

THE FLETCHER SCHOOL OF LAW AND DIPLOMACY

DHP 264

Fall 2017

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GEOPOLITICS OF ENERGY IN EURASIA

SYLLABUS

COURSE OBJECTIVES

The purpose of this course is to provide students of national, trans-national and global affairs with a comprehensive view of the role of energy in the contemporary geopolitics of Eurasia. While we may examine the historical background for current events, our political focus will emphasize the evolution of energy security issues in Eurasia from the collapse the Soviet Union in 1991 to the current era. The course has four major goals. First, we need to understand the role energy plays in the formation of the modern Eurasian nation state. This task leads immediately into an examination of energy endowments in the region and elsewhere and how they are extracted and distributed from both national and non-national sites. A third requirement is to know how energy consumption in this region is part of a technological order that is global and under-going constant change. Then, the fourth goal is to recognize how a failure to cope with unstable Eurasian geopolitics may contribute to a systemic collapse of energy production and supply with global consequents impossible to calculate.

Diplomacy 264 is an interdisciplinary course and the resources upon which the dialog in the classroom depends is drawn from many disciplines and languages. The comparative approach that is applied in addressing various problems is consistent with the way the field of diplomacy has evolved during the last thirty years. To let the discussion be dominated by one discipline or a competition between two powers, as was the case during the Cold War, is inconsistent with the way the forces of globalization are shaping current research. Since the population of Eurasia is about 4.6 billion any event that has wide spread impact in Eurasia will have huge importance. How to gauge the significance of security questions concerning energy is a complicated affair given the cultural diversity of this major region of human society. Eurasia contains many states each of which is undergoing rapid political, economic and social development that already has produced a major transnational backlash against modern change.

COURSE SUBJECT MATTER

Since the academic goals of the course are ambitious, it is a good idea to give the student some idea of the events we will address during the twenty-five lectures or more that will take place in the spring semester 2017 for Diplomacy 264. What follows is a list of problems involving the geopolitics of energy in Eurasia that will offer a means of understanding the role of energy in 2017. This of events is not cast in concrete. It is my guess that the impact of contemporary change in US foreign policy for Asia will require more space in this list of contemporary issues.

1. The unequal distribution of oil and gas reserves in Eurasia has major global significance. Here the major players capable of large scale oil production for export are the US, Russia and Saudi Arabia; and if we conduct a global search for the nations with big exploitable surpluses of natural gas, they are the US, Russia and Qatar. It is not hard to conclude that this lopsided distribution of valuable raw materials will be exploited for political reasons as is the case in current Middle Eastern geopolitics.
2. When the Soviet Union collapsed in 1991, this temporarily removed a major oil producer from the international market for oil and gas; and it created 15 new nations that had to deal with new borders and oil pipeline connections based upon the geographical structure of the old Soviet Union. This produced a major on-going conflict in the case of the Ukraine and encouraged Russian efforts to control the flow of oil and gas along the borders of other new energy producers interested in the sale of their products in Europe as in the case of Azerbaijan.
3. The large-scale production of oil and gas in middle Eurasia from the Persian/ Arabian Gulf during the late 1970's went along with the beginning of a Eurasian backlash against hyper modernization. The event which triggered this movement was the Iranian Revolution of 1978; the impact of this event continues to produce a linkage between oil and gas production and violent anti-state actions against modernizing states. This issue is also connected to the external involvement of non-Eurasian powers interested, for a variety of reasons, in bringing an end to internal non-state violence in core energy producing regions. (see US involvement in Greater Middle Eastern warfare)
4. Post-Soviet energy politics in Eastern Europe, the Baltic and the Black Sea mark a major clash of interests between the Russian Federation and new post-Soviet States, NATO and the EU. The failure to resolve differences draws the Great Powers into frontier engagements and produces major political events ranging from the occupation of the Crimea to the expansion of pipeline connections between the Russian Federation and Europe as in the case of the NORD stream pipe line in from Russia to Germany through the Baltic Sea.
5. The ensuing struggle over the reliability of gas supply in Eastern Europe moves away from just a conflict over pipeline capacities and supply consideration to become a conflict between Europe and the Russian Federation on economic diversification in East European spaces. Russia counterattacks EU policies through the construction of new pipelines in the Black Sea. (Blue stream and other proposals fail to connect gas rich Turkmenistan to Azerbaijan)
6. Conflict in the Caucasus over producing oil and gas from the Caspian Sea through a

