



SCIENTIFIC FINAL REPORT

Regnr Östersjöstiftelsen: 63/14

Project manager: Lars Lundgren

Project title: Via Satellite - Transnational Infrastructures in European Television History

1. Purpose of the project

With only four days notice, the Soviet Union and its allies in the Eastern Bloc withdrew from the 1967 television broadcast, *Our World*, intended to be the first live satellite broadcast to cover the entire Northern Hemisphere. The Soviet withdrawal from the *Our World* broadcast fits well into historical accounts of broadcasting that have traditionally depicted Eastern and Western Europe as strictly isolated from one another, existing in separate universes. While the withdrawal from *Our World* ultimately cemented the picture of two isolated television systems, the proposed project takes the prior cooperation and two-year planning period of *Our World* as its vantage point, examining the early development of the Eastern Intersputnik satellite system and the Western Intelsat satellite system, as emerging communication infrastructures, and the plans to join them during the 1967 broadcast.

The aim of the project is to analyse and compare transnational television infrastructures in Cold War Europe. The aim is divided into two research questions; 1) How can the emergence of two divided but interacting satellite infrastructures, Intelsat and Intersputnik, be understood in relation to the evolution of transnational broadcasting? and 2) How can the failed cooperation, and the subsequent satellite broadcasts, be understood in relation to the evolution of transnational broadcasting?

2. The three most important results of the project and what conclusions can be drawn from them

The results of the project can be outlined as follows, as it contributes to different scholarly areas.

First, scholars of global media and media infrastructures will find that the project provides a new picture of the development of satellite infrastructure. Our publications incorporate the perspectives and agency of the socialist world for the first time and corrects significant inaccuracies in the very limited existing literature about the Soviet-led satellite network, Intersputnik. Tracing internal conversations, diplomatic exchanges, and promotional efforts on both sides of the Iron Curtain, we show how the integration of the socialist bloc into global satellite infrastructures was envisioned by both sides and partially implemented well before 1991, despite public claims on both sides about separate, rival networks. The socialist world's active participation in the creation of a global commercial satellite communication system was, moreover, more than a mere scholarly curiosity. We find that the very existence of an alternative, Soviet-led network empowered Western European critics of US dominance of INTELSAT and reshaped the governing structures of



INTELSAT itself. We also show how the rapid construction, during the 1970s, of a global network of “earth stations,” the large technical installations needed to send and receive signals from earth to space during the decades before direct broadcast satellites, both revealed and helped further the integration of socialist and capitalist-world satellite networks.

Second, the project has generated several publications that illuminates current conflicts over satellite broadband and other global infrastructural projects. The debates we trace during the 1960s and 70s about control, profit, and fairness in the creation and governance of satellite communications closely resemble current debates over, for example, the Chinese company Huawei’s rapid expansion of 5G networks and the United States’ disproportionately powerful role in global Internet governance. The project both demonstrates how resistance to US hegemony by global coalitions can be effective, and also helps us better understand a contemporary global media environment in which US power is actually in decline.

Third, our account of the race to build institutions and infrastructure for satellite communications also contributes to recent efforts to internationalize the historiography of space exploration. We show that the experiences of cooperation across Cold War geopolitical divides, including Franco-Soviet experimental satellite broadcasts that began in the mid-1960s, were intended to and indeed helped lay the groundwork for eventual US-Soviet cooperation in manned space flight. Satellite communications offers us a new view of the origins of manned space flight, suggesting that perhaps the 70s era of Apollo-Soyuz was not as exceptional in the *longue durée* of space history as historians have argued until now.

