Pioneering Models for an Open Discussion and Northern Knowledge-Building – The Case Studies of Calotte Academy and Northern Research Forum

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About 25 years ago, a colleague of mine who well knew 'Action research' claimed that my method is first to act, i.e., organize a workshop/seminar with the interplay between science and politics, and then, later, to examine and analyze the process. As to be proved (Q.E.D.), I do analyze here something that I have been doing for the last 30 years or so.

From the end of the 1980s to the early-2000s, there was an inspiring sense that we were in a "New North" in terms of ideas and innovations, cooperative initiatives for disarmament, peace, and sustainability, innovative political and academic arrangements by Indigenous peoples, regional governments and scientific society, as well as a certain idealism of a raise of an influence of civil societies and NGOs (TAPRI 1991; AHDR 2004; Heininen 2023a). As a result, new forums and networks for open discussions between different stakeholders and knowledge-building - locally, regionally, nationally, internationally – were established. All this was much motivated and accelerated by the thaw and stability-building between the Eastern bloc and the Western one, which indicated the end of the Cold War period in the Arctic region.

This inspiring sense, also called an 'Arctic boom,' included a social need and tentative readiness for a dialogue between scholars, Indigenous peoples, representatives of NGOs, and policy-makers, as well as across sectoral borders, with interdisciplinarity and transdisciplinarity. In particular, there were active interrelations, even discussion, between a state and a civil society within several single Arctic states on the one hand and on the other across national borders due to the fact that Indigenous peoples, environmental movements, and civil societies, as well as a few scholars and scientists, became concerned on a state of their environment due to long-range pollution from lower latitudes (e.g., Heininen 2013).

Based on this, there were visions, narratives, initiatives, and discourses on the Arctic, such as a "knowledge-based region," a new design for regionalization as a "challenge to the traditional state system" vis-a-vis region-building by nations as major actors, a potential model for functional cooperation and stability-building in world politics (e.g., Heininen et al. 1995, 16; AHDR 2004, 22-26 & 236-237). In the 2010s, this was interpreted as an 'Arctic model' or an 'Arctic consensus' (e.g., Byers 2017, Zagorsky 2017). Some of the outcomes, in particular the initiatives of the Murmansk Speech by President Mikhail Gorbachev (1987), are impressive as illustrated and implemented like, for example, the International Arctic Science Committee (established in 1990) as the first academic pan-Arctic organization, the Arctic Environmental Protection Strategy (signed in 1991) by the eight Arctic states; the Conferences of Arctic parliamentarians (since 1993), and the establishment of the Arctic Council (in 1996), including representatives of states and Indigenous peoples.

There were also experiences from the first international research projects on Arctic issues, such as the Tampere Peace Research Institute's project on alternative security and development (in 1987-1993), the Calotte Academy as its public seminar organized in the European Arctic (since 1991); and the first policy-oriented academic open assemblies on Arctic issues, circulated over the circumpolar North, the Northern Research Forum (in 2000-2015).

By the 2020s, the Arctic region has become part and parcel of global multidimensional and multifunctional changes and new challenges, and the globalized Arctic has multiple implications worldwide (Heininen & Finger 2018). This maintains the Arctic as an interesting workshop for further studies – on the environment and resources, Indigenous peoples, societies and cultures, governance and international law, geoeconomics and politics, cooperation and stability(building) – on global, regional, and local levels. After February 2022, as we are facing turbulent times and great power rivalries in world politics, and when unilateral, competitive, national military security is in focus, it might, nevertheless, be challenging to recall how multiple civil societies - with growing concern on a state of their environment and security, as well as interested in open cross-border cooperation - pushed the governments of the Arctic states to act.

After February 2022, as pan-Arctic cooperation in the context of the Arctic Council has been (temporarily) paused, it seems to be obvious that these initiatives, open discussions, and new international cooperative platforms, based on the inspiring sense of a New North, were not enough. In the atmosphere of 'talks by hawks', conversely, it might be a proper time to study cooperation and peace and how to solve conflicts and build confidence. In particular, wicked environmental challenges and other complex problems creating a multi-dimensional crisis give even bigger reasons to go beyond the state-dominated world system and mainstream thinking and lean on high expertise, unorthodox methods, and cooperation.

This conclusion, if correct, does not indicate a need for more (state) power and control or higher technology. It indicates an "absence of an inspiring atmosphere that would motivate stakeholders to (re)think, move beyond the mainstream and do globally what states have done nationally," as well as a need for an inclusive dialogue (Heininen 2023a). The legacy of, and experiences from, the early efforts to establish and run forums for knowledge-building, which are not controlled by states, and create new and unorthodox methods to promote a lively dialogue and expertise-sharing, where participants engage each others' arguments, could be viewed useful, perhaps also applied, for an open discussion on a global scale. As well, they could be useful for data-sharing and confidence-building in the entire North when official cooperation between the eight Arctic states is paused.

The annual Calotte Academy and the Northern Research Forum with its biennial Open Assemblies were organized in the period of a 'New North' with great success for regional dialogue- and knowledge-building. With serious efforts to enhance open discussion, to share knowledge and experiences with local communities, and to believe in a dialogue as a means, they deserve to be acknowledged and analyzed, their experiences studied, and their narratives heard. Hence, it is time to analyze them as case studies on how these pioneering Northern models for dialogue and knowledge-building were built in the first place and what their aims, methods, procedures, outcomes, and importance were. As well as what might be their legacy and lessons to learn for Northern expertise and knowledge-building in the future. This briefing note is part of a special section of the Arctic Yearbook 2023ⁱ, which is closely related to the theme of the year.