major pipeline system that would link Azerbaijan and Iraq production to the global market for oil and gas without passing through territories under Russian control. The Baku Ceyhan pipeline becomes a major strategic defeat for Russia that encouraged other proposals in the Eastern Mediterranean region to bring oil and gas to a Turkish pipeline aimed at supplying western Europe with oil and gas. The consequences are related to other instabilities in this region. They are the internal resistance to Russian interests in Chechen territories, the conflict between Azerbaijan and Armenia over Nagorno Karabakh, and the Russian invasion of Georgia in 2009.

7. The US support of Azerbaijan in its conflict of interests with both Iran and Russia over the resources and political future of the flow of oil and gas from Central Eurasia involves Russia, the United States and other Eurasian powers in constant struggle over approximately 70% of the world's proven oil reserves. This is a major regional concern for Diplomacy 264; and therefore, the lectures for this issue will be more wide ranging (Global) in examining the connection between energy and geopolitics. For example, we will look at the Middle Eastern war in Syria as part of a Global struggle over Eurasia's vast energy resources that includes the energy consuming states of China and India.
8. Our starting point for reframing strategic interests in the globalization of Eurasian geopolitics of energy after 1991 is the enormous increase in the demand for oil and gas generated by the rapid modernization of China and India. This happened at the turn of the twenty first century. We will need to discuss the political and energy conditions this generates for supplying about one third of humanity.
9. Since the new global energy demands will be part of much increased involvement of the United States in the geopolitics of international trade, we will expand our analysis to include a global perspective on how Asian energy demand sets up new international diplomatic complexities that make nation to nation resolution of global commerce difficult. Some sense of the importance of this event for the US is captured in Kurt M. Campbell's book "The Pivot Toward Asia".
10. One of the consequences of this event, is the creation of a new global maritime frontier that links sources oil, and gas from the rest of the world to China and India. This revolution in commercial transportation, in turn has expanded the set of global maritime choke points where it is possible for opponents of global development to mount major challenges for access to fossil fuels. We will examine the new security threats in separate lectures for a Eurasian maritime choke points around the entire edge of the Eurasian continent. This will include the forthcoming opening of Arctic sea routes on a year round basis .
11. The last portion of Diplomacy 264 is devoted to current technological changes that are influencing the production and distribution of oil and gas on a grand scale. Among all recent advances in the extraction and marketing of oil and gas, the use of computer technologies to locate and extract oil and gas from complex formations underground and offshore is obvious (horizontal drilling); the revolution in tanker construction and transportation of oil and using new digital technologies fossil fuels is another; and finally,

we will look at Liquefied Natural Gas as another example of revolutionary change in the oil and gas industry. (see the Wire)

12. The concluding lectures examine the negative social and cultural consequences of the accelerated technological change produced by the modern extraction and use of Eurasia's fossil fuels: air and water pollution, global warming and the impact of the inequality of income in states with large oil and gas reserves and small economic diversification.

The above list of topics is just a guide to the basic subject matter for the course. However, the dynamics of energy development in Eurasia, the speed of technical change and the power of unanticipated events will no doubt produce some departure from the path laid out in this syllabus.

READING REQUIREMENTS

Below is a small list of books crucial for a basic understanding of this project. These texts are available in the Fletcher Library and can be purchased at the Tufts University Book Stores. Chapters from these books are listed under various topics in the syllabus. It is not difficult to obtain recent information on energy issues. Usually political acts with an impact on energy supply and distribution are promptly taken up on the internet. Where details of production and technological change are available in short readable form consult U.S. Energy Information Administration (eia) Country Analysis Briefs for producing nations (for example, Algeria). All other articles and book chapters are on Trunk at trunk.at.tufts.edu.

COURSE EVALUATION

At mid-term we will have a three page take home paper on a policy topic related to the general interests of class in the energy geo-politics of Eurasia. At the end of the course there will a scenario structured final examination that will sum up an understanding of the major challenges to the stability of Eurasia's energy environment.

