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New Research on Russian Arctic Natural Gas Development

by Arthur Mason

I. Introduction

It is often repeated that the advent of a money economy has dissolved the bonds of traditional society so that money becomes the real community. But can it not also be stated that in a high-energy economy, our social condition is no longer shaped directly by those we depend upon personally but on energy flows we control directly as individuals in the course of our daily activities so that energy is the real community? The nine decades between 1882-1973 (Edison's electrical systems and OPECS's first oil price rise) delimits a distinct energy era of fundamental innovations and rapid growth. Equivalent power commanded by today's affluent Euro-American household—without the convenience, versatility, flexibility, and reliability of delivered energy services—would have been available “only to Roman latifundia owner of 6000 slaves, or to a nineteenth-century landlord employing 3000 workers and 400 big draft horses” (Smil 2001: 48). Whence does the desire for all our energy production and use come from?

Here, we outline new research that identifies experts who create a desire for arctic energy development. Manufacturing desire for hydrocarbon resource development requires methods for artistically fixing time and space. Crafting promissory statements, demonstrating proximity of remote supply areas or projecting demand through rising trend lines are just a few of the forms that establish an interconnectedness.

Creating these visuals helps to assimilate the future of energy markets with the erratic and complicated development of arctic energy resources. In this manner temporal (the future) and spatial (supply area) indicators are fused into one carefully thought-out concrete whole. Thus, much like art, knowledge of energy planning and development, transforms thought into a sensory

experience, and into a sensible experience. Our work, therefore, explores the possibility of aesthetic programs developed by experts to connect knowledge of arctic energy with stakeholder understandings of their own purposes.

Our research is inspired by the *production of desire* that governs over the commodity chain process of global capitalism (Appadurai 1996, Castells 1996; Harvey 1990). When considering the popularity of the Nike shoe brand, Gereffi and Korzeniewicz (1993) suggest that the demands for assembling sports equipment are quite standard (without risk). Yet, the requirement for creating desire among consumers for purchasing this equipment, including a mature advertising industry, poses the greatest risk and reward. Implicit is the *culture industry* legacy associated with Theodor Adorno and Max Horkheimer, who located consumer needs in popular art and film. We employ the idea as a departure point for carrying out ethnography of energy policy and planning in the Arctic.

We are using exploratory funds from the U.S. National Science Foundation and, at their invitation, developing a long-term research proposal. Our aim over the next two years is to develop a research scaffolding, made up of close connections with industry, government, journalists, consultants, and so on, so that we can detail the kinds of poetic actions of energy forecasters, scenario planners and futurists, whose productions, when taken together, open up forms of visibility for arctic natural gas development. We suggest that expert communities have the consciousness of a *dreamer* and that their creative purposes allow them to fuse artistic representation with a real life characteristic of energy industry. This raises several questions: What are we to make of experts who look into the future of global energy markets and arctic natural gas development? That is, what are we to make of a dreamer who provides knowledge of rational decision-making based upon non-rational thought? In other words, what are we to make of the expert's extreme polemicism?

Preliminary fieldwork began this past summer, in several major cities (Houston, Washington, D.C., London, Paris, Oslo, Moscow, St. Petersburg) where the work of energy forecasters, consultants and market analysts produce ideas about the future to inform the actions of executives and government. These experts combine technical prediction with new modes of communication and are important for the knowledge they generate but also for the forms of socialization and ritual-like learning environments they create. We also visited areas close to the proposed Barents Sea Shtokman

off-shore natural gas field (Murmansk, Arkhangelsk, Teriberka), where we had the opportunity to talk with locals about transforming the town of Teriberka into a modern delivery station for the Shtokman field development. We spent much of the time conducting interviews and attending workshops where executives, consultants and politicians emerge as partners in understanding (Mason, Karamanova and Catalyst n.d.). We do not presume a simple sharing of information, but instead, focus on the continual redefinition of interests among stakeholders and the possibilities for creating new interests along emerging axes of common and conflicting purpose (e.g., Agrawal 2005:161; Lowenhaupt-Tsing 2005:13; Mason n.d.).

Our research is comparative and draws on previous study of Alaska natural gas development, when we discussed how expert communities emerge (Mason 2008a, 2007, 2006, 2005) and also, in a different realm of study on relations between Alaska Native elites and experts, when we examined how such communities continually are strengthened through legal and scientific discourse (Mason 2010a, 2010b, 2008b, 2002). By contrast, in this essay, we register newly gathered perspectives on three communities, whose participants, while located across Western Europe and Russia, gather with some frequency to discuss aspects of Russian arctic gas development (along with other energy trends).