Theoretical background

'Science' means to produce 'knowledge' for people (Östreng 2010, 3, 6-8, 12), as universal science is a part of the common heritage of humankind and goes across national and disciplinary borders. It cannot be isolated from the rest of a single society or the global community. This means that scientists and scholars are not only members of the scientific community and citizens of their own countries but also members of their own societies. Neither are they outsiders or someones who make observations about the world, societies, and peoples' lives. In the same way, logically, each of them is responsible to their own society and nation, as well as to the scientific community and the entire global community.

Behind is the 'social relevance of science,' an important criterion of science. The same could be illustrated by the notion of Osama El-Ghazali Harb (former head of the Arab Association of Political Scientists) that "Science is more than labs. It's people, it's the environment" (Krieger 2008). The two case studies of this piece of writing are influenced - in the beginning implicitly and later explicitly - by the social relevance of science, though it is an individual researcher's responsibility to implement it daily. Nonetheless, in the Age of Globalism, members of the scientific community are able and should be willing, to do research internationally, i.e., to continue their work in a global context, which they did nationally in the Age of Modernism (see Albrow 1995).

Johan Galtung, a well-known peace researcher, put it more directly and impressively for a young scholar by arguing that researchers should always do good for humankind. This argument about researchers' mission is understandable and more common in peace studies and for peace researchers; interestingly, the two co-founders of the Calotte Academy were at the time peace researchers at TAPRI doing research on the issues of peace vs / vis-a-vis war, conflict vs / vis-a-vis cooperation, disarmament vs / vis-a-vis arms race.

The importance of the social relevance of science is every now and then acknowledged, at least rhetorically in speeches and supported in theory. Ironically, it is less remembered when it would be badly needed. Behind is an understanding that our modern societies, with different sectors and sectorial borders as boundaries, have the benefit of having constant interplay between science, politics, and business. Even though the principle is recognized as a value per se, it is less implemented, in particular when research positions and funding are heavily competitive, as, in fact, the implementation is not always interpreted as merit.

When the social relevance is interpreted literally and implemented, there is an inspiring atmosphere for new and fresh ideas for those who produce new scientific knowledge. Fresh ideas and

innovations are much required and needed in modern societies, and not only for businesses, which are facing more rapid and multi-functional changes, and even accelerated by crises. Science has played a role in nation-building and is largely interpreted to do so in the present and the future. Behind is thinking that science, as well as expertise in general, is required for development, prosperity, and education much through advances in technology, and in modern, technology-depending societies, this, as well as knowledge-building, is even required more.

Furthermore, taking into consideration how much science is being leaned on and required, it is expected to be useful. Fresh ideas and innovations are good to have, but implementation is what is always needed. An implementation requires being open-minded towards new ideas from the leading minds, creating and promoting a new and wider (international) platform for innovative thinking and bold new ideas, financial resources, and, more importantly, real efforts to make it; and finally, to be willing and capable to maintain your freedom, i.e., the independence of science.

Whether to call it a 'freedom of science' or the 'independence' of the scientific community, the question is about another universal principle, as well as criterion of science. The principle is parallel to 'freedom of expression,' which is mostly related to media. An academic freedom and freedom of expression are said to belong to the core of European values, and academic freedom was ranked as the first of the key messages by Nordic universities at Nordic University Days in September 2022.

Though the principle is universal and clear, the challenge is how and when, if not always, to implement a freedom of science. It means that an individual researcher is able and has a right to explore, (re)think, and express her/his thoughts based on outcomes from her/his research, even if they go beyond the mainstream. This principle is being threatened on the one hand, from inside by "alternative narratives for university governance and higher education... and the notion of universities as particular kinds of corporations" (Mäntysaari, 2018), and on the other from outside, when science is politicized due to for example a hot/cold/trade war, great power rivalry, other geopolitical tension, or an emergency law, authoritarian governing, a dictatorship. In these kinds of conditions, researchers easily face "the delicate balance: whether researchers could align with national policies and at the same time maintain their independence?" (Report from Expert-to-Expert workshop at the High North Conference on 18 April 2023).

Following this, freedom of science is about the courage of an individual researcher to implement the principle that the scientific community should always support, in particular in turbulent times in world politics or in society. On the other hand, the independence of the scientific community is up to the cohesion of the community and, finally, up to every member.

In the post-industrial era, 'Knowledge' is interpreted as a new factor of 'Power,' or 'Soft power' by Joseph Nye (1990). According to post-modernism, knowledge could also be called 'Influence,' meaning a new kind of approach instead of traditional power, when talented experts with high knowledge have an influence on others – either ordinary people or policy-makers - by persuading them to agree to new norms, or by "friendly persuasion" arguing to go beyond their prejudice (Heininen 1999, 27-50; Risse 2000; also Yang in this volume). Knowledge is included Critical geopolitics, unlike in Classical geopolitics, as an important factor, as well as an emerging factor in global geopolitics and rivalries between great powers, as in Globalism, none can totally control knowledge and knowledge-building (Heininen 2018).