LECTURES

In view of the ambitious scope of this course, I will depend upon an interactive mixture of lectures, class discussions and media presentations to cover many complex issues. Students are encouraged to establish study groups early in the course and to draw up maps, short chronologies and a vocabulary of geographical, ethnic and industrial terms to keep the spaces and cast of characters straight for a period of accelerated institutional change in Eurasia.

1. FORMAT

The course will be lectures mixed with class room discussion of major shifts in the geopolitics of Eurasian energy development. Students are not allowed to be bored by a seemingly endless display of pipeline maps.

2. KEY READINGS FOR THE COURSE AND CAPSTONE PROJECTS

The major texts for this course will help students interested in completing field requirements or capstone projects on the issues raised in the course lectures. They are listed below. These books are on Reserve in Edward Ginn Library; articles and other sources of information are posted to our electronic blackboard. Texts on Eurasian history, politics and culture are rarely best sellers and I do not encourage students to purchase the detailed studies of specific issues unless there is a special interest in mind.

The best overall text on oil and gas industry is Daniel Yergin, *The Quest: Energy Security and the Remaking of the Modern World*, (New York, The Penguin Press, 2011) ISBN 978-1-594420-283-4 ; Parag Khanna, *Connectography: Mapping The Future of Global Civilization* (New York, Random House, 2016) provides an innovative global framework for the analysis of energy geopolitics; for Security Studies students and pipeline lovers, ISBN 9780812988550; Jan H. Kalicki and David L. Goldwyn, eds. *Energy and Security: Strategies for a World in Transition* (Washington DC: Johns Hopkins University Press, 2nd edition, 2013) ISBN 978-1-4214-1186-6 is inclusive; understanding the cultural backlash associated with the modern impact of the oil industry, see, Mark Juergensmeyer, *Terror in the Mind of God* (Berkeley, California, University of California Press, 2003) ISBN 978-0-520-24011-7; Michael Mann, *Power in the 21st Century: Conversations with John A. Hall* (Malden, MA, 2011) summaries the complex relations between the nation state and society in the modern era of global industrialization; Kelly Sims Gallagher, *The Globalization of Clean Energy Technology: Lessons from China* (Cambridge, Massachusetts, MIT Press, 2014) ISBN 978-0-262-02698-7 is crucial for understanding the relation between the rapid industrialization of China and the ability of the state to absorb and use modern technology; for American geopolitical interests in the Chinese and Indian experiences with accelerated modern technology see, Kurt M. Campbell, *The Pivot* (New York, Hachette Book Group, 2016) ISBN 978-1-4555-6895-6; Angela E. Stent, *The Limits of Partnership* (Princeton, Princeton University Press, 2014) ISBN 978-0-691-15297-4 deals with the impact of the end of the Soviet Union on great power relations related to the security situation in energy rich Eurasia; for maritime issues connected to the explosive growth of Asian consumption of oil and gas, see, J. Mohan Malik. *Maritime Security in the Indo-Pacific: Perspectives from China, India and the United States* (London, Rowman & Littlefield, 2014) ISBN 978-1-4422-3532-8; and for the South China Sea struggle for power, see, Bill Hayton, *The South China Sea* (London, Yale University Press, 2014) ISBN 978-0-300-18683-3; for forthcoming technological revolutions in general see the McKinsey Global Institute's point of view in Richard Dobbs, James Manyika, and Jonathan Woetzel, *No Ordinary Disruption* (New York, Public Affairs Press, 2015) ISBN 978-1-61039-579-3.

If you have difficulty getting at the readings listed for each of the lectures, please see me. My office hours are Tuesday and Thursday from 10-12 in Cabot 603. Should these hours not work out for you, call my assistant Ms. Sheri Callender 617 627 2003 and make an appointment.

SLLYBUS FOR DIPLOMACY 264

PART 1

INTRODUCTION TO THE GEOPOLITICS OF ENERGY INSECURITY

1. September 6. Where is Eurasia, why is Southwest Asia such an important part of modern energy geopolitics and why is the current energy situation so unstable?

