

Communication and Diplomacy: The Arctic Council's Communication of Science on Social Media

An InsSciDE Case Study

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Technodeterministic and technoromantic understandings of the role of companies such as Facebook and Twitter have ascribed to these platforms powerful transformative roles in processes of social change. Recent research, however, has emphasized the need to analyze their influence within broader social, economic and political contexts. It is necessary to consider the platforms' place within broader media ecologies, the actual levels to which users employ the platforms to bypass established media outlets (disintermediation), and whether mere presence online translates into use and impact. With these issues in mind, we examine the Arctic Council's (social) media use in the service of science communication, its benefits and limitations, and the place of social media in the broader science diplomacy media ecology.



Source: @ArcticCouncil

Keywords:

Arctic Council, social media, public sphere, science diplomacy, Facebook, Twitter



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Within the broader media ecology of science diplomacy, what role can large-scale social media platforms play? To what extent has technoromanticism masked the reality of the use of these platforms? When science diplomacy is communicated via social media, what choices are made?

In May 2017, at the tenth Ministerial Meeting of the Arctic Council in Fairbanks, Alaska, the foreign ministers of the eight states with Arctic territory signed the Agreement in Enhancing International Arctic Scientific Cooperation in order to “enhance cooperation in scientific activities in order to increase effectiveness and efficiency in the development of scientific knowledge about the Arctic.” This foundational text, coming ten years into the existence of the signatory Council, “enhances the logistic capacity for cross-cutting knowledge discovery and application” (Berkman et al., 597). The Arctic Science Agreement is in and of itself an iteration of science diplomacy. On the relationship between science diplomacy and the Arctic Council, Binder (2016) wrote:

Science for diplomacy describes the soft power approach states follow through strengthening their scientific capabilities, achieving additional attraction and in consequence developing the availability to shape preferences and policies (...). Most prominently, cooperation agreements and the creation of institutions are used as an instrument to promote deeper political ties through scientific collaboration. The Arctic Council serves as a good example for this dimension, as the cooperation on environmental protection within the Arctic Environmental Protection Strategy (AEPS) in consequence led to the foundation of the AC.

A central component of science diplomacy is communication, and communication of that diplomacy to the public in general, and to stakeholders in particular. Social media have often been pitched as platforms with the potential not only to reach large numbers at relatively low cost, but also to allow bypassing of mainstream media outlets to achieve enhanced dialogue and discussion with various publics. How this social media potential for reach and impact on the public sphere has played out in practice, however, is another issue. As opposed to earlier, technodeterministic and technoromantic understandings of the role of social media in which these platforms are ascribed powerful transformative roles in processes of social change, recent research has emphasized the need to analyze their influence within social, economic, and political contexts. In other words, we must consider their place within broader media ecologies, the actual levels to which users employ the platforms to bypass established media outlets (disintermediation), and whether mere presence online translates into use and impact.

With these issues in mind, we analyze a sample of the communication from the Arctic Council on the topic of science and scientific cooperation, published/posted after the signing of the Arctic Science Agreement. We address the benefits and limits of (social) media use in the service of science communication, the place of social media in the broader science diplomacy media ecology, and also the asymmetries in knowledge and information awareness.

Protagonists

Analysis of the use of large-scale international social media platforms for the dissemination of information regarding science and science diplomacy is faced with a dense web of organizations and individuals to take into account. A useful way to think about this web is to weigh the relative amounts of power the different protagonists have in relation to the mediated communication in question, as well as their power over its filtering into the public sphere (through creating content and online discussion).

- **Social media platforms:** Organizations (usually) without direct input to or view on the information, but which provide the potential material access to large-scale publics, and through site architecture shape the form of communication in a highly fragmented media ecology.
- **Arctic Council:** The organization that hires the individuals responsible for making decisions regarding which material to post on the various Arctic Council social media pages, how and when.
- **Members of the scientific community:** Those who participate in the science diplomacy covered, and/or produce the scientific output presented on platforms by the Council.
- **External stakeholders:** Governments, non-governmental organizations (NGOs), rights activists either consuming or providing the material communicated on the sites.

