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Preface:
From the Leadership Team

Dear Readers,

On behalf of the Stanford U.S.-Russia Forum, we would like to welcome you to our program’s eleventh year. The Stanford U.S.-Russia Forum’s (SURF) core mission is to develop the next generation of future leaders in U.S.-Russia engagement through substantive discussion, research, and collaboration while generating innovative research and solutions to issues of mutual importance for both countries. More than 400 students from over 85 universities have participated since SURF’s 2008 inception.

Each year the program brings 30 students from both countries together to attend a weeklong conference in Russia in the fall, conduct research with their working group peers over the academic year, and ultimately present their work at a capstone conference in Washington DC and at Stanford University in the spring. The majority of the participants are graduate students, bringing maturity and experience to the research teams. Started as a student initiative, SURF also emphasizes leadership experience and gives Stanford-based student leaders a role in organizing elements of the program.

SURF’s mission has a strong theoretical foundation in the idea of track two diplomacy, the unofficial, informal interaction between members of adversary groups or nations that aims to develop strategies, influence public opinion, and organize human and material resources in ways that might help improve relations and resolve conflict. The young leaders who comprise the SURF
delegation are actively helping to break down traditional boundaries, through research collaboration and by enacting policy change. Now more than ever, the geopolitical situation between the U.S. and Russia necessitates such bilateral dialogue in order to encourage cooperation on international issues that both nations face.

Thank you for your interest in our efforts,

Leadership Team, Stanford U.S.-Russia Forum

Melissa Samarin

Irina Gavrilova

Kyle Duchynski

Pavel Kuznetsov

Ravi Patel

Nelson Zhao

Pavel Yakushev
Dear Readers,

It is with great pleasure that I present the 2019 edition of the Stanford US-Russia Forum’s annual publication. In this year’s issue, our delegation analysed a wide variety of relevant topics, presenting novel and tangible approaches to some of the most salient concerns our countries face today. Each paper makes a unique contribution to its respective discipline – whether through market projections or statistical models, historic perspectives or contemporary analysis, policy recommendations or proposed guidelines. Each research project is a product of extensive collaboration and communication, a guiding principle for our organization’s work as a whole. Though we never set a theme for our journal or research agenda, this year’s paper topics naturally settled around two related ideas: that of shifting changes and pioneering solutions in our bilateral relations.

The current relationship between the US and Russia has recently been defined by significant and often drastic changes, which many of our teams closely examined. The Energy Geopolitics team analyzed the diversification of energy markets through liquefied natural gas, which is a frontier in geopolitics and potential game-changer for energy exports. The Conflict Resolution team identified the role of media framing, by quantifying and testing how changing the language of a news report may impact actual outcomes of ongoing conflicts. The Climate and Environment group examined illegal timber harvests in the Far East of Russia, calling for systemic change in forest sourcing and timber identification for both retailers and consumers. The Arms Control and International Security team looked closely at the changing dynamics of the nuclear arms control regime with the US withdrawal from the INF treaty, identifying the motivations for doing so and offering several viable options for moving forward. As the future of Afghanistan is under review, the Counterterrorism team examined this conflict as a ‘low hanging fruit’ for collaboration, at a time when other proxy conflicts remain intractable, in combating instability in the country, which is of mutual interest for both the US and Russia.

Several teams also explored issue areas inherently pioneering in nature. The Business Opportunities in Healthcare group examined the biotechnology field, identifying this burgeoning industry as one ripe for collaboration between the US and Russia. Although cybersecurity remains a contentious bilateral issue, the International Law team took a positive look at this issue by systematically examining existing international law structures and offering recommendations for how best to adjudicate cybersecurity cases in the future. The Culture and Creative Spaces team, a pioneering team at its core, took bold strides in examining music, particularly hip hop, as a cultural bridge and channel of dialogue; their project reminds us of the deep importance that culture and the arts play in mutual understanding. The Entrepreneurship team analysed business practices in both countries, assessing the important role of university incubators in fostering innovation and pioneering creative business and start-up ideas. The Science and Technology team investigated how science communication can push the boundaries of scientific development and revive a drive toward common space missions and exploration by both NASA and Roscosmos.