On the big connection between military affairs and energy demands, see, www.vaclavsmil.com/wp-content/uploads/dos/smil-artical-2004-war-and-energy.pdf ; Yergin, The Quest, pp. 1-34; Khanna, Connectography, pp.1-34; Juergensmeyer, Terror in the Mind of God, pp. xi-15.

2. September 8. From Great Game to Globalization; the changing geography of energy security and the complex geopolitics of threats to the supply systems for Eurasia and the World, see

Nikolas K. Gvosdev and Christopher Marsh, Russian Foreign Policy (Los Angeles, Sage Publications, 2014), pp. 27-65; Kaliki and Goldwyn, Energy and Security, pp. 69-87; and ec.europa.eu/priorities/energy-union/docs/energyunion-en.pdf. (A Framework strategy for a Resilient Energy Union with a Forward-looking Climate Change Policy); and for the importance of choke point security, see <https://www.eia.gov/todayinenergy/detail.php?id=18991>.

PART II

THE ARCTIC, BALTIC SEA AND EASTERN EUROPE: REGIONAL SECURITY PROBLEMS AFTER THE COLLAPSE OF THE SOVIET UNION 1991

September 13. The Collapse of the USSR in 1991 and New State Instabilities in Eurasia.

Peri Pamir addresses this problem in “Nationalism, Ethnicity and Democracy: Contemporary Manifestations”. This argument is available at WWW.gmu.edu/programs/icar/ijps/vol2-2/pamir.htm. For a recasting of the competition between Russia, Eastern European States and the United States see, Angel E. Stent, The Limits of Partnership (Princeton, New Jersey, Princeton University Press, 2014), pp. 1-48; and The Energy Research Institute of the Russian Academy Sciences, Global and Russian Energy Outlook up to 2040 available at www.erivas.ru/files/2014/forecast_2040_en.pdf, pp 88-94. Gvosdev and Marsh, Russian Foreign Policy, pp.276-279; for Exxon, Russian, US relations on oil production, see <http://www.cnbc.com/2016/12/13/exxon-mobil-could-tap-huge-artic-assets-if-us-russian-relations-thaw.html>.

September 15. Defrosting the top of the World: the struggle for the production and transportation of oil and gas from Atlantic to Pacific Oceans via the North Sea and the

Arctic.

Scott Borgeson; www.crystolenergy.com/assessing/-future-north-sea-oil-gas/
<https://www.foreignaffairs.com/arctic-antarctic/2008-03-02/artic-meltdown>. And Kaliicki and Goldwyn, eds. Energy and Security, pp. 205-220: the chapter by Charles Emmerson, “The Arctic: Promise or Peril? To see evidence of the negative consequences of oil and gas production. see, WWW.greenpeace.org/international/en/campaigns/climate-change/artic-impacts/The-dangers-of-Arctic-oil/Black-ice--Russian-oil-spill-disaster/. The opening of the Arctic (a strategic Turning Point) is in <https://www.nytimes.com/2017/08/25/world/europe/russia-tanker-christophe-de-margerie.html>.

September 20. Russia and NATO: the unstable Geopolitics of Gas Pipelines in Eastern Europe

Andrew Wilson, Ukraine Crisis (New Haven, Yale University Press, 2014), pp. 1-37, 99-143; Keith C. Smith, Russian Energy Politics in the Baltics, Poland, and Ukraine (Washington DC, Center for Strategic and International Studies, 2004), pp iv-76; and for Latvia, Lithuania and Estonia, see Till Jasper file: `///c:/users/Dell Desktop/Downloads/Till%20Jaspwe%20Weyers%20(1).pdf`. For Finland see <http://www.newsweek.com/trump-dodges-question-russi-security-threat-656199>.

September 22. On Out-Flanking NATO: Russian Energy Counter Strokes: The North Stream, The Baltic Sea Solution (the Blue Stream) and The South Steam discussions.

Marshall I. Goldman, Petrostate: Putin, Power and the New Russia (London, Oxford University Press, 2008), pp. 93-209; and http://en.wikipedia.org/wiki/Nord_Stream. For the failure of the shale movement in Poland, see <https://www.theguardian.com/environment/2015/jan/12/polands-shale-gas-revolution-evaporates-in-face-of-environmental-protests>.

September 27. The new energy geopolitics of the Black Sea: From Blue Stream to South Stream to rusting pipes.