Should science and knowledge based on science be utilized for a society, a nation, or people, or taken as a value per se? This is a universal and complicated question. 'Utilitarianism' vis-a-vis 'science as a value' is a dilemma that is been discussed and debated for a long. If to prefer the value per se and forget the ethics of science, it easily means that whatever inventions, innovations, and new technology would be allowed to develop, even an atomic bomb, as an extreme example. Consequences of this, as well as those of the 'Anthropocene,' could be fatal, as we have seen when facing consequences of the destruction by an atomic bomb (in Hiroshima and Nagasaki) or extreme weather conditions caused by the climate crisis. On the other hand, if to prefer utilitarianism and require an advantage, it means that science will be controlled by policy-makers or being politicized, consequently losing its independence.

This dilemma is without a final conclusion; at least so far, there is no functional model for binary thinking. A possible metaphor for the dilemma is 'innovation' as a symbol of utilitarianism: Science should be useful and produce an advantage for a society/nation on the one hand, and on the other, innovation is not possible without creativity, which is based on the independence of the scientific community, i.e., policy-makers can neither command nor order to make an innovation. Here, it is possible to lean on dualism and argue that the value of science is in its benefits and advantages, which will not be materialized without ethics and respect for the freedom of science. Finally, the real importance of science is measured by its capability to produce knowledge for people.

The same principle and dilemma also concern 'expertise,' i.e., other experts outside the science community who have high expertise in the field. The holders of expertise can be called an 'epistemic community,' a community and/or network of knowledge-based experts who help decision-makers define the problems they face, identify various policy solutions, and assess the policy outcomes (Haas 1992; Gunnarsson 2023). This kind of community neither means nor supports meritocracy, which is elitist and exclusive; instead, it acknowledges transdisciplinarity as relevant and needed when facing complicated and multifunctional challenges. One idea behind the Northern Research Forum, in the beginning, was first to apply the model of an epistemic community, and after having experiences and reaching a high level of expertise, be able to establish a northern model and network of an 'epistemic community.'

A 'dialogue' and an 'open discussion' (used here as synonyms) were the key terms for the two case studies and a focus of this briefing note when trying to define workable methods for knowledge-building. Gadamer (1972) interprets that in a real dialogue, the participants "approach the dialogue with an open mind," which shows, even reveals, "the potential of dialogues." Diderot echoes this by stating that "monologue is tyranny... a dialogue to practice freedom" (Hongisto 2013). In other words, a dialogue is a way and means, through rounds of (counter)arguments, a common language between parties, as well as between science and politics, is possible to find.

If 'science' is to produce 'knowledge' for people, a dialogue means "to overcome not only the boundaries of scientific disciplines but also those erected between academia and stakeholder expertise in society" (Östreng 2010). Here, the interplay between science (as knowledge producer for peoples) and politics (all about power) is relevant, though more is required.

Kornprobst (2009) lists several rules, or preconditions, for an open and democratic dialogue. Among them are that the participants "are committed to inclusivity,... engage each other's arguments, ... focus on an issue domain... [and]... embrace the open-ended nature of the dialogue". Based on the experiences from the Calotte Academies and the NRF Open Assemblies, there is a

need to add two more rules as preconditions: that the participants "have patience" and that sufficient time is allocated for open discussion, which is no battlefield but 'inclusive' by nature (Heininen 2021).

After these, a few technical rules, as well as mental and technical preconditions, are fulfilled, and the potential for dialogues could happen, though it is not determined. In a lively dialogue, through rounds of arguments and those of counter-arguments, the participants start to know others' opinions and a common language is possible to find. As a result, Gadamer's potential for dialogues could be achieved after fulfilling these preconditions and following the rules. To be successful, the implementation is not only, or mostly, a technical matter, more a mental matter that participants are willing and open-minded first, to agree on the importance of the social relevance of science; second, to respect other expertise and knowledge, and thus implement 'transdisciplinarity'; third, patiently listen others' arguments; and finally, that organizers allocate sufficient time, as mentioned, for an open discussion – in academic and policy-oriented meetings this is often the bottleneck which makes an open discussion not existing.

The original nature of a dialogue could be described to include several arguments by the participants being built on each other like layers. If so, then a dialogue is one of the best methods for knowledge-building and innovation, if you wish. This is much about the objective that the Calotte Academy and NRF Assembly aimed to achieve by creating an atmosphere where participants are confident, patiently listening, and actively contributing. At their best, the sessions of these events, as will be discussed later, managed to create dialogue, where the participants were committed to 'inclusivity,' engaged in each other's arguments, and focused on issue domains. As an outcome, participants could find that the original nature of an open dialogue was embraced.

Interestingly, a dialogue is also for confidence-building, and correspondingly, confidence is a precondition for lasting peace and sustainability. Another applicable and more efficient means for confidence-, stability- and peace-building, according to Functionalism (e.g., Mitrany 1975), is functional cooperation in a field of low politics, such as environmental protection, science, education, and knowledge-building. In the world order divided by the (rich) global North and the (poor) global South - dominated by Sino-US great power rivalry, new East-West tension, and bloc-building with the military as the focus - this does not seem to be so obvious. Nonetheless, cooperation is a more used and important factor in international politics than fear. The high geopolitical stability of the post-Cold War Arctic is a masterpiece of functionalism, as it is a result of constructive functional cooperation on environmental cooperation and science between the Arctic states and Indigenous peoples (e.g., Heininen 2013).