Finally, the publications of the project adds to an emerging field of research within Russian and Eastern European studies in the histories of Soviet economic policy, international trade, and socialist state-owned corporations. Given the post-Soviet capitalist transformation in Russia, and the emergence of state-controlled, for-profit corporations as dominant economic actors, historians have begun to explore the origins of neoliberal economic policies before 1991 and the engagement of Soviet corporations with global markets in aerospace, tourism, natural resources, and other sectors. We add to this research by documenting the decision-making of Soviet officials and their Eastern bloc partners as they sought to understand the significance of this new medium and find international markets for their space technology and launch capacity. While most scholars of space and satellite communications have assumed that the USSR’s space industry began to engage with private sector only after 1991, we find that pursuing commercial interests, remaining competitive in a new high technology manufacturing sector, and building for-profit relationships with other governments and corporations were continuously pursued by both the Soviet Union and its Warsaw Pact allies from the first plans for Intersputnik in the late 1960s. The outcome of Soviet pursuit of its own economic interests was a set of material and institutional infrastructures for global satellite communications that both laid the groundwork for the eventual privatization of the space communications sector by the late 1990s *and* were understood by officials on both sides of the Iron Curtain as the embodiment of shared global values of economic justice and access for the global South.

3. The project’s contribution to the international research frontline



Although there is an emerging critical scholarly literature on satellite communications, very little recent work has focused on development and institutionalization of this medium *after* the first successful satellite broadcast experiments in the early 1960s but *before* the arrival of direct-to-home satellite broadcasting in the late 1980s. Work on this period is limited to a handful of accounts of the history of INTELSAT, including its relationship with Intersputnik, some written by past and present employees of INTELSAT and other telecommunications officials. Other existing work includes books by scholars in the social sciences writing contemporarily with or immediately after the events they analyze, perhaps most notably Herbert Schiller, who dedicates one chapter in *Mass Communications and American Empire* to Comsat (the US representative to INTELSAT) and INTELSAT (Beacon, 1971). Reflecting their publication before the end of state socialism in Eastern Europe, these accounts naturally had to rely on Western views of Soviet intentions and actions, without access to internal Soviet documents.

While the Cold War appears as a more explicit context in more recent, post-1991 histories of satellite communications, these works have tended to reflect triumphalist narratives typical of US political life in the 1990s and 2000s, reaffirming Cold War binaries that position the USSR as both entirely cut off from and inferior to the US as a scientific, political, and economic power. Among more recent work, James Schwoch's landmark *Global TV: New Media and the Cold War* (University of Illinois Press, 2009) end the story in 1969, before the Soviet Union had really attempted to enter the international satellite communications sector. The choice of the mid or even late 1960s as an end point makes the history of satellite communications into an account of US technological triumph over the Soviet Union after the initial humiliation of Sputnik in 1957. By continuing the story of satellite communications through the 1980s, when the US had lost its dominant position, and by incorporating the perspectives of the US's European and socialist world partners and rivals, the project has offered a more nuanced picture of the impact of interaction and integration across the Cold War divide—one which, as above, helps make the ultimate privatization and regionalization of satellite communications comprehensible.

By emphasizing transnational interaction, we have added to the growing literature on Cold War scientific, technical, and cultural exchange that emphasizes the way that such exchanges often took place largely without regard to prevailing geopolitical logics. Key scholars in this field include Sari Autio-Saraso, Michael David-Fox, John Krige, and others. Like Per Högselius's *Red Gas* (Palgrave, 2013), a study of gas pipeline construction in Europe during the Cold War, our work reveals that satellite communications infrastructure followed the pattern described by European historians of infrastructure and technology as "hidden integration," in which, despite high-level political conflict, states actively built infrastructural networks that crossed Cold War geopolitical boundaries. We extend this work by emphasizing not only how integration took place despite geopolitical hostilities, but also events in Cold War high diplomacy could, often unintentionally, foster network integration and, ultimately, privatization, as happened in the case of the Moscow-Washington satellite hotline.

Recent years have seen a growth in literature on satellite communication, often addressing issues of distribution and infrastructure from a combination of cultural, technological and industrial perspectives, for instance in *Down to Earth* (Rutgers University Press, 2012), edited by Lisa Parks and James Schwoch. Additionally, there is a renewed interest in the role of satellites in sensing and earth observing practices, as part of an effort to collect



environmental data and survey climate change, as exemplified by Mariel Borowitz's *Open Space* (MIT Press, 2017). By taking an infrastructural approach to the history of satellite communications, we build on existing work that focuses on investigating, historicizing, and contextualizing satellite communication and media infrastructures. By returning to the early, formative eras of contemporary media networks, scholars have sought to make visible the infrastructures that underlie and shape the circulation of media content, an approach that, as historians ourselves, we find sympathetic.