- **Media:** Large- and small-scale media outlets that read the material posted to social media platforms or, more importantly in relation to power over content, share in some form with their followers the material posted, or produce articles shared by the Arctic Council on its pages.

- **General population:** Users of the social media platforms (or those exposed to its content) unaffiliated with any of the previous groups.

The Arctic Council and the communication of science diplomacy on social media

Fedoroff (2009) defined science diplomacy as “the use of scientific collaborations among nations to address the common problems facing 21st century humanity and to build constructive international partnerships”. In the case of the Arctic, a number of specific areas have been identified as central to such partnership: sustainable development, environmental protection, balancing economic prosperity, and overall societal well-being.

The Arctic Council, established in 1996, defines itself as “the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic Indigenous peoples and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.” In addition to the eight member nations of the Arctic Council (Canada, Denmark, Iceland, Norway, Russia, Sweden, the United States and Finland – together with the Faroe Islands & Greenland, part of the Kingdom of Denmark), there are also six “Indigenous Permanent Participant organizations” and 35 “observer states and organizations.”

In this case study, the communication from the Arctic Council on the topic of science and scientific cooperation, published on Twitter and Facebook from May 2017 (after the signing of the Arctic Science Agreement) up until October 2021, was analyzed with an eye to discerning the benefits and limits of (social) media use in the service of science communication, and the place of social media in displaying cooperative efforts.

Stakes

The communication of science diplomacy on social media platforms has direct consequences for the dissemination of information not only in the service of (science) diplomacy, but also for public debate. With dissemination and engagement, however, come both benefits and possible pitfalls.

- The use of social media by the Arctic Council to communicate and present scientific research and cooperation in the service of science diplomacy is fundamentally linked to the relationship between citizenship and governance. This use conveys that the actions of states conducted in the name of citizens are presented in an open and transparent manner, and that this openness and transparency are benchmarks in and of democracy. Conversely, an absence of communication, or communication that fails to either inform or engage, runs the risk of not only bypassing citizens, but also of undermining efforts to leverage science diplomacy in the service of broader cooperation.

- The general failure of the Arctic Council to stimulate any real sense of engagement or public debate on or through their social media channels when addressing issues of science is perhaps unsurprising, given the topic of the communication (specialized scientific issues). Yet the low levels of discussion or interaction beg the question of what is being missed through these low levels, and what the Arctic Council sees as the ultimate purpose of the communication of scientific cooperation via public channels beyond simple “internal” communication. While engagement with communication on science diplomacy is most likely to be found among those in the diplomatic and scientific communities, the long-term impact of that science – particularly in the case of the Arctic – has implications down to the local grassroots levels. Thus, communicative feedback loops involving these groups, though platforms such as social media, could prove key. Recent examples of the use and power of social media platforms in politics (the US being one such example) and their role in democracy are significant here.

- Finally, an element that did not come out of the research on the Arctic Council’s use of social media (due to lower levels of interaction), but has a direct bearing on the stakes involved in such use, is that of the balance between the benefits of public communication on social media platforms versus the potential pitfalls of such communication. While the democratic potential of open communication and discussion is self-evident, a factor worth considering is how debate on social media platforms can often degenerate into aggressive, nationalistic, or otherwise divisive narratives that can not only stray from the original purpose of the posts, but can possibly undermine them.