In addition to our brilliant delegates, the leadership team channels an immeasurable amount of hard work every year to ensure this forum continues to flourish. Thanks to the team’s collective efforts, the Stanford US-Russia Forum continues to be a thriving community of dedicated professionals and academics, emboldened and encouraged by our unifying mission of dialogue and cross-cultural exchange. In particular, I would like to thank Irina Gavrilova, for her dedicated and thorough review of these papers at every step of the research process; her thoughtful comments and fresh perspective were invaluable in helping shape these papers and bringing this journal to fruition. I would also like to thank each participant from this year’s delegation for engaging in this rigorous research process and being unafraid to pursue such complex and creative research topics.

Whether read as a whole or individually, these papers highlight the importance of person-to-person dialogue in fostering innovative ideas. It also offers a scope of issue areas and venues for future cooperation between the US and Russia. With its high-quality research, bold questions, and innovative solutions, this publication represents the wide-ranging talents of our delegates, both current and past. The ideas gathered here capture the voices of leaders who will be, and already are, shepherding the future of US-Russia relations. Nurtured in the spirit of collaboration and mutual understanding, they stand as tangible reminders that bilateral relations and productive dialogue must be prioritized.

Melissa Samarin
Director of Research
The Intermediate-Range Nuclear Forces Treaty: Motivations Driving American and Russian Decisions

I. Arms Control and International Security Working Group
Anoushka Bose, Tucker Boyce, Platon Karpov, and Dmitrii Nilov

Abstract

The United States and Russian Federation have negotiated, signed, and cancelled a number of arms control treaties since the end of the Cold War. Arms control and international security continue to be a dynamic, high-stakes component of the relationship between Washington and Moscow. This research focuses on the Intermediate-Range Nuclear Forces (INF) Treaty, including the U.S. commitment to formally withdraw from INF in the next six months. This research explores the motivations driving American and Russian decisions as they relate to the treaty. Through a review of the literature and interviews with subject matter experts from think tanks, government, and NGOs, this research analyzes the motivations and discusses how these motivations may apply to future U.S.-Russia arms control discussions. This includes discussions over the New START Treaty and the multilateral implications of INF withdrawal.

INTRODUCTION

As Russia and the United States continue to develop advanced nuclear weapons systems and modernize their stockpiles, it is imperative there be continued negotiations and eventual cooperation on arms control between Washington and Moscow. The New Strategic Arms Reduction Treaty (New START) that entered into force in 2011 was a positive step towards mutual arms reductions between Russia and the U.S. that complimented another significant treaty - Intermediate-Range Nuclear Forces Treaty (INF). However, the recent U.S. decision to withdraw from INF and the continued tensions in the broader U.S.-Russia relationship are expected to have negative impacts on the progress of bilateral arms control.

During the Cold War, Russian and American policymakers adopted a strategy of nuclear deterrence as a means of establishing national security. Under this strategy, it was thought that being capable of inflicting devastating nuclear retaliation in response to a potential strike would in turn prevent such an attack in the first place. The Cold War postures caused a number of potential full-scale wars, particularly during the Cuban Missile Crisis in 1962. Both nations competitively developed weapons for a number of years.

Fortunately, the potential consequences of a nuclear war eventually convinced both sides to begin negotiations.

As the relationship was improving, both countries began to negotiate on nuclear weapons-related issues. These negotiations resulted in a number of treaties, including the Anti-Ballistic Missile Treaty (ABM), which limited Ballistic Missile Defence (BMD) systems. President George W. Bush withdrew from ABM in 2001, despite Russian views that this was a mistake for bilateral nuclear negotiations.

One of the prevailing modes of thought surrounding bilateral arms control treaties is the notion of strategic stability. Although the concept is debated in the academic literature, a broad definition of strategic stability is that it “usually refers to a state of affairs in which countries are confident that their adversaries would not be able to undermine their nuclear deterrent capability.”

The INF Treaty entered into force in 1987 and banned ground-launch nuclear missiles with ranges from 500 km to 5,500 km. Signed by Ronald Reagan and Mikhail Gorbachev, it led to nearly 2,700 short- and medium-range missiles being eliminated, and an end to a dangerous standoff between U.S. Pershing and cruise missiles and Soviet SS-20 missiles in Europe. INF has been a crucial cornerstone of strategic sta-
bility between Russia and the U.S., so the withdrawal of the US from it is likely to cause new challenges in bilateral arms control. Although the risk of nuclear use has been continuously alleviated, tit-for-tat actions from both sides in regards to regional and global politics have exacerbated the inability for the countries to negotiate moving forward.