We extend the reach of this work, however, by focus not solely on the material, but on the human institutions, beliefs, and visions that shape and enable them to work, and taking from Tung-Hui Hu, and from Susan Leigh Star and Geoffrey Bowker before him, a wide-ranging definition of infrastructure that includes not only material networks—cables, antennae, and satellites themselves—but also human networks, political and economic institutions, and cultural representations. By focusing on the human, regulatory and administrative institutions built to govern satellite communications, we contribute to this existing literature on media infrastructures a fuller account of how economic and geopolitical power worked to shape contemporary infrastructures, one that includes the role of competition with socialist rivals in reshaping even US-led global satellite institutions.

We thus follow in Benjamin Peters' (2016) footsteps by looking closely at Soviet institutions and internal decision-making, but diverge from his comparative approach, which obliges him to cast Soviet efforts to develop a national computer network as chiefly a story of failure. While we acknowledge Intersputnik's technical inferiority and minimal market share compared to INTELSAT, by taking a transnational approach that emphasizes interaction and mutual influence, we show how even asymmetrical, marginalized actors can reshape global networks. We thus complicate the findings of several recent critical studies of media infrastructures, including by Nicole Starosielski, Lisa Parks, and Brian Larkin, who have emphasized the ways that infrastructural projects serve to display power before global audiences, excluding or creating new hierarchies as they connect. We add to and complicate these accounts of infrastructural power projection by uncovering the ways in which global media infrastructures were also shaped by anxiety, insecurity, and competition from rivals.

4. New research questions that the project has led to

As mentioned, the project has addressed the rapid expansion of the terrestrial infrastructure for satellite communication. In our current project we use this part of the study as a vantage point for examining satellite earth stations and data centres as transnational infrastructures and logistical media. We direct our attention to the emergence, construction and maintenance of what we call network buildings, and how they can be understood in relation to transnational communication infrastructures. Furthermore, we look at how the ordering, organization and coordination of data flows be understood in relation to network buildings and their role within transnational communication infrastructures.

5. The contribution of the research to the knowledge of the Baltic Sea Region and Eastern Europe

See 2 and 3 above.

6. The contribution of research to multidisciplinary knowledge formation



See 2 and 3 above.

7. Dissemination of the results of the project within and outside the research community

Publications

Monographs

Evans, Christine E. & Lars Lundgren. *Space Bridges. Satellite communications networks, global media, and the Cold War*. Under review.

Book chapters

Evans, Christine E. & Lars Lundgren. 2020. "Dividing the Cosmos? INTELSAT, Intersputnik, and the development of transnational satellite communications infrastructures during the Cold War", in Lovejoy, Alice & Mari Pajala (eds) *Remapping Cold War Media: Institutions, Infrastructures, Networks, Exchanges*, Indiana University Press.

Evans, Christine E. & Lars Lundgren. 2019. 'Producing Global Media Memories: Media Events and the Power Dynamics of Transnational Television History', in *Globalization and the Media*, 1st Ed, Terhi Rantanen (ed), London: Routledge. (republishing of 2017 article)

Lundgren, Lars & Benjamin A. Davis. 2019. "Global broadcasting in the Digital Age", in Kamalipour, Yahya (ed) *Global Communication*, Rowman & Littlefield.

Lundgren, Lars. 2015. "Transnational Television in Europe: Cold War Competition and Cooperation", in Simo Mikkonen & Pia Koivunen (eds) *Beyond the Divide. Entangled Histories in Cold War Europe*, Oxford & New York: Berghahn books.

OA:

https://www.academia.edu/18012207/Transnational_Television_in_Europe_Cold_War_Competition_and_Cooperation

Articles

Lundgren, Lars. 2020. "Transnational Infrastructures in Television History and Satellite TV", *The Oxford Research Encyclopedia of Communication*, forthcoming.