Shireen Hunter, Strategic Development in Eurasia after 11 September (New York, Routledge, 2004), pp. 55-75. http://en.Wikipedia.org/wiki/Blue_Stream. Why Russia Cancelled (?) South Stream is in http://en.Wikipedia.org/wiki/South_Stream.

September 29 October Imperial boundaries revived: Russian Invasion of Crimea 2008.

WWW.USNEWS.Com/opinion/blogs/world-report/2015/04/17/Ukraine-crisis-is-a-geopolitical-game-changer-that-weakened-Russia. The counter argument to the game

changer article is available in www.nato.int/docu/Review/2015/Russia/2015/Russia/sanctions-after-crimea-have-they-worked/EN/index.htm. A historical analysis of the strategic importance of the Crimean Peninsula by a Russian scholar is in <https://www.csis.org/analysis/geostrategic-importance-blacksea-region-brief-history>

PART III

THE GEOPOLITICS OF ENERGY INSECURITY IN THE HISTORICAL CORE OF EURASIA: “THE CASPIAN DERBY”.

October 4. Political instability in a crucial sub-region of Central Eurasia: the security importance of the “Strategic Ellipse”. Note there are various sizes for the Strategic Ellipse. I go for the largest: it places the entire Arctic in the northern portion of the Strategic Ellipse. This puts most of the Siberian oil and gas fields now in operation, the major oil and gas deposits on top of the oil and gas reserves of the “Greater Middle East”, the Red Sea and Persian Gulf and the coast of East Africa as far south as Madagascar. This geography also includes the following maritime choke points: the Suez Canal, the Bab al Mandab at the bottom of the Red Sea, the Mozambique Strait, the port of Basra in Iraq, and the Strait of Hormuz at the end of Arab/Persian Gulf.

For some examples of political insecurity in this, see, Yergin, *The Quest*, pp. 43-63; and for what happens to a small state when the Great Powers are unable to resolve threats to their energy interests read the material on the tragic role of the Chechen uprising in, Carnegieendowment.org/2004/10/28/Chechnya-what-can-be-done/bbm Jan H.Kalicki and David L. Goldwyn, *Energy and Security*, pp. 187-204; http://en.wikipedia.org/wiki/Baku%E2%80%93Tbilisi%E2%80%93Ceyhan_pipeline.

October 6. Oil America on the Warpath: Western International Oil Companies in the Caspian Sea; Tengiz, Kashagan and Baku Ceyhan pipeline.

Steven Levine, *The Oil and the Glory: Chevron in Fortune on the Caspian Sea* (New York, Random House, 2007), all. On Kazakhstan’s Global role see, www.cccurasiancouncilforeignaffaires.eu/wp-content/uploads/2014/02/ECFA-paper-no-1-energy-security-FINAL-pdf. Accessed on 8/18/2016

October 11. Georgia, Russia, Iran and the neo-imperial “colonization” of Georgia’s northern and eastern frontiers takes place. Is the Caspian Sea now a Russian lake?

Stent, *Limits of Partnership*, pp. 135-210; Herman Pirchner. Jr., *Reviving Greater Russia? The Future of Russia’s Borders with Belarus, Georgia, Kazakhstan, Moldova and Ukraine* (New York, University Press of America, 2004), pp.1-64. Let us not forget Iran! <https://www.washingtonreport.me/1996-november-december/oil-and-gas-in-the-caspian-sea-region.html>.

October 13. How the globalization of oil technology and modern financial networks destabilized the energy politics of Kazakhstan's oil and gas production after 1991. See Maximilian Curtis's article at <http://en.foreignaffairsreview.co.uk/2013/02/kazakhstan-geopolitics>. For Kazakhstan's difficulties with modern oil technology see Catherine Putz at <http://www.the-diplomat.com/201604/will-kashagan-be-pumping-by-the-fall/> For Turkmenistan's geopolitics of gas and the question of whether the Caspian is a sea or a lake see Martha Brill Olcott "Turkmenistan: Real Energy Giant or Eternal Potential?" <http://www.carnegieendowment.org/files/FullTextOlcott.pdf>.