Ultimately, INF can be regarded as a core base for US-Russia arms control, the current state of which is challenged by the withdrawal announcement. With that in mind, this paper will examine the likely motivations of the US to withdraw from INF and Russia’s incentives to preserve the treaty.

METHODOLOGY

Our research draws upon both primary and secondary sources in the literature, including academic journals, books, articles, and official political documents in both Russian and English. We also conducted a series of in-depth, expert interviews to better understand the contemporary views of the nuclear arms control community. These interviews were a combination of off- and on-the-record conversations that either informed our research approach or are directly quoted in the text. We aim to answer the question of what the motivations of the U.S. and Russia are as they related to the Intermediate-Range Nuclear Forces Treaty, and how these motivations may apply to future U.S.-Russia arms control discussions. As is explained below, motivations are informed by the official statements from both countries, but we also analyze the underlying ideological factors that may have influenced those decisions.

For the scope of this paper, we assume that the United States will follow through on their announcement to withdraw from the Intermediate-Range Nuclear Forces Treaty (INF Treaty). We assume that the New START Treaty remains in place, even if it is on tenuous terms. Though New START is up for renewal, we make no assumptions on its actual renewal in this research. This research also assumes that no new agreements are proposed or negotiated within the next six months.

OVERVIEW OF MOTIVATIONS

This paper outlines the core motivations behind the U.S. announcement to leave the INF Treaty and the reasons the Russian Federation has publicly signaled a willingness to preserve the treaty. In both cases, there are a range of motivations. Some are articulated as public documents, while others are more based on ideology. While the publicly announced motivations are important because they articulate national decision-making by high-level representatives, this research seeks to analyze the ideological foundation of these announcements as well. This is particularly important in the American case, where the Trump Administration has taken a markedly different approach to international security issues across the board.

For both Russia and the United States, our research finds that there are numerous ideological, political, and other factors that influence surface-level motivations. On the U.S. side, for example, it is unlikely the decision of the American announcement of treaty withdrawal is purely related to Russian alleged violations and Chinese development of mid-range weapons systems. There is also likely an ideological component advocated by the President and his advisors, including National Security Advisor John Bolton, that influences this direct decision. Analyzing how that decision was made and the ideological reasons behind it is useful, because it sheds light on the current framework through which administration officials view the issue. This framework can then be applied, in some instances, to additional nuclear arms control treaty, particularly New START.

For Russia, the willingness to negotiate is not only about the virtue and preservation of an important nuclear pact. It is also possible that the Russian position and response to the potential end of INF is related to a concern that it would weaken Moscow’s nuclear strategy goals. The common thread between the openness to negotiate and the stated fears (NATO and European weapons deployments) is that there is a fear of an arms race or collapse of other treaties if INF is no longer regulating intermediate-range systems.

SCOPE AND WEAKNESSES OF CURRENT RESEARCH

The weaknesses of this research approach (focusing on motivations) mainly stem from the politicized and dynamic nature of the topic. There are ongoing discussions about how and when the U.S. will withdraw from the INF Treaty. However, focusing on motivations is useful because they can be applied to additional nuclear arms control topics, regardless of the final resolution of the INF Treaty. The research scope is limited to the INF Treaty and associated motivations. Other aspects of U.S.-Russia nuclear relations, including nuclear security, emerging missile development (hypersonic, etc.), and missile defense are not discussed.

BENEFITS OF THREATENING TO LEAVE

Though this paper examines the motivations behind the American withdrawal from the INF treaty, it is unclear how committed the United States truly is to ultimately leaving the agreement. Given the prolonged nature of the formal announcement and now the six-month withdrawal period, we believe it is important to examine what the benefits of a threat to leave may be rather than a strict commitment to withdrawal. The Obama administration had made similar allegations of Russian violation with regards to the 9M729 missile, but were unable to gain any ground in bringing the Russian technology back into perceived compliance. Given the established tactic of the Trump administration to threaten to leave major agreements such as NAFTA, this new bargaining tactic may just be a new dimension of this executive branch’s approach to bilateral and multilateral agreements. With regards to Russia, the threat to leave INF may be a
more subdued form of deterrence. By threatening to leave over even an alleged violation, the U.S. could be attempting to prevent Russia from continuing along the path of developing traditional high-tech weapons. If the threat to leave INF can urge Russia to take pause before continuing to build, perhaps that is sufficient deterrence in and of itself. Additionally, highlighting the alleged violation so publicly could prevent Russia from even coming close to violating the treaty through more substantive acts. An arms control expert at MGIMO, during a personal interview with our group, conveyed the sentiment that arms control can often be thought of as a cheap means of deterrence. A full and comprehensive worst-case deterrent is normally quite expensive, but arms control treaties can ensure both a sound deterrent alongside a limited budget for each country. Given that the INF is one of the principal agreements between both countries, it serves as active deterrence — perhaps largely in the favor of Russia given the strangling of the economy as a result of the recent and comprehensive sanctions. Having a cap on the funds needed to keep pace with the United States is a valuable benefit of the INF and threatening to leave may allow the U.S. to negotiate a more favorable treaty or bring about greater concessions.