Evans, Christine E. & Lars Lundgren. 2017. "Producing Global Media Memories: Media Events and the Power Dynamics of Transnational Television History", *European Journal of Cultural Studies*, Vol. 20 (3), pp. 252-270.



Evans, Christine E. & Susanne Wengle. 2018. "Symbolic state-building in contemporary Russia," *Post-Soviet Affairs*, Vol. 34 (6), pp. 384-411.

Lundgren, Lars & Christine E. Evans. 2016. "Geographies of Liveness: The 'Our World' Broadcast and Satellite Networks as Infrastructures of Live Television", *International Journal of Communication*, Vol. 10.

OA: <https://ijoc.org/index.php/ijoc/article/view/5072>

Other

Evans, Christine E. & Susanne Wengle. June 6, 2018. "Tomorrow Putin answers Russians' questions on live TV. Here's what his performance will tell us," *The Washington Post*, Monkey Cage blog, https://www.washingtonpost.com/news/monkey-cage/wp/2018/06/06/tomorrow-putin-answers-russians-questions-on-live-tv-heres-what-his-performance-will-tell-us/?utm_term=.3267e85951e2

Conferences organized

In May 2018 we organized a conference in Prague, Czech Republic titled *Network(ed) Histories*. The conference attracted participants from about 20 different countries, and we had 39 (full) papers, as well as one keynote by Lisa Parks (MIT Global Media Lab) - *A Nodal Approach to Network History: The Project Mercury Earth Station in Zanzibar*. While the conference was organized by Evans and Lundgren, funding was secured through conference fees, and contributions from the Communication History Division of the International Communication Association.

Conference presentations

Evans, Christine E. "Cosmic Bridges: satellite communications networks, global media, and the Cold War," *ASEEES Annual Convention*, San Francisco, CA, Nov 24, 2019.

Evans, Christine E. & Lars Lundgren. "Earth Stations in the Development of Communications Satellite Infrastructure during the Cold War" (w. Christine Evans). In Panel: "Space Bridges, Earth Stations, and Circulating Experts: Infrastructural Approaches to Transnational Cold War History", *50th Annual ASEEEES Convention*, Boston, USA, Dec 6-9, 2018.

Evans, Christine E. & Lars Lundgren. "Windows to the future"? Earth stations in satellite communications during the Cold War". *ICA Preconference: Network(ed) Histories*, Prague, Czech Republic, May 24, 2018.

Evans, Christine E. "Symbolic State-building in Putin's Russia: The Direct Line Broadcasts" *Media and Power in Contemporary Russia and Beyond Workshop*, University of Chicago, April 27, 2018.

Evans, Christine E. & Lars Lundgren. "The 50-year anniversary of the 50-year anniversary. Liveness, mass media, and commemoration of the Russian revolution in 1967 and 2017. *1917-2017: 100 Years of Russian Revolution in Arts and Aesthetics*, Södertörn University/Moderna Museet, Stockholm, Oct 19-21, 2017.



Evans, Christine E. & Susanne Wengle. "Symbolic State-building in Putin's Russia: what can the Direct Line Broadcasts tell us?", *Midwest Political Science Association*, Chicago, IL, April 6, 2017.

Evans, Christine E. "Several Hours in the Motherland: Satellite infrastructure and the *Priamaia Liniia* broadcasts," *Midwest Russian History Workshop*, Northwestern University, Evanston, IL, March 5, 2017.

Evans, Christine E. & Susanne Wengle. "The President Live!: authority, citizens and the media in the "Direct Line" broadcasts," *48th Annual ASEES Convention*, Washington, DC, November 18, 2016.

Lundgren, Lars "Synchronizing Liveness: Producing Transnational Broadcast Events". *6th European Communication Conference*, Prague, Czech Republic, 9-13 Nov, 2016.