II. Background

Natural gas is critical to energy growth because of emissions, and related to this is market restructuring in natural gas and electricity during the 1990s which started a move in industry to maintain easy to site power generators, as well as a preference for gas turbines (BP 2004; IEA 2004). Government and the private sector are renewing interest in developing circumpolar arctic gas (AMAP 2007). Two hundred gas accumulations have been discovered near and north of the Arctic Circle. Two productive areas, Northern Alaska and Russia's West Siberian Basin are among the largest global hydrocarbon provinces with nearly 20 percent of the world's known oil and gas and the greatest concentration of natural gas (Mason 2004).

Commercial energy development requires decision-making unique to two separate continental supply systems. The first system is the North American gas industry of Canada and the United States whose integrated pipeline network extends to the northern most reaches of the Province of Alberta. Participants of this system are eager to construct pipelines northward to connect with arctic reserves at Canada's

Mackenzie Delta and the North Slope of Alaska. A different system is the pipeline linkages that deliver West Siberian gas to consumers across Russia and Eastern and Western Europe. There, proposals are equally ambitious and include developing arctic gas fields within the Yamal Peninsula, and further to the northwest, the off-shore Shtokman gas field in the Barents Sea (Moe 1994, 1992; Reynolds 2003; Stern 1980).

Both systems have evolved independently but are now experiencing unheard of evolution brought about by changes in their respective regulation and markets. The shift to privatization in the planning of projects is raising concerns about investor confidence, regulatory certainty, political risk and competition from other hydrocarbon fuels and renewable energy sources. The capital expenditures required for development –between \$15 and \$30 billion per project – are immense. The long horizon for obtaining a return on investment suggests that any number of factors, including a retreat from market liberalization or the threat of a gas cartel, could make raising these sums problematic (CERA 1999; Kryukov and Moe 1999, 1996; Mason 2007; Stern 1987, 1998, 1995; Victor et al. 2006).

These complications have drawn our attention to the role of intermediaries (knowledge producers, consultants, promissory organizations) who educate industry leaders about various uncertainties involved in monetizing these resources. Elsewhere (Mason 2006, n.d.), we argue that intermediary firms such as Cambridge Energy and WoodMackenzie are successful in assimilating imagined energy futures into the decision-making process of Alaska natural gas development. Their success depends in part on the specific forms they use to disseminate knowledge, in particular, through scenario plans and executive roundtables (Mason 2007). These forms constitute mature practices for the continuous dissemination of energy predictions. Not only do intermediaries possess the requirement for producing successful expectations but also those to deal with more problematic, contentious or failed ones. Neil Pollock and Robin Williams (2009) (following the insight of Michel Callon 1998) suggest that the usefulness of intermediaries lay in their ability to deal with high levels of uncertainty during periods when innovation or controversy have undermined the normal processes of calculation. As such, intermediaries “help cool hot societies down through producing new kinds of measures to handle uncertainty” (Pollock and Williams 2009:19).

Communities of Practice

The Shtokman natural gas field located in the

Russian Barents Sea is known for its immensity of recoverable resources, enormity of technical and multi-billion dollar requirements for development as well as questionable monetary reward for delivering reserves into a global market. The project falls under various rubrics of policy, including an import into Russia of Western Expertise (UBS 2006), stewardship of environment (Austvik 2007), Russia's reversal of the downward supply trend (Ebel 2009), Norwegian-Russian trans-border cooperation (Gunnarsson and Chattey 2007; Heininen 2007), re-establishing Russia as a significant state actor (Makinen 2010), and so on.

One community in Western Europe and Russia that contributes toward defining the horizon of expectation on Barents gas development is made up of six categories of actors and institutions that collectively produce a self-enclosed "social field" of interpretation about Barents gas development (Bourdieu 1985). While the relationship of individuals to each other is impersonal, the physical presence at meetings, conferences, workshops or among themselves constitutes crucial exchange for consolidating understanding. These categories and their actors include:

- (1) *Industry* (e.g., Shtokman Development AG represented by Gazprom of Russia, Statoil of Norway, Total of France);
- (2) *Government* (e.g., Norwegian and Russian ministries)
- (3) *Academics and Institutes* (e.g., Oxford Energy Institute, Norwegian Institute of International Affairs, Fridtjof Nansen Institute)
- (4) *Journalists* (e.g., Liz Gorst of *Financial Times*, Jacob Pederson of *Wall Street Journal* both in Moscow; Paul Sampson at *Gas Intelligence* in London)
- (5) *International and National Consulting Firms and market analysts* (e.g., Cambridge Energy Research Associates, Wood Mackenzie Global Consultants, Norway's ECON Pöyry, Credit Suisse, Citibank)
- (6) *NGOs and Environmental Groups* (e.g., Bellona, WWF, Murmansk local groups)