Domestically, threatening to leave the INF has brought about a lot of response from experts and politicians alike. By “coming down hard” on Russia, President Trump may have given himself some political leeway with politicians who claim he is a Russia sympathizer. Additionally, by creating another groundbreaking headline, the Trump administration has managed to create another fire that may distract from the real and substantive actions they are taking on other issues. This smoke and mirrors trick is one that has been hypothesized by experts to be used to take potentially controversial steps under the radar. For example, the first immigration ban put out by the Trump administration was largely unconstitutional, but with the great outrage it incited, it cleared the way for a more constitutional but largely still aggressive immigration ban six months later. This political method is one that seems to be used frequently by the administration whether it takes the form of singularly inflammatory tweets covering up the real political decisions at hand or more blatant executive orders. With respect to the INF treaty, this could distract from some of the criticism President Trump has received due to a lack of traction made on North Korean denuclearization since June 2018.

The last benefit of the threat versus actually leaving comes in maintaining discipline among United States allies in the European Union. Over the past two years, an increasing number of American allies have been willing to break with the executive administration by either issuing public condemnations of U.S. actions or by fostering new trade deals and economic connections with countries like Russia. The increasing reliance on Russian oil and gas among allies like Germany has caused the United States to worry about new alliances being formed and the threat to leave INF or an eventual withdrawal would only push European allies to lean on the United States nuclear arsenal even more. As mentioned by Foreign Minister Sergey Lavrov in his statement to the Russian media, NATO took several weeks to come out in support of the US decision to leave the INF treaty. Though German chancellor Angela Merkel (among many others) had cautioned against INF withdrawal, NATO eventually did support the US and published a public condemnation of Russia’s actions and claimed that it was “now up to Russia to preserve the INF Treaty.” The public statement was quite strong and claimed that, “allies strongly supported the finding of the United States that Russia is in material breach of its obligations under the INF Treaty and called upon Russia to urgently return to full and verifiable compliance.” In fact, the statement even went so far as to say that Russia will bear sole responsibility for the end of the Treaty should the full withdrawal fully take place over the next six months. Despite some European officials’ opposition to such a claim just weeks before, the statement demonstrated the desire to show a united front and perhaps the increased discipline exerted by the United States on its allies.

U.S. MOTIVATIONS: ANNOUNCING TREATY WITHDRAWAL

This section describes the motivations the United States has for leaving the INF Treaty, analyzing the motivation itself, the Russian responses, and the direct impacts of the motivations.

INF TREATY VIOLATIONS

Nearly every announcement the Trump Administration has released for discussing a possible withdrawal from the INF Treaty cites Russian non-compliance. Since 2014, the Obama and Trump Administrations have accused Russia of violating the treaty. The core claim concerns a Russian missile referred to as 9M729 (also called SSC-8, its NATO name). The Russian Federation has both denied that the missile violates the treaty and alleged that some U.S. systems violate the treaty, too.

The allegation that Russia violated the treaty did not originate as a motivation for leaving the treaty. The Obama Administration’s 2014 statement, which news reports say came after a series of internal National Security Council (NSC) consultations, accused the Russian military of violating the treaty but left room for Russia to still comply with the treaty. The Trump Administration announced a U.S. withdrawal in Fall 2018, attracting additional attention to the compliance issue and raising the stakes of any negotiations. In October 2018, after President Trump announced the U.S. withdrawal, National Security Advisor John Bolton led a group of U.S. officials that visited Moscow to discuss the decision. Simultaneously, there was still rhetoric about how Russia can ‘re-comply’ with the terms of the treaty, avoiding a full end of the agreement. Russian officials have denied that the 9M729 is in violation of the treaty. Although Russia has confirmed the existence of the missile in question, Russian officials claimed the missile was not tested at a range that
violates the INF Treaty in late 2017.

