literature as well as in the European avant garde. Contemporary notions of nomadism include the perpetual traveler and the "technomad"—a nomadic cyber lifestyle. The use of the "nomadic" as a discourse—whether philosophical, literary, technological, or physical—involves a rejection of borders and boundaries, and a move to escape the confines of fixed identities of nationality, religion, economic status, or gender. In their book *A Thousand Plateaus*, Gilles Deleuze and Pierre-Félix Guattari refer frequently to the idea of philosophical nomadism: a line of enquiry and approach that requires an ability to think outside of the dominant structure. Those who move from one place to another, who do not "belong" in any one physical space, those who refuse to accept the conditions of the State, those who subvert—these embody Deleuze and Guattari's concept of "nomadology." More than a lifestyle choice, Deleuze and Guattari saw nomadology as an alternative approach to understanding the history of civilization, providing multiple narratives and suggesting an alternative

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In the nineteen-seventies it was clear to Inuit leadership that television —able to fill every living room in the Arctic with images depicting southern attitudes, values, and behaviors—represented a new and potentially devastating threat to Inuit language and culture. The Inuit Broadcasting Corporation was set up as a response and, since 1981, has been making and broadcasting programs about Canadian Inuit culture for Inuit people in their own language of Inuktitut. In 1990, Igloolik Isuma Productions became Canada's first Inuit independent film and TV (and now Internet) production company.

history to that of territories, grand designs, and institutions in traditional historical narratives.

One should be very cautious in suggesting there is real common ground between "nomadism" as a term of the way of life of traditional indigenous hunting societies and the more recent concept of "nomadism," but it is perhaps unsurprising that traditional nomadic lifestyles hold an appeal for artists, with their sense of autonomy rooted in a shared history of mobility across borders, and social values that were hostile to the use of coercion and interference in the affairs of others.

In the Arctic Perspective Initiative, the concept of a nomadology of thought and the contemporary Inuit way of life, with its deep ties to the land and its flexibility and adaptability, come together. The goal of the API project is to design and develop a system of mobile technologies and infrastructure to support and enhance contemporary seminomadic or seasonally-nomadic livelihoods. This goal is underlain by utopian notions of autonomy, and an understanding of the social and political character of technology, with the knowledge that to set up sustainable systems needs a structural approach that starts from the interests, knowledge, and lifestyles of the people for whom it is designed.

Indigenous Arctic people have adapted to changing political and environmental circumstances. They have negotiated gigantic land settlements, set up cross-national political groups, secured high levels of self-determination in Nunavut and Greenland, lobbied for better land management, protected their own culture and language with self-run broadcasting and film companies, and become prominent in media coverage of climate change. By designing their own technological systems —using free and open technologies and utilizing sustainable energy—indigenous people of the North would be better placed to develop technological infrastructures that fit their own resources, knowledge, and cultures, and place control for their further development firmly in their own hands.

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