Arctic Council communications: Strategy, stakeholders and social media

In the Arctic Council Communications Strategy (2020) it is written that one of the Arctic Council's primary purposes is to "disseminate information, encourage education, and promote interest in Arctic-related issues," and that, "in the face of an ever-shifting communications landscape, [the Arctic Council communication] strategy will guide the Council towards generating positive narratives – as a strategic effort – on Arctic cooperation, environmental protection, sustainable development, and the well-being of Arctic residents." The main goals and objectives of this communication are stated thusly:

- to strengthen the Arctic Council brand and underline its relevance;
- to provide a credible "voice" for the Council on issues where it has achieved consensus and furthered the knowledge-base;
- to highlight how the Arctic Council actively contributes to positive outcomes in the Arctic - notably through the substantive and high-quality work of its subsidiary bodies;
- to illustrate that the Council, its working groups, and their projects respond to and address on-going regional priorities and global crises;
- to generate a positive narrative of international cooperation on sustainable development and environmental protection in the Arctic;
- to facilitate timely communications efforts and media responses to position the Arctic Council as the leading and authoritative voice of the region.

The target audiences for the Council's communication are identified in the strategy as: (1) inhabitants, including Indigenous peoples, of the Arctic and the Arctic States; (2) the Arctic Council network; (3) policymakers in the Arctic States and observer states; (4) Arctic-focused NGOs, interparliamentary and intergovernmental organizations; (5) the Arctic scientific and research community; (6) business sectors with interest in the Arctic; (7) **youth**, including **students**, from the Arctic and from Arctic States (emphasis ours); and (8) media representatives and the general public. While the Council identifies a number of possible communication tools, "digital media networks" (including social media) are defined as serving to "amplify messaging and reach key audiences – notably **opinion leaders, journalists, and youth**" (emphasis ours).

The Arctic Council has social media pages on Facebook (created 2014, 10.8K followers), Twitter (created 2012, 22.5K followers), Instagram (created 2020, 2.3K followers), Flickr (created 2011, 78 followers) and pages on Vimeo (created 2011, 53 followers) and Soundcloud (created 2015, 30 followers). We focused our study on the use of Facebook and Twitter (the platforms with the greatest reach) by the Arctic Council for the posting of material that made clear reference to science or research.

Social media and science diplomacy: The place in the overall social media flow

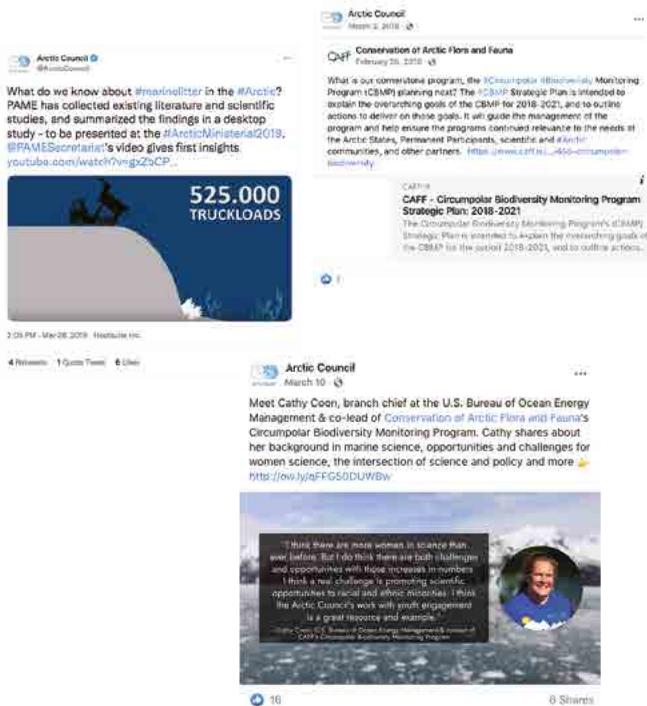
We selected our sample for analysis through performing a search on Arctic Council social media postings between May 2017 and October 2021, using variants of the words *science*, *scientific*, *researchers*, and *research*. This selection was justified by our suggestion that communication about scientific activity and research both enhances existing cooperation and fosters further cooperation.