This discussion of Russian compliance naturally introduces the question of which side’s characterization of the 9M729 is correct. Officials and academics on both sides are quite divided on the question. Although this paper does not attempt to analyze which side’s claim is more accurate, a brief background of the claims is necessary to understand the full picture. The United States Director of National Intelligence (DNI) released the most complete, public government perspective in late November 2018 on the issue. The U.S. DNI argument is that the 9M729 was developed “in the late 2000’s” and was tested multiple times, as recently as 2015. The claim of the violation concerns how tests were conducted at multiple ranges, including at ranges over 500 kilometers but within the limits of the treaty: “it allows you to test missiles from a fixed launcher as long as you do not intend to base them on the ground.” The U.S. characterization of the tests is: “By putting the two types of tests together, Russia was able to develop a missile that flies to the intermediate ranges prohibited by the INF Treaty and launches from a ground-mobile platform.” The Russian perspective on this issue is that since the missiles were not tested at a prohibited range, there is not a violation of the treaty.

Russian compliance is clearly a central issue in the INF discussion, but what was the process by which it became a motivation for leaving? During the Obama Administration, the United States made numerous statements regarding Russian compliance but never introduced the threat of leaving the treaty. The answer is complex but likely stems from additional motivations discussed in this report, including the ideology of American officials involved in the negotiations. In addition, it is worth noting that the U.S. has characterized this motivation as part of a pattern of Russian actions that challenge America and its allies. Secretary of State Pompeo said: “these violations of the INF Treaty cannot be viewed in isolation from the larger pattern of Russian lawlessness on the world stage” and went on to list additional areas of controversy between both countries including Ukraine and Georgia. The Trump Administration has therefore taken the stance that INF is one part of a larger series of Russian actions.

MULTILATERAL AGREEMENTS

Both Russian and U.S. officials have agreed that INF should transform into a multilateral agreement, as the number of world’s nuclear states grows. Furthermore, the U.S. has repeatedly stated the absence of other nations within the INF as one of the reasons to withdraw from the treaty. In this framework, INF’s restrictions are claimed to be unfair, since the countries outside of the U.S. and Russia can develop nuclear missiles in the otherwise prohibited range. When the INF was signed in 1987, both superpowers were far ahead of other nations in terms of both nuclear technology and pure numbers of weapons. However, the U.S. is speculating that it is no longer the case, with China rapidly advancing their military capabilities.

Even though the bilateral era is inevitably coming to an end as other nations grow their nuclear stockpiles, U.S. withdrawal from the INF will negatively contribute to treaty negotiations on a global scale. First, such a move could undermine the credibility of the U.S. to stand by other arms control agreements. Second, a multilateral treaty will require significant efforts to negotiate between major nuclear states. Such restriction-free limbo, would remove all brakes for Russia, and in turn for the U.S., to rapidly increase their intermediate-range stockpile, which both countries have expressed interest in.

On the topic of multilateral arms control agreements, the most attention is currently focused on China. The country has been revamping its military, and is on a steady course to match and become a dominant global military power. That being said, China is relatively far from its goal in comparison to the U.S. and Russia. Today, its policy appears to be “quantity over quality”, as China lacks technological leverage. It has been relying on Russian military technology exports to bridge this gap, however China has expressed clear intentions in becoming self-sufficient in that regard. Thus, inability to control China’s military expansion, the U.S. contemplates if partaking in INF limits its leverage on China and the rest of Asia.

The latter is especially fueled by the retaliations of China to the U.S. imposed sanctions. The two economic powerhouse are currently undergoing escalation of a trade war, as China refuses to back down to the U.S. sanctions, and responds in a tit-for-tat fashion. Furthermore, the U.S. is unsettled by the ever improving Sino-Russian friendship. A recent example of that was the joint military exercise Vostok 2018 past September, which was the largest military exercise since the Soviet era. On the other fronts, China is heavily investing into Russian energy resources, as Russia is the largest exporter of oil, and is predicted to dominate exports of natural gas to China in the next year as well. Thus, with Chinese reluctance to comply by the U.S. demands or respond to its leverage, such good relationship between China and Russia makes the U.S. increasingly uneasy.