Furthermore, wicked global problems - the climate crisis, the environmental catastrophe, and the related multi-dimensional crisis - would require functional cooperation, less so bloc-building, and other bureaucracy. It is no surprise that implementing the interplay between science, politics, and business requires both words, i.e., a dialogue, and deeds, i.e., cooperation.

The Calotte Academy - a school of dialogueii

The Calotte Academy is an annual international academic seminar on Northern/Arctic issues and a traveling symposium in the European Arctic and Sapmi. It is with high expertise and designed to promote interdisciplinary and transdisciplinary discourses and to discover, brainstorm, and test

new methods and applications. Further, as a "school of dialogue" to foster academic and policy-oriented dialogue among members of the research community and between them and a wide range of other northern stakeholders. Finally, by supervising young researchers in circumpolar Arctic and global studies and training them to implement a dialogue, the Academy is designed on the on hand, for early-career scientists (advanced MA students, PhD candidates, and post-docs) with different academic and knowledge backgrounds to present their work, and on the other, as participatory by nature to share knowledge and expertise with/by/for local communities.

The first Academy, as a public seminar based on high expertise, took place in May 1991 at Jeera (of Saami Education Institute) in Inari, Lapland. Since then, the Academy has been arranged annually in different locations in the European Arctic - Finland, Norway, Russia, Sweden, and Sapmi – using different routes when being on the road for a week. Including the 2023 event in June 2023 - in Rovaniemi & Inari in Finland/Sapmi, Kiruna in Sweden/Sapmi, and Kautokeino, Alta & Kirkenes in Norway/Sapmi - relevant Northern/Arctic themes have been covered by hundreds of presentations, and innumerable comments and counter-arguments, questions and answers in discussions after each presentation¹.

When looking chronologically at the annual events of the Calotte Academy, it is possible to identify the following phases within its first three decades²:

In the first phase (in 1991-1999/2000), the Academy acted as a policy-oriented seminar for TAPRI's international research project and a platform for public discussion on relevant issues (covering security, ecology, and sustainable development) between scholars and local and regional stakeholders, as well as for to educate MA university students and young journalists;

Through the 2nd phase (in 2001-2011), it acted as an international forum for scientific and policy-oriented dialogue on relevant issues – globally, regionally, and locally – among members of the research community and a wide range of other stakeholders and served as a regional sub-forum for the NRF Open Assemblies, and an inter-disciplinary seminar for international organizations and research institutes (e.g., the Barents Press, the Barents Institute in Kirkenes);

The 3rd phase was started in 2012 when the Academy was mature enough to act as an annual traveling symposium and a 'school of dialogue' for early-career scientists from the Arctic States, Central Europe, and Asia³, as well as to serve as a forum for the UArctic Thematic Network (TN) on Geopolitics and Security's and the Arctic Yearbook's brainstorming.

As a unique 'school of dialogue,' the Academy's main aim is to create, promote, and enhance a lively theoretical and multidimensional dialogue, with inter- and transdisciplinary approaches, on relevant contemporary Northern and Arctic issues from different - local, regional, global - perceptions of, and discourses on, Arctic development, governance, geopolitics, and security. Among attractive themes the Academy has covered are ecology and climate change, regional vis-avis sustainable development, governance vis-a-vis (from classical to critical) geopolitics, traditional, environmental, and comprehensive security, globalization, self-governing of Indigenous peoples, para diplomacy by sub-national governments and regions.

A further aim has been to maintain an analytical and critical discussion on the future of the European Arctic and Sapmi, as well as their peoples and communities, by describing, analyzing, and debating different – cooperative, competitive, conflicting – perceptions, discourses, and trends, as well as possible and probable impacts of their interrelations/complexities in globalization.

Recently, a special focus has been on the transformations of the Arctic, particularly its European part, from confrontation to geopolitical stability based on constructive cooperation. And later, that is the unprecedented development of the region, when the pan-Arctic cooperation is (temporarily) paused by the Arctic states, as mentioned earlier. Here, participants are asked to take into consideration - in their presentations and discussions - a state of constructive (functional) cooperation across national borders, including an important role of the Saami and other non-state actors. And first of all, how to maintain the achieved geopolitical stability and continue, even deepen, the successful cooperation when the Arctic is facing multiple crises of the rapid climate change, loss of biodiversity, and the inability of the states to make the hard decision in mitigation on the one hand, and on the other great power rivalries, new East-West tension and reflections of regional wars in Europe and the Middle East.

To implement these aims, an annual event is structured so that there are academic sessions with policy orientation, including scientific presentations, expert ones, and open discussions in each location. Sessions are structured based on an 'open dialogue,' which is interpreted as a cumulative process with an open-ended nature and inclusivity, engagement of others' arguments, and focus on the issue domain. Further, it is recommended to apply the open-ended nature of dialogue and cross borders between disciplines, expertise, and sectors, like the route of a week crossing several national borders.

A fundamental precondition for this, and to let Gadamer's potential of dialogues materialize, is to allocate sufficient time for open discussion – questions and answers, comments and counterarguments – as well as ask participants to have patience to listen to others' argumentation. As a result, according to these principles, sessions are structured so that each presentation is allocated altogether 30-40 minutes, out of which a maximum of 15 minutes is for a presentation and the rest for open discussion.