Part IV

Eurasian Backlash Against Modernity, Entanglement of Great Powers in "The Greater Middle Eastern War" and the Explosive Asian Demand for Energy (1979-2016)

October 18. We will consider the Iranian Revolution of 1978-79 a turning point in Eurasian security considerations dealing with energy. Warfare with in the Strategic Ellipse now involves global powers and powerful new technologies. The institutional impact of war and accelerated social and cultural changes creates a religious backlash to modernity; warfare destabilizes regional politics and threatens the production of oil and gas; and this violence is spreads throughout the Greater Middle East at time when China and India are launching major state directed industrial development projects that demand vast supplies of energy imports. We argue the sum of these changes constitutes a new "turning point" in the history of Eurasia's experience with modern forces.

For a discussion of the various usage of the term turning point see Niall Ferguson comments in www.nytimes.com/2012/11/30/opinion/global/niall-ferguson-turning-points.html. For the military involvement of great and small powers, see, Andrew J. Bacevich, America's War for the Greater Middle East, (New York, Random House, 2016), pp. 201-294. Khanna, Connectography, pp., xv-60 and Mark Juergensmeyer, Terror in the Mind of God (Berkeley, University of California Press, 2003), pp xi-15, 61-84 covers other institutional developments considered to be a major part of the Globalization process. .

October 20. For Iran's complicated response to Globalization and energy security see Suzanne Maloney, Iran's Political Economy Since the Revolution (New York, Cambridge University Press, 2015), pp. 368-427; for a discussion of how the Blowback effect of rapid Globalization produces sectarian divisions in the Gulf region, see Banafsheh Keynoush, Saudi Arabia and Iran, Friends or Foes? (New York, Palgrave Macmillan, 2016), pp. 175-238; and consult Hamad H. Albloshi, The Eternal Revolution: Hardliners

and *Conservatives in Iran* (New York, IB TAURIS, 2016), pp. 135-141. Steven Simon's *Russia and the Middle East: The View from Washington* deals with how Russia might exploit the political and economic instability in the Gulf Arena is at <http://carnegieendowment.org/2016/04/05/russia-and-middle-east-view-from-washington/iwnl>.

October 25. Two Oxford Institute papers deal with India and Chinese demands for fuel: Sen, A. and Sen, A. (2016). "India Oil Demand: On the Verge of "Take-Off"? Oxford Energy Paper, Oxford Institute for Energy Studies, March. Available at <http://www.oxfordenergy.org/2016/03/on-the-verge-of-take-off/>. And Meidan, Midhal. (2016). "The structure of China's oil industry. Oxford Energy Paper, Oxford Institute for Energy Studies, May. Available at <http://www.oxfordenergy.org/2016/05/past-trends-and-future-prospects/>. The Central Eurasian response to the eastern demand for gas is the construction and operation of the Central Asia-China gas pipeline. It was commissioned in 2009. See, https://wikipedia.org/wiki/Central_Asia%E2%80%93China_gas_pipeline.

PART V

THE GLOBALIZATION OF THE MODERN INDO/PACIFIC MARITIME FRONTIER AND ITS ROLE IN THE DEFINITION OF ENERGY SECURITY PROBLEMS

October 27. What is the character of the statecraft necessary for meeting the security concerns for a major shift in production and consuming of oil and gas from the Center of Eurasia to the East? Gvosdev and Marsh, *Russian Foreign Policy*, pp. 293-363; Conversation between Kurt Campbell and Brian Andrews on the "Pivot" to Asia" in <https://www.Chathamhouse.org/sites/fileschathamhouse/publi/Research/Americas/08133pp-pivottoasia.pdf>.

November 1. The Pivot toward Asia and on how the scale and scope of the new Eurasian security map for the supply and demand for oil and gas to Asia starts, see Richard Giragosian for energy security in East Asia at <http://www.iags.org/n0813042.htm>. Geoffrey Kemp, *The East Moves West* (Washington DC, The Brookings Institution Press, 2010), pp.3-102; for the Mediterranean expansion of the energy connectivity along Eurasia's shorelines see <http://www.gmfus.org/publications/gas-discoveries-eastern-mediterranean-implications-european-union>. <http://www.globalsecurity.org/military/world/egypt/suez-canal.htm> addresses the strategic importance of the Suez Canal.