Another factor to consider is that any future multilateral treaty, will likely not be limited with the aforementioned key states of the U.S., Russia, and China. A multilateral arms control treaty would have to include such countries as India, Pakistan, Great Britain, France, and other nuclear states with similar stockpile numbers. The inclusion of more parties will become an extremely complex task to bring everyone to an agreement. As prolonged negotiations take place, this once again has a potential to create an opportunity for an arms race to emerge.

IDEOLOGY SHIFT

Since the appointment of Ambassador John Bolton as the
United States National Security Advisor, there has been a corresponding shift in American foreign policy. Bolton has “spent his career opposing arms control treaties”, as evidenced by his push in 2001 to withdraw from the 1972 Anti-Ballistic Missile Treaty under President George W. Bush. He has now become the principal driver behind an American withdrawal from the INF treaty citing that “Russia had been violating the treaty for years and that rising powers such as China meant that it was a ‘new strategic reality out there.’ Bolton also stated that China’s cyber-attacks against the United States made Russia seem like the ‘junior partner.’” Despite the seemingly clear reasons given, Bolton announced withdrawal from the treaty in the face of resistance from some notable US allies.

Bolton’s expected preference for limited to no arms control rests in the realm of worst-case thinking wherein faith in U.S. military power prevails. No agreements are necessary since the power of American sanctions and military superiority are enough to keep Americans, if not its allies, safe. This shift in ideology has become a significant force in the White House as Bolton is known for his bold and stubborn views. Under this ideology shift, it makes sense that the United States National Security Council (NSC) would move towards heightened flexibility and capability for unpredictability. This capacity has been cited by the Trump administration to be one of the reasons for the groundbreaking U.S.-North Korea summit in June and appears to be one of the self-perceived strengths of the administration. Leaving the INF treaty is rationally the next step (assuming the logic of such an ideology) and would “untie the hands” of the administration in attempting to thwart the rising threat from China.

From the Russian perspective, this need for flexibility and unpredictability comes at a significant cost to strategic stability. In fact, it insinuates that the United States thinks of itself in such an advantaged position that it has no need to negotiate with Russia. Russia has emphasized the need to remember the history of the Cold War as bilateral agreements since the early 1970s have kept both powers at bay and in high-level communication with one another. Such a need for flexibility is thought to be highly overrated should it come at the cost of a treaty that ensures verification and regular inspection.

Withdrawing from the INF treaty would undoubtedly achieve the goals that Bolton has set out to achieve with this ideological shift. Former US officials have said that “Bolton is blocking talks on extending the 2010 New Start Treaty with Russia limiting deployed strategic nuclear warheads and their delivery systems. The treaty is due to expire in 2021 and Moscow has signaled its interest in an extension, but Bolton is opposing the resumption of a strategic stability dialogue to discuss the future of arms control between the two countries.” Under this doctrine, the abrogation of New Start is inevitable following an exit from the INF treaty and both would serve to “free the hands” of U.S. military development and nuclear spending. There is no doubt that such an ideological shift among high-level officials in the Trump administration as a result of Bolton’s influence would result in a lack of intent to renew or renegotiate any future arms control treaties.

RUSSIAN MOTIVATIONS

This section describes the motivations the Russian Federation had for attempting to preserve the INF Treaty, analyzing the motivation itself, the American responses, and the direct impacts of the motivations.

Russia’s Interest in Preserving Strategic Stability

The main publicly stated motivation of Russia to preserve the INF treaty was its objective to maintain the current state of strategic stability in the bilateral arms control system. In Russia’s perspective, strategic stability was likely to be undermined if either the U.S. or Russia decided to produce more nuclear weapons.

Ever since the INF entered into force, Russia has been able to benefit from the communication channels that have been established to ensure that INF is fulfilled. More specifically, those channels of communication provided for increased transparency and ensured the state of predictability, which allowed the countries to maintain the balance of nuclear arsenals without having to spend enormous sums of money on an arms race that many fear could unfold again in the absence of the INF.

When the US announced that it was to withdraw from the INF, many Russian officials and the expert community feared that the US might also be reluctant to renew New START, which is an important component of strategic stability. Assuming full withdrawal from the INF within six months, the chances of renewal, as well as the efficacy of New START will be largely undermined, as there will be no lower limit on the range of missiles that could be developed by both countries, meaning they could both produce nuclear weapons close to the range prohibited by New START. Thus, the INF withdrawal might signal the end of the bilateral arms control at large, which could produce a certain level of uncertainty and lead to undue competition. Russian Foreign Minister Sergey Lavrov said explicitly in an interview on October 25, 2018 that if the United States decides to follow through on its current intentions, then all legal restrictions that have been curbing an arms race will be gone; President Vladimir Putin will be forced to respond to adverse changes in the strategic situation.