Whereas substance is the most important thing, it matters what kind of methods are used/what the procedure is - in the case of the Calotte Academy, the procedure is simple and non-bureaucratic. This kind of unorthodox and flexible format is neither common in the scientific community nor easily taken by established academic & funding institutions. More importantly, the Academy itself has become a means, with a strong educational component (though without official duties), to implement an open and cumulative dialogue with a focus on an issue, allocated time, and mutual confidence and respect. As well as its aims, methods, and experimental nature have made it an open, democratic forum for academic and policy-oriented activities and, further, an alternative model for conventional academic gatherings, which (too) often are run by lack of time and patience for open discussion.

In addition to academic and policy-oriented sessions, in several locations in the European Arctic and Sapmi, an annual event consists of first, excursions to special places, administrations, institutions, and companies that are interesting and relevant to the theme; second, a devoted session for a research plan, project design, fund-raising and other practical issues of research; and third, a (possible) role-play game, as a simulation of international negotiation, on Arctic governance, geopolitics, security and ecosystems, where each participant has her / his own role.

Each annual event consists of a core group of open-minded people and talented minds who are interested in substance as well as motivated and committed to open-minded dialogue. Due to the fact that the Academy is neither an exclusive club, as participants are equal, nor there are keynote

speakers. Instead, in each location, there is a local audience – consisting of educators, planners, policy-makers, journalists, and NGO people – without a request to be a registered participant to attend the Academy's discussions (see Vogt 2011, 54).

As a participatory by nature and with a synergistic approach – neither against anyone nor anything (except maybe narrow-minded thinking and bureaucratic structures), the Academy has been taken as a welcome addition to the spectrum of existing platforms and, for used theories and methods. Behind the combination of aims, methods, procedure, as well as that the core of participants is early-career scientists, there is a certain philosophy: firstly, the participatory nature, or inclusivity, is implemented by open discussion as a cumulative process between relevant stakeholders; secondly, critical approach across disciplines of science and expertise is implemented by the double interplay (between science, politics and business, and Western science & Indigenous knowledge); thirdly, respect towards knowledge-building and as an attitude matters, when building a process which should be cumulative and exponential; and finally, flexibility and economic efficiency are applied in organization.

All in all, though small and unorthodox, the Calotte Academy is, so far, been a surprisingly resilient and successful platform for implementing the interplay between science, politics, and business in reality; a sub-forum for international research projects and conferences, and a platform; and first of all, a school of dialogue for early-career scientists. This makes it one of the oldest still running international academic institutions on circumpolar/Northern issues and the oldest with all sessions located within the Arctic region. Born and raised in Inari and acting as Inari's unofficial higher education component, the Academy is a perfect example of the social relevance of science and a 'Global-Local' interference. To have interdisciplinary and transdisciplinary approaches, and thus implementing the social relevance of science, has in these years been attractive for practitioners, post-docs and other young researchers, and Ph.D. candidates.

Northern Research Forum – a pioneering model for an open discussion⁴

The Northern Research Forum (NRF) was an international and transdisciplinary platform for an open and constant dialogue on relevant Northern local-to-global issues between researchers, experts, and other Northern stakeholders. The NRF Open Assembly, which was successfully run for 15 years, was the first pan-Arctic platform concerning circumpolar North/Arctic academic spheres to implement the interplay between science, politics, and business; the Calotte Academy had been doing that in more local and regional scale.

The NRF was established in October 1999 in Reykjavik, Iceland "to provide a forum where research on northern and Arctic issues can be shared and discussed in regular meetings of a wide variety of scientists, other academics and representatives of other stakeholders" (Press Release 1999). The initiative came from President of Iceland, Olafur Ragnar Grimsson (1998), who proposed to create a "forum which... would bring together in a systematic way the wealth of academic talent... enabling young researchers and scholars to present their findings", and was supported by Senior researcher Lassi Heininen as a forum for an interactive and creative discussion and debate on research between science and politics/theory and praxis, when a lack of cross-sectoral communication was defined as a barrier for modern societies' development and an obstacle for problem-solving.

The first Open meeting, *North meets North,* including participants – junior and senior researchers, policy-makers, and business people - from all over the circumpolar North, took place a year later in Akureyri, Iceland (see The Northern Research Forum 2001). It proved that this model of open discussion should be continued. The last Open Assembly was in October 2015, when the Arctic Circle was institutionalized and adopted this model of an open discussion. Altogether, there were eight Open Assemblies with tens of sessions, hundreds of presentations and comments, tens of position papers, and a few printed proceedings.

The NRF's objectives and aims were first, to provide – to create and promote - an international platform for the promotion of innovative thinking and bold new ideas from the leading minds of the research community and northern experts, as well as an effective and trans-disciplinary open dialogue among researchers, and between them, policy-makers, business people, and a wide range of other northern stakeholders. Secondly, instead of an emphasis on the number of participants, the focus was to maintain and feed a constant interplay between science, politics, and business by creating an atmosphere and suitable conditions, such as sufficient time, for an open – academic, policy-oriented and intellectually attractive - discussion on relevant and critical issues based on expertise and research-findings. Thirdly, to facilitate research on contemporary issues assisting decision-makers to know and apply research findings, as well as to assess research findings relevant to the contemporary Northern and Arctic agenda, yet with global significance.