The self-enclosed authenticity of this field was asserted in a key note presentation this past June at the PETROSAM workshop in Oslo, when Oxford Energy Institute's Jonathan Stern outlined aspects of European-Russian oil and natural gas research: (1) such studies are increasingly marginalized in academia and researchers are an "endangered species", while the overwhelmingly focus is on renewables and climate change; (2) the competitors and audience for such research are energy companies, market analysts and journalists. Indeed, on this point, one need only review Robert Ebel's (2009) *Geopolitics of Russian Energy* (Center for Strategic and International Studies) to grasp the community's self-referentiality. Ebel establishes his credibility by drawing 40 percent of his research (65



PETROSAM workshop, with Professor Jonathan Stern, Director of Gas Programme, Oxford Energy Institute, England (left), and Arild Moe, Deputy Director, Fridtjof Nansen Institute, Norway (right), addressing during keynote presentations, audience questions and answers.

citations) from three Moscow journalists, Nadia Radova of *Platts*, Anna Shiryayevskaya of *Bloomberg* and Liz Gorst of *Financial Times*; finally, (3) Stern cites a distinction between sound-byte analysis found on the blogosphere and the fallacy of speed of information and response. Media cycles seek out quips and bullet points, requiring from experts that their responses be quickly produced and self-enclosed.

In contrast, the culture of hydrocarbon research favored by Stern develops knowledge from long-term experience, recognizing trends across several decades. He is *deeply influenced* by discussions with colleagues at institutes where, during periods of several hours, debates about fundamentals, speculations and expectations ensue. This community was evident at the PETROSAM (Social Science Petroleum Research) workshop, mentioned above, sponsored by the Research Council of Norway. Morten Anker, an early career economist at ECON Pöyry, a Norwegian consulting firm, gave a presentation stimulating a concentrated debate by Stern (England), Arild Moe of Fridtjof Nansen Institute (Norway) and Valery Kryukov of the Institute of Economics in Novosibirsk (Russia). Over the past four decades, these three researchers have worked together on publications and commentary concerning Russian gas development (e.g., Kryukov and Moe 1999, 1996).

A different community, within Russia, is made up of two contrasting social groups: a rear-guard made up of an older generation of specialists whose structural position as managers of organizations such as Gazprom and the government ministries is based upon accumulated political capital, that is, their built-up personal connections throughout their career, and; a vanguard or alternatively labeled the *Global Russians* (Globalnye Ruskie) - a phrase adopted at the St. Petersburg Economic Forum this past June,



St. Petersburg International Economic Forum, panel on Views on the Future, Russia and the "Global" Russians, with panel members including Oleg Kharkhodin, Rector, European University at St. Petersburg, who received a PhD in Sociology from UC Berkeley.

to identify a younger generation of Russians educated in the West and who are now serving as experts in Moscow either in the capacity as energy analysts, journalists, etc. for western firms (e.g., Citibank), or for newly created government entrepreneurial incubation parks. This vanguard group is further characterized by their reliance upon American economic discourses concerning relationships between capital expenditures, transparent reporting, and returns on investment.

Finally, we identify Norwegian actors as key players in Russian Barents Sea gas development. At present, the Norwegian government, through its Ministry of Trade and Industry sponsors various programs, developed through The Norwegian Research Council, whose target is increasing understanding about Shtokman development through academic exchange and entrepreneurial programs, particularly in Murmansk, Russia.

Conclusion

These communities manage knowledge of Barents Sea gas development by creating standardized forms of discourse on a variety of emerging topics which influence investment in the region, including, but not limited to, the emergence of short-term (spot) markets in Europe, new

technologies in enhanced extraction (hydraulic fracturing) as well as economic discourses concerning capital expenditures. Disseminating knowledge requires ritualistic learning environments, stagings of verification, oral presentations accompanied by images and ripostes. Participants achieve an acute sense of structure about the interconnectedness of Barents Sea gas development to global energy markets, by means of continually refining a language in which unexpressed psychic states can be immediately expressed. We suspect that arctic gas policy and planning are formulated within this network of intermediaries (knowledge producers and promissory organizations) whose purpose is constructing a desire for consuming various types of knowledge-commodities from which meaningful development takes shape. Continuing developments will be available on www.studiopolar.com

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