Another publicly stated concern of Russia is that American withdrawal will mean a more dangerous world. Many experts in Russia believe that optically the U.S. seems to be saying that it is time for other countries to arm themselves instead of decreasing the amount of their weaponry and following the example set by the U.S. Additionally, under these new circumstances, the NPT review conference risks being unfruitful due to the growing hardship of reconciling
Although these statements seem like part of a political game, the goal of which is to shift attention from the alleged Russian violations of the INF, it is also rational for Russia to want to prevent the possibility of a potential arms race that would be quite costly for both sides, but especially devastating for Russia given the turbulent state of its economy. As a result, Russia has denied the allegations from the US and has explicitly indicated its willingness to discuss the concerns of the US over Russia’s compliance with the treaty.

It seems, based on its decision to withdraw, that the U.S. either does not think a new arms race with Russia will unfold or does not fear its potential consequences, despite President Putin saying that Russia will develop new missiles banned under the INF if the US exits the pact and pursues an arms buildup of its own. Essentially, Putin issued a direct warning to the U.S. It might be the case that this warning was a tool used to make president Trump change his mind and reverse his decision as well as induce European countries who are opposed to the possibility of a new arms race to exert additional pressure on the White House. Regardless, it seems that Russia is not enticed as much as the US by the possibility of becoming more flexible in terms of its nuclear capabilities.

RUSSIA’S CONCERNS OVER NATO AND WEAPONS IN EUROPE

Russia is concerned that the U.S. withdrawal could make Russia more vulnerable, especially if the U.S. decided to deploy ABMs, cruise missiles, or even mid-range missiles in Europe as a way of exerting strategic influence. In this scenario, Russia would be forced to respond by starting the renovation of some of its mid-range missiles and directing them at Europe. Such retaliation would not only increase tensions with NATO but also make the European countries that object to the US withdrawal change their stance and eventually allow the U.S. to deploy its missiles on their territory to create a defensive umbrella against Russia. This in itself would be a dangerous precursor of a destabilizing arms race and an escalation of tensions. Some experts also maintain that with the INF gone, and Ukraine and Georgia developing closer ties with NATO, the escalation of tensions between Russia, Europe, and the U.S. would be inevitable.

Although President Trump has not officially expressed intentions to deploy any missiles in Europe, such an option is on the table. Given that the U.S. has deployed missiles in Europe in the past to counter the influence of Russia in the region, it is definitely a tactic that the U.S. could consider again.

Such a turn of events would not be preferable for Russia due to overall security concerns, financial costs of renovation, and a lack of a need to worsen the relationships with its economic partners in Europe.

LIMITED ARMS RACE CAPABILITIES

Through the means of arms control, countries can save on their defense budget, while assuring the safety of the nation. Instead of spending the budget to continuously increase stockpile numbers to match the opponent, both parties can agree to an arms control treaty which would not allow for one to get ahead of the other. As a result, the countries involved stay on equal footing military-wise, while requiring significantly reduced budget for maintenance and development purposes. This concept can be directly applied to the INF treaty.

After the collapse of the USSR, Russia’s economy has been in steady recovery, but not without a number of financial crises, especially in 2008 and then due to sanctions in 2014. By sheer numbers, the U.S. economy is significantly more stable, which has allowed for military spending to be about 10 times greater than the Russian military budget. That being said, the arms control treaties in place has allowed it to maintain its deterrence capabilities, while at the same time disarming thousands of nuclear missiles of both parties, bringing the chance of a nuclear war to a lesser degree. However, assuming full withdrawal from the INF within six months, there is a potential of a new arms race emerging. With its strong economy and already the largest military budget in the world, the U.S. might shift its priorities to pursue advancements in nuclear weapon technology. In response, Russia would need to retaliate in a similar fashion. However, given the economic health of the country, it be will hard for Russia to sustain such a race for long. The U.S. withdrawing from the INF could result in a high chance for Russia to fall behind in its deterrence capabilities against the U.S.