More importantly, the aim was to focus on holistic viewpoints and socially relevant issues to people and communities when they face rapid societal changes of globalization and try to respond to the climate crisis. And here, opportunities were emphasize more than problems - community viability, resilience/sustainability locally-regionally-globally, stability-building for comprehensive security – and that issues are based on research findings and expertise. This long-range goal - inspired by the social relevance of science, including people and the environment - could be interpreted as an intercultural communication process with a spirit and enthusiasm for innovative ideas.

These objectives and aims were implemented via open discussions at the biennial NRF Open Assemblies in 2000-2015. Based on inclusion and democratic nature, discussions took place in theme sessions and plenaries with a holistic approach, day-long excursions, and occasionally breakout sessions facilitated by panelists were added to have a deeper expert approach vertically. These activities were supported by short Position Papers on the main theme(s), invited beforehand from and prepared by experts in different fields. At their best, these sessions managed to create dialogue, where the participants were committed to 'inclusivity', engaged in each other's arguments, and focused on issue domains. As an outcome, when being active and patiently listening, the participants could find that the original nature of an open dialogue was embraced.

An important part of the Assemblies and the implementation of the NRF objectives was to have 10-20 NRF Young Researchers at each event. The aim was to promote early-career scholars by inviting them, based on applications, to present their research and engage them in a dialogue with other experts and policy-makers. Due to the high quality of their research - for example, to explore what new methods are required to tackle climate change when there is a gap between the 4-year logic of politicians and 100+ years of real impacts - they were later upgraded as panelists. In addition to junior and senior researchers and other experts, there were policy- and decision-makers from national, regional, and local governments – heads of state, chairs of Indigenous peoples'

organizations, members of parliaments, governors, ministers – and business people, who attended the Assemblies.

Among NRF activities between the Open Assemblies, there were local round-tables and subforums with lively discussions based on expert contributions by the participants organized in Europe, North America, and Russia. Among them, a series of Town Hall meetings on the findings of the Arctic Climate Impact Assessment and Arctic Human Development Report in Anchorage, Oulu, Inari (in 2006-2007); a special session on the Arctic Council and multilateral cooperation at the 5th Assembly in Anchorage (in 2008); and a modified workshop to identify the most important issue/problem of the globalized Arctic/for Arctic science at the ICARP III in Toyama, Japan (in 2015).

The NRF also closely cooperated with other international institutions - the University of the Arctic, the International Arctic Science Community, the Northern Forum, Arctic Parliamentarians, and the Arctic Council - to build and enhance knowledge for regional development. Similarly, as the registration fee was zero or symbolic, there was a need for external funding – that was received in the early years from the Carnegie Corporation of New York, the Ford Foundation, the Nordic Arctic Research Program, and the Government of Iceland.

The NRF stage-building, which was transferred into a global scale at the 6th Open Assembly having "Our Ice Dependent World" as the theme, was meant to be a cumulative process, where the Arctic was redefined as a 'knowledge-based region.' Indeed, the NRF process included several phases: 'stage-building,' i.e. an expert platform for seeking new thinking and bold, innovative ideas from talented people across the entire North; 'inter-disciplinarity,' i.e., an issue orientation and inviting researchers in particular young ones, representing different disciplines; 'dialogue-building,' i.e., to promote human and social capital, and knowledge-building by crossing borders/boundaries between different sectors in society, and the entire globe, by maintaining a constant interplay between science, politics, and business; and finally, 'transdisciplinary,' i.e., to serve as a platform for researchers and experts, in particular Indigenous experts, and to train young researchers.

Comparative study

The establishment of the Calotte Academy and that the Northern Research Forum was motivated by the social need and inspiring atmosphere of a New North at the turn of the 1980s-1990s, as a transition period from the Cold War Arctic into a post-Cold War one. The Academy is based on an initiative of the Summer University of Lapland and the NRF on that of President Grimsson. The feasibility study and design for the platforms were done by the scientific community: in the case of the Academy, the team of TAPRI's international project; and the case of the NRF, the University of Lapland expert group in the first place (see, The Northern Research Forum 1999), followed by the NRF Steering Committee. Finally, agendas for annual/biennial events were planned, designed, and developed by active researchers and other experts.

The Calotte Academy and the NRF have much the same main objective/aim: to implement the interplay between science, politics, and business through an in-person dialogue. As a result, by promoting open discussion between different stakeholders, they made the social relevance of science real. In the same way, the two platforms share the same method, an open discussion/dialogue between members of the scientific community and other experts on the one

hand, and on the other between them and a wide range of other stakeholders, policy-makers, planners, Indigenous representatives, NGO activists, and business people.

As a real dialogue is possible only through direct personal contacts, the annual Academies and the biennial Open Assemblies were only in-person gatherings, not online, as Merje Kuus (in this volume) describes and prefers.

This makes them pioneering and innovative models for knowledge-building in the post-Cold War Arctic, as well as highlights and promotes intangible values. These, as well as peaceful coexistence with nature and neighbors, remain important in the era of globalism, too, particularly in an atmosphere of tensions and rivalries when hawkish talks are loud. Similarly, a lively dialogue with patience between experts from different fields, where you aim to build on what others say, is still interpreted as "a useful means of generating insight into an issue and of turning research into powerful innovations and knowledge" (Heininen, 2023a).