At the most general level, we can say that Arctic Council social media content with explicit reference to those search terms of science and research made up a relatively narrow portion of the social media content that was examined. On Twitter, for example, of over 3,000 tweets posted by the Arctic Council in our sampling period, some 5% made specific reference to these terms. Facebook content with explicit references to these terms was equally scarce. While there were undoubtedly posts on both platforms that included information on science and science diplomacy that were not captured by our sample, our aim was to identify clear and explicit reference to science and research. This interest in clarity and specificity was motivated by the fact that the Arctic Council made reference to groups such as "journalists" and "youth" as being particular targets of social media communication – that is, groups falling outside of scientists, diplomats, experts and other "insiders" who would be more informed about Arctic Council activities, and thus less in need of (or using little) specified terminology. (Conversely, the fact that there is communication about forms of science diplomacy that do NOT make mention of those terms might illustrate an inward-looking focus of/for the use of the platforms by the Arctic Council; however we did not assess this possibility.)

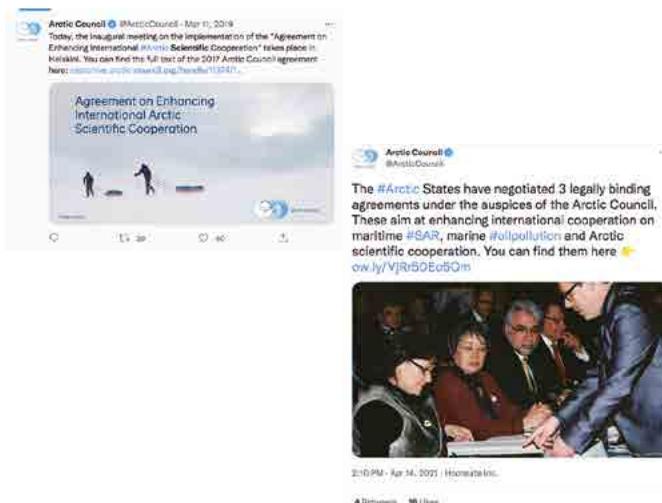
■ Forms of content

While difficult to cover all of the forms of science/research content communicated on the Arctic Council's Facebook and Twitter pages in a limited amount of space, three examples serve as illustrations of how the platforms were used to communicate science/research efforts and cooperation.

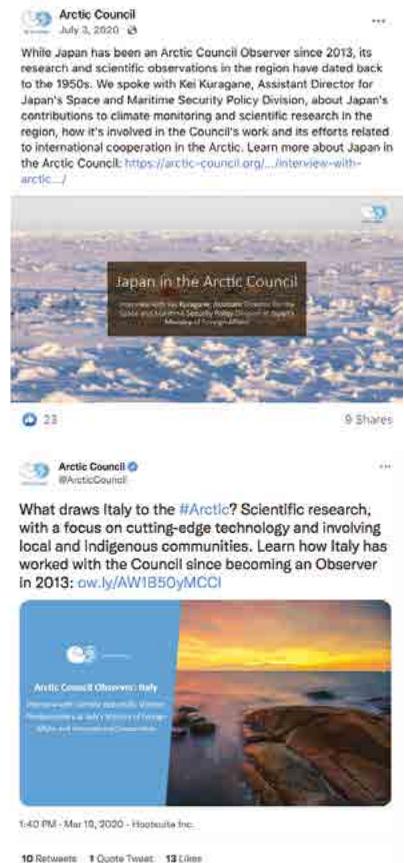
• Example 1: **Promotion and communication of Arctic Council (and related sub-divisions) scientific meetings and gatherings.** This form of communication is the most common across the social media accounts. In these Facebook postings and tweets, the Arctic Council highlighted the scientific work done under its auspices. The posts link to Council-sponsored or connected events and make reference to individuals or organizations working on collaborative projects.