Evans, Christine E. "Visualizing the nation by satellite: infrastructure, culture, and the long history of Vladimir Putin's *Direct Line* broadcasts," "*Visualizing the Nation*" workshop, University of Manchester, Manchester, UK, November 4, 2016.

Evans, Christine E. & Lars Lundgren. "Geographies of Liveness: Time, Space, and Satellite Networks as Infrastructures of Live Television in the 'Our World' Broadcast". *International Communication Association 2016: Communicating with Power*, Fukuoka, Japan, 9-13 June, 2016

Lundgren; Lars. "Travels, Truths, and Television: Ethnography in/of the Archive". *International Communication Association 2016: Communicating with Power*, Fukuoka, Japan, 9-13 June, 2016.

Evans, Christine E. & Lars Lundgren. "Producing Global Media Memories: Media events and the power dynamics of transnational television history". *ICA Preconference: Transnational Communication History*, Fukuoka, Japan, 9 June, 2016.

Evans, Christine E. & Lars Lundgren. "Divided and Connected: Satellite Networks and the Production of Liveness", in panel: "'Hello, Earth': Soviet Space Television in the Context of the Cold War". *47th Annual Convention of the Association for Slavic, East European and Euroasian Studies*, Philadelphia, USA, 19-22 Nov, 2015.

Lundgren, Lars. "Ethnography in the Archive: Travelogues, truths and television". *Bridges and Boundaries: Theories, Concepts and Sources in Communication History – ECREA mid-conference*, Venice, Italy, 16-18 Sep, 2015.

Lundgren, Lars. *Nordmedia2015*, "Divided and Connected: Satellite Networks and the Production of Liveness", and "Ethnography in the Archive: Travelogues, truths and television". Copenhagen, Denmark, 12-15 Aug, 2015.

Lundgren, Lars. Organized panel: "Transnational Television in Cold War Europe". Copenhagen, Denmark, 12-15 Aug, 2015.



Evans, Christine E. & Lars Lundgren. “‘Everything will be live!’ Cold War television and the transnational production of liveness” *International Communication Association 2015: Communication Across the Life Span*, San Juan, Puerto Rico, 21-25 May, 2015.

Evans, Christine & Lars Lundgren. ”Connected and Divided: Satellite Networks as Infrastructures of Live Television” *ICA Preconference: Communications and the State: Toward a New International History*, San Juan, Puerto Rico, 21 May, 2015.

Invited talks

Evans, Christine E. “Space begins on Earth: Satellite Earth Stations and the Infrastructural History of Space, 1960s-1970s,” invited lecture for conference entitled “The Global Cosmos: Dislocation & Discontent in the Space Age,” The Huntington Library, San Marino, CA, May 15-16, 2020. (Rescheduled due to COVID-19 for 2021).

Evans, Christine E. “Communications Satellites and Cold War History,” Keynote address to the Young Researchers Conference, Havighurst Center for Russian and Post-Soviet Studies, Miami University, Oxford, OH, April 4, 2019.

Evans, Christine E. “Space begins on Earth: Satellite Infrastructures and Cold War History,” Center for Russian, Eastern European, and Central Asian Studies, University of Wisconsin, Madison, WI, March 14, 2019.

Evans, Christine E. “A long history of Vladimir Putin’s *Direct Line* Broadcasts,” School of Slavonic and Eastern European Studies, University College London, November 7, 2017.

Lundgren, Lars, “Synchronizing Liveness: Producing Transnational Broadcast Events”, Department of Journalism, Advertising and Media Studies, University of Wisconsin-Milwaukee, Dec 9, 2016.

Evans, Christine E. & Lars Lundgren. “Our World? Satellite Networks as Cold War Infrastructures”, Department of History, University of Wisconsin-Milwaukee, 14 Nov, 2016.

Lundgren, Lars. “Transnational Broadcasting/Producing Global Media Memories”. Seminar in film and media history, University of Lund, 18 May, 2016.

Lundgren, Lars. “Researching Television’s Socialist Past”. *Unlocking Broadcast Archives from Eastern Europe*, Bucharest, Romania, 12-13 March, 2015.