Nonetheless, the Academy and the NRF were not merely 'stage-building' for an open discussion between different stakeholders. They were also exercises for fact-finding and data-collecting for and promoting the next annual or biennial event through expert-based discussions - for example, by the NRF Theme Project Groups⁵ -, professional training, disseminating research findings, and intercultural communication for knowledge-building, such as Town Hall meetings. Each of them could be interpreted as a cumulative 'process,' not an organization in the ordinary sense of the term. No wonder that the two platforms and networks were, from the beginning, meant to be and further develop, first and foremost, forums and processes with an enthusiasm for fresh ideas and research findings and a spirit of continuity.

Following this, their organizing and administrative structures were lean and less bureaucratic: At the first state, the Academy was organized by the TAPRI's project team in cooperation with regional and local academic institutions, and since the 2010s by co-organized by the Saami Education Institute (SAAK) and the University of Lapland together with UiT The Arctic University of Norway and the Kola Science Center from Russia, in cooperation with the TN on Geopolitics and Security. Correspondingly, the operation work and administration of the NRF was done by the Secretariat, located at the University of Akureyri, and by the International Steering Committee, consisting of scholars and experts from the Arctic states. For each Open Assembly, an ad-hoc-based local host organizing committee was placed in charge of contacts and practical arrangements in the location.

Instead of having formal procedures or duties, the two platforms adhered, and the Academy still adheres, to four fundamental principles: organizing and promoting a transdisciplinary dialogue; inviting senior and junior researchers and other experts to actively participate; having an issue-oriented discussion concentrating on opportunities; and allocating sufficient time for to sustain an open and lively discussion. This also meant several rounds of preparations – pre- and post- of each event – such as organizing local round tables or sub-forums, recruiting young researchers, inviting background (Position) papers on the main theme, and after an event, oral reporting, or more often written final reports (Academy) and proceedings (NRF).

Conventional wisdom says that interesting things are often cumulative, and according to the nature of an innovation wave, which is universal, anything new and innovative will easily become attractive and for this reason, been applied or copied. Not surprisingly, the Academy, taking place in the

European Arctic, acted as a foundation for the NRF, which took place in the entire circumpolar Arctic and beyond. Even more, around the Academy, there was born an 'Ecosystem' consisting of the NRF and its Open Assemblies, TN on Geopolitics and Security and its sessions at Arctic Circle, the Arctic Yearbook, and the GlobalArctic Project and its Handbook.

Correspondingly, the format/model of NRF Open Assembly was applied for the CNARC Assembly and as the most productive effort for the Arctic Circle Assembly, the both first time organized in 2013 (see also Kuus in this volume). Also some other elements and activities of the NRF were applied elsewhere like for example, the Theme Project Groups, as a new model and procedure to gather experts on a field for fact-finding, were applied for the University of the Arctic Thematic Networks; and the model of NRF Young Researchers' grant and network acted as a foundation for the International Polar Year (IPY) Young Researchers, and the Association of Polar Early Career Scientists (APECS), as well as already earlier for the Calotte Academy.

Importance and learned lessons for Northern expertise and knowledgebuilding

The importance of the Calotte Academy and its annual events for Arctic research and higher education, as well as for regional knowledge-building, could be measured by a valuable, though simple, finding as an outcome of the first phase: An authentic implementation of inter- and transdisciplinarity is doable, cumulative and applicable, and that the related dialogue can be an intellectually attractive method among early-career scientists, in particular as established universities and academic institutions are not interested to apply it. Correspondingly, the importance of the NRF and its Open Assemblies for Northern expertise and regional knowledge-building could be measured by a striking outcome: For the first time, a broader pan-Arctic stage, which became global, was built on research, expertise, and Indigenous knowledge, and succeeded in facilitating an academic and policy-oriented discussion on relevant contemporary local, regional and global issues.

Finally, the importance of the two platforms could be measured by the fact that a model for a forum, expert network, and brainstorming procedure, with inclusion and relevance for people and local communities, was created, and an open and intensive dialogue was maintained and developed further.

The design, emphasizing an open discussion based on expert presentations among researchers, experts, and policy-makers, was an efficient way to set an interesting agenda, place relevant issues and opportunities on the agenda, and have bold ideas from innovative thinkers to discuss and analyze. Interestingly, these platforms and networks provided - during the events and in their preparations - two relevant lessons: first, that though 'substance' is most important, a 'procedure' matters, and that more important than the number of participants is participants' interests and motivation; and second, at their best, with an upper-limit number of participants, they managed to create dialogue, where the participants were committed to 'inclusivity', engaged each other's arguments, and focused on issue domains. Consequently, as mentioned earlier, when the participants were both active and patiently listening, they could find that the original nature of an open dialogue was embraced.

Active participation of two groups of experts should be mentioned here: The first group consists of early-career scientists. The NRF started, and the Academy applied later, a pioneering way to support young researchers by giving a grant to become equal participants of and present their

research at these events⁶. The main aim was to train them for future careers as researchers, other experts and/or practitioners.

The second group consists of policy-makers, practitioners, and other non-academic stakeholders. After being involved in lively (in-person) discussions and brainstorming on relevant, contemporary issues, it would be easier for them to apply scientific knowledge for policy-shaping and -making. This requires from non-academic actors to be open-minded and, from the research community, to make real efforts to implement the interplay so that all stakeholders would be treated equally. This made it possible to apply effectively new ways and address certain challenges more constructively than otherwise would have been possible.