• Example 2: **Promotion and communication of the Arctic Council in general as a venue for scientific collaboration.** In this second general category, the Arctic Council posts regular reminders on their accounts of the role of the organization in promoting scientific collaboration and cooperation. These posts are usually non-specific in the sense that they are not linked to a particular scientific event or research project or publication, but rather to the work of the Council.



• Example 3: **Promoting the expansion of science diplomacy in the Arctic beyond traditional Arctic geographic borders.** In this category, the Arctic Council used its social media platforms to communicate the scientific cooperation and collaboration of nations whose borders fall outside of the Arctic region.



• Example 4: **Linking science (diplomacy) and Indigenous issues.** A final example of the use of social media for promoting science diplomacy was the way in which the Arctic Council communicated the organizational links between science and Indigenous rights/issues. While a diverse cross-section of issues was used by the Arctic Council in relation to science and research, the connection to Indigenous populations emerged as an important theme.



■ Low levels of engagement

The social media posts from the Arctic Council on Facebook and Twitter were marked by a relatively low level of interaction – defined on Twitter as Re-tweets, Favorites, or Responses, and on Facebook as Shares, Likes, or Comments. Most Facebook posts and Tweets received in the region of 0-20 forms of sharing/liking engagement, and most had even lower direct commentary in the form of responses and comments. Many tweets garnered no engagement at all, and the vast majority of Facebook posts had under 10 comments (and most less than five). The tweets and posts that generated the greatest degree of interaction were, for example, those initially announcing the signing and/or start of the *Agreement in Enhancing International Arctic Scientific Cooperation* in 2017 (signing) and 2018 (implementation).

While levels of engagement with messages about science and/or research in the form of Retweets, Favorites, Responses, Shares, Likes, and Comments were low compared to other posts on the Arctic Council's Twitter and Facebook accounts, another direction of engagement came in the form of the Arctic Council itself re-tweeting and re-posting material on the two platforms produced by other users. On Twitter, the Arctic Council tended to re-tweet material of direct relation to Arctic Coun-



cil events and/or programs where the Arctic Council was named.

It should be noted that the low level of engagement in relation to Arctic Council social media content on the subject of science/research was not unique. While not a central focus in this case study, the overall levels of engagement with the Arctic Council's social media content are (and were) at roughly the same levels as the posts on science and research. In other words, the science/research posts did not markedly out- or under-perform the other content posted by the Arctic Council. Of the over 4000 tweets sent by the Council during the four years under analysis (on all subjects), only 25% received 10 re-tweets or more, just 15 received over 50 re-tweets, and not a single tweet out of 4000 got more than 91 re-tweets.



■ Connection/connecting to mainstream media outlets

While one of the stated objectives of the Arctic Council in relation to its social media posts was to increase information and engagement with "journalists," the Facebook and Twitter accounts of the organization showed little evidence of having generated such engagement to any significant degree. Twitter and Facebook posts were rarely shared by national and/or local media outlets, and the Arctic Council did not make use of "tagging" media – placing the username in the body of the post or tweet in order for the post to be placed in the user's feed where it would likely be seen – in their posts on either platform. Similarly, the Council very rarely shared any articles or material produced by external media companies, be they local, regional or national. There was an apparent policy in the posting of material to the Arctic Council accounts that the vast majority of links go directly to the Arctic Council website, the websites of Arctic Council-related divisions, or to government agencies/departments of Arctic Council member or observer states/regions. Outside media were not used as relays or as sources of material.

Discussion and conclusions

What does the use of social media by the Arctic Council tell us about the relationship between science diplomacy, technology and the public sphere? In order to address these issues, we shall use a number of key theoretical concepts as frameworks for discussion.

Media ecology: The concept of media ecology encourages scholars to consider the total communicative make-up of a given media environment and the relationship between the different components of that environment, rather than looking at each communicative form/act or medium in isolation. While the present case study examined just two social media platforms, their role in the broader media ecology within which science diplomacy is communicated is of particular importance. What is apparent from the study is that the Arctic Council has not attempted to make its social media accounts important nodes in a much wider communicative network. While the accounts certainly link to governments, governmental agencies, NGOs, universities and research groups, the lack of engagement/interaction with local, regional and national media outlets (or other non-journalistic media) makes their role in the broader media ecology somewhat peripheral. Thus these platforms are nodes in only a specialist/specialized communicative diplomatic and scientific communication ecology, which does not itself display great engagement.