November 3. The Indian Ocean becomes the Geographic Center of the Global Oil Market

and the emergence of large scale piracy marks its arrival. John Garofano and Andrea J. Dew, eds., Deep Currents and Rising Tides, The Indian Ocean and International Security (Washington, D.C., Georgetown University Press, 2013), pp. 1-48; for security issues concerning the protection of sea lines of communication for tankers moving oil to the eastern Pacific coast of China see Bonnie S. Glaser at www.cf.org/asia-and-pacific/armed-clash-south-china-sea/p27883

November 8. For Northeast Asia security considerations from see the Australian Strategic Policy discussion at <https://www.aspi.org.au/-data/assets/pdf-file/0012/15321/131022-NE-Asia-Defense-and-Security-Forum-Report.pdf>

November 10. As global supply of oil and gas dramatically increases through, around or over choke points some scholars argue that the need to protect connected networks that supply energy will surpass the importance of defending the sovereign territorial interests of national allies. See Parag Khanna, Connectography, pp. 137-323.

MODERN ENERGY SECURITY FOR EURASIA IN AN ERA OF PART VI

ACCELERATED TECHNOLOGICAL CHANGE

November 22 Security challenges in the first quarter of the twenty first century will be broader, more diverse, and significantly more difficult to predict. Therefor the scope and speed of policy making will also accelerate at rates not comparable with previous era. Finally, the frameworks for forming successful actions will be multiple: local, regional and global. Examples of how this new complexity will require new frameworks of analysis are those that grapple with the uneven distribution of oil and natural gas reserves, new environmental tensions such as global warming, powerful nuclear technologies, revolutionary expansion of the means to extract, move and manipulate energy and unexpected technological events.

For an introduction to global security problems associated with accelerated technological change see Yergin, The Quest, pp. 523-717.

November 29. The Gas Revolution. the global spread of fracking technology began to weaken the ability of Russia to control the price of gas in Eurasia. See http://russia-insider.com/en/opinion/2014/12/02/07-43-21pm/russia-demonized-suspected-financing_anti-fracking-protests. And the arrival of global Liquefied Natural Gas

Commerce created new operational and business environments for energy importers and exporter in Eurasia? Kaliki and Goldwin, Energy and Security, pp. 88-106.

December 1 Given the size, scale and speed with which the producing and consuming states of Eurasia are transforming in a negative manner the physical environment in Eurasia and the World, the oil industry is now endangering social existence. See Luca Anceschi and Jonathan Symons, Energy Security in the Era of Climate Change (New York, Palgrave Macmillan, 2012), pp. 1-29; Kalicki and Goldwyn, Energy and Security, pp. 499-514, for what might be done to address this fundamental issue.

December 6. To be optimistic about the diplomatic resolution of the energy and security issues will require a new management on a global level of power in human affairs. See Michael Mann, Power in the 21st Century: Conversations with John A. Hall (Malden, MA, 2011), pp. 1-176; meanwhile the spread of radical modern energy technology that now links the Great Powers: Kelley Sims Gallagher, The Globalization of Clean Energy Technology: Lessons from China (Cambridge, Mass., MIT Press, 2014); and for revolutionary management techniques, see and Richard Dobbs, James Manyika, and Jonathan Woetzel, No Ordinary Disruption (New York, Public Affairs, 2015), pp. 181-207.

December 8. Greater Middle Eastern War Goes Global. Andrew J. Bacevich's history of America's war for the "Greater Middle East" is taking place in the heartland of Eurasia's great period of hyper globalization. The energy resources for this event were largely drawn from within the spaces we have examined in this course. But by 2017 the supply of fuels for the modernization of Eurasia is global and the violent consequences of the forces associated with hyper-globalization are also global. If the result of recent elections is suggestive of the difficulties brought on by "deglobalisation", it is a good idea to understand the forces that are at work now. The hope is to avoid an even more destructive period of change than in the past. See, the optimistic report of Barclays Investment Bank on the risks of "deglobalisation": <https://www.investmentbank.barclays.com/our-insights/the-end-of-globalization-as-we-know-it.html?cid=ppc-sc08e00v11m08uspa00pv00&trid=43700022671715573>.