As an open policy-oriented discussion, based on research and expertise, was transferred into a dialogue on critical issues – for example, human responses to melting of sea ice and glaciers; building resilience in, and sharing experiences for, regional development; stability vis-a-vis security in governance – it was necessary to address opportunities, which peoples and societies might have when facing societal changes and impacts of globalization. Among successful examples of this are first, the Calotte Academy Town Hall meeting on *Understanding the Impacts of Global Changes in the Barents Region* (in 1998 in Inari) "with a few scientists and bigger audience including Saami fishermen, hunters, and reindeer herders" (Selected Articles of Calotte Academy 2021, 712); second, the Town Hall meetings on the findings of the Arctic Climate Impact Assessment (ACIA) and Arctic Human Development (AHDR) reports in Anchorage, Oulu and Inari (in 2005-2006); and third, the 2nd NRF Assembly, in 2002 in Vileky Novgorod, Russia (see, The Northern Research Forum 2004) and the 3rd one, in September 2004 in Yellowknife and Rae Edzo, NWT, Canada, coorganized with regional and local governments, local universities and Indigenous peoples' organizations.

Similarly, fourth, to address constructively between experts the challenges on how climate change might impact regional planning of municipalities and regional governments at the 2008 Calotte Academy with the title *Climate Change Defining Human Security*, and at the 2013 NRF Open Assembly with the approach of *Sharing Experiences and Exploring the Methods, and Assessing Socio-economic Impacts*; and finally, as the bar was raised higher, when the scope of the stage was expanded and discussion was transferred into global agenda to integrate themes in terms of local-global context by having *Our Ice Dependent World* as the main theme of the 6th NRF Assembly (2011), and *Water – globally and in North Calotte* as that of the 2012 Calotte Academy.

Conclusions

The Calotte Academy has been successfully acting as a school of dialogue for young researchers and a platform for international research projects & conferences. Correspondingly, the Northern Research Forum successfully acted from 2000-2015 as a forum to implement the interplay between science, politics, and business.

The importance of these platforms and processes, in the longer run, is that by having a lively discussion among researchers, in particular young ones, and other experts, and between them and local/regional/national policy-makers, planners, and business people, a new way to organize an international policy-oriented meeting was tested. Indeed, in these contexts, science was more than labs; it was about people, civil societies, and the environment.

Thereby, an innovative model for a Northern dialogue with 'inclusivity' was implemented, and this approach was not only for an open discussion *per se* but dealt with ways and procedures for building knowledge locally and regionally, as well as for building and increasing confidence regionally and globally. For these reasons, it is no wonder that the Calotte Academy and the NRF Open Assembly - being transdisciplinarity by nature and having actively implemented the interplay between science, politics, and business - became an important part of an Arctic model. And an Arctic model has already been applied to other academic and policy-oriented gatherings, even in other parts of the globe, such as CNARC and the Third Pole events in the Himalayan region.

The key for their success was pioneering new methods of thinking, and that their objectives, aims and the themes were results of a careful (re)thinking and brainstorming among the members of organizing bodies, all experts on Northern fields. Further, this kind of agenda, designed by the scientific community, was brought among other experts, policy-makers, business people, and other practitioners to be openly discussed and challenged. Finally, that as open and independent entities they implemented synergy between different expertise and stakeholders, as well as between existing organizations and networks.

As the initiators, developers, and co-organizers do not have a copyright, the main means of these two platforms - the model of an open assembly and the method of a dialogue - could applied and further developed, by academic and other expert institutions, for a dialogue-, knowledge- and confidence-building, where participants engage each other's arguments for searching new solutions, on local, regional and global scale.

Notes

- 1. Afterwards, a Final Report of each Academy, based on notes of each session written by the participants as rapporteurs, including main findings and highlights of a discussion, is produced and published as hard copies and digital (see https://calotte-academy.com). Shorter reports are also published in the Arctic Yearbook.
- 2. As numerous outcomes of the three phases in the first 32 years, except the years of 2000-2001 due to the preparations of the 1st NRF Open Assembly, and 2020 due to the COVID-19: 30 annual events in 20 locations in Finland, Norway, Russia, Sweden, and Sapmi with hundreds of active participants representing more than 25 nationalities.
- 3. Paper presenters are annually selected based on an open call for application, and given a small grant to support traveling and accommodation.
- 4. More about the history of NRF and its Open Assemblies, see Heininen 2023b.
- 5. Among the NRF Theme Project Groups were the following themes: Legal and Political Issues, Economies in the North, Energy Issues, Northern Sea Routes, and Climate Change vis-a-vis Northern Securities.
- 6. The NRF Network of Young Researchers consisted of circa 120 scholars (in 2000-2015), and that of the Calotte Academy (since 2012) consists of more than 300.

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ⁱ The section is based on presentations of the breakout session, "Knowledge for governance and diplomacy: Expertise & Dialogue," at Arctic Circle Japan Forum on March 4-6, 2023, in Tokyo, co-organized by the Thematic Network on Geopolitics and Security and the Arctic Yearbook.

ii More about the history of Calotte Academy, see Heininen 2021.