Disintermediation: The peripheral place of the Arctic Council in the broader media ecology is linked to the notion of disintermediation: the extent to which individuals or organizations bypass mainstream media and utilize platforms such as social media to target the general population; or, conversely, the extent to which they use the mainstream media to spread and amplify their messaging. As noted, the Arctic Council's social media use showed little evidence of an attempt to engage mainstream media outlets through its posts, or to encourage amplification of its messages on science diplomacy through direct or indirect social media contact. Whether this practice is intentional or unintentional is an issue for further research (i.e. semi-structured interviews), but the fact that connecting with journalists is a stated communication goal suggests that the mediation of Arctic Council material on science diplomacy is not viewed as undesirable.

Technological determinism and solutionism: In its rationale for use of social media, the Arctic Council identifies "opinion leaders, journalists and youth" as key groups with whom contact is desired. Yet the relatively inward-oriented content of the material posted to the social media platforms on science and research, as well as the low levels of interaction, suggest the possibility that techno-determinist and/or solutionist perspectives are at play: namely the notion that technology is used because it is there, and not using it would therefore seem like a failure; that the mere use of the technology will solve problems (i.e. put information out there, and it will be found); and, finally, that technology not only offers solutions to every problem that we have (in this case "reaching youth"), but that the creators of technology generate false problems that can then only be "solved" by the technology they create. A narrow technological determinist or solutionist view, therefore, might serve to hinder more open, progressive, and alternative modes of communicating science and science diplomacy.

The public sphere: As a final point, the case study begs the question: What is the role of the "public" in this digital public sphere? Or to put it another way: where is the "social" in social media? International research and science cooperation communicated by the Arctic Council in this case study centers around a region facing potentially catastrophic consequences as a result of climate change. Thus, the science diplomacy in question, and the science that may spring from or through that diplomacy, has clear material implications for large numbers of people living in situations marked by extreme precarity. The relative lack of contact and engagement with broader publics (beyond scientific and/or diplomatic specialists) via social media platforms is therefore an element also worthy of further discussion, and one that links science diplomacy with the ethical responsibilities of citizenship and democracy.

Study Questions

- How might organizations involved in the communication of science diplomacy better leverage the possibilities afforded by social media platforms? How should interactive features be harnessed to stimulate debate both inside and outside of science diplomacy circles?
- What is the relationship between the broader media ecology and organizations involved in the production/promotion of science diplomacy? If science diplomats interpret social media using technoromantic and technodeterministic frameworks, could that hinder their effective interactions with the media ecology?
- Social media platforms may be seen as tools for bypassing mainstream media in order to reach a broader public (disintermediation), or as tools for reaching mainstream media for further amplification. In which cases would diplomats, scientists or both prefer disintermediation? In which cases would they prefer amplification of their activities?

Endnotes

- A fuller version of this InsSciDE work will be forthcoming in a peer-reviewed journal. Christensen M (in preparation) Media Ecologies and Science Diplomacy: Arctic Council's Communication of Science and Research Cooperation on Social Media.
- Cover image: @ArcticCouncil tweet, 22 February 2022.

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Selected Publications

- (with Nilsson AE first author) (2019) *Arctic geopolitics, media and power*. Taylor & Francis, London
- (with Jansson A) (2015/2017) *Cosmopolitanism and the media: Cartographies of change*. Palgrave MacMillan, London
- (with Nilsson A and Wormbs N) (eds) (2013/2016) *When the ice breaks: Media and the politics of Arctic climate change*. Palgrave MacMillan, London.