DISCUSSION AND CONCLUSION

MOTIVATIONS AND INTENT TO WITHDRAW

When the U.S. announced its intent to withdraw from the INF Treaty, it brought a host of U.S.-Russia nuclear arms control issues into focus and changed the dynamic of the bilateral nuclear relationship. This research analyzes the motivations behind both Washington and Moscow’s decisions on the INF Treaty and related nuclear issues. These motivations helped craft the core narratives of both countries. While some motivations are clearly articulated in policy announcements from both countries, others are ideologically driven or likely below the surface. For the United States, withdrawing from INF is a response to Russian violations of the treaty and the
need for additional flexibility. There are perceived benefits to the threat of withdrawal even if the treaty remains in place. For the Russian Federation, there is a public and potentially underlying benefit to remaining within the Treaty. Part of that motivation is self-interest for Russian military calculus and part of it is out of preserving the treaty as a form of stability. The motivations discussed here function together to form each country’s treatment of the INF issue on the global stage. Now that INF will be absent, the next steps in the broader U.S.-Russia nuclear relationship will be influenced by these motivations.

SUMMARY OF KEY MOTIVATIONS

Russia's main motivations to preserve the INF:
1. First, Russia has been able to benefit from communication channels that have been established to ensure that parties comply with the treaty. These channels provided for increased transparency and ensured the state of predictability, which allowed to decrease the tensions between the countries.
2. Second, given that arms control treaties can be seen as a cheap version of deterrence, it is more beneficial for Russia to have the INF in place amidst the current economic turbulence.
3. Third, Russia is concerned that the U.S. withdrawal could make Russia more vulnerable, especially if the U.S. decided to deploy ABMs, cruise missiles, or even mid-range missiles in Europe as a way of exerting strategic influence.

The motivations of the US to withdraw:
1. First, the US didn’t want to stay in a treaty that it perceives as binding for one signatory only. Nearly every announcement the Trump Administration has released for discussing a possible withdrawal from the INF cites Russian non-compliance.
2. Second, the U.S. officials have repeatedly stated the absence of other nations within the INF as one of the reasons to withdraw. In this framework, INF’s restrictions are claimed to be unfair, since other countries, especially China, can develop nuclear missiles in the otherwise prohibited range.
3. Third, since the appointment of John Bolton as the National Security Advisor, there has been a corresponding shift in the way the US treats arms control treaties. The US wants more flexibility and regards the power of sanctions and military superiority as enough to keep Americans, if not its allies, safe.

APPLICABILITY BEYOND INF

Moscow and Washington now must consider what policies to enact in the wake of the American withdrawal from the INF Treaty. At the time of writing, the INF withdrawal process had begun but it was not a finalized decision yet. However, at this point it appears nearly impossible that the United States will reverse its decision to withdraw. There are a number of significant decisions on related arms control issues that will be made in the next three years. The motivations described earlier in this paper are likely to influence the decisions leaders in both countries take.

There are few major issues at play, discussed below.

Development of INF-Prohibited weapons: Will either country develop (or, from the U.S. perspective, continue to develop) INF-prohibited weapons? Will those weapons be deployed? And if so, where will they be deployed?

How leaders approach potential weapons development will be a core issue. The United States withdrew from the treaty ostensibly because the Trump Administration valued the flexibility it would provide. However, that flexibility does not mean the United States will decide to actively pursue INF-prohibited weapons, at least for now. Russian officials hinted at increased investments into INF-prohibited systems when they publicly made statements urging the United States to stay in the treaty. There is an open question of whether Russia will accelerate the development of these systems, or take a wait and see approach in the next two years.

Multilateral Effects: Will there be any developments in relation to China? This is the least clear scenario. There has been no substantive movement on an agreement that would incorporate China, Russia, and the United States into an arms control agreement. However, because the U.S. concerns were over Chinese flexibility in addition to Russian non-compliance, it will be important to analyze Chinese nuclear developments over the next few years.

New START: What will be the end result of the New START Treaty, which covers longer-range, strategic nuclear weapons. Will the Trump Administration announce intent to renew or cancel the Treaty? Or will it be until after the 2020 election (November 2020) that the United States makes a decision? How will the Russian government approach the New START conversations?

New START is essentially the new cornerstone of U.S.-Russia arms control cooperation; this is partially by default, as it is the only remaining bilateral treaty. Under New START, a number of outcomes are possible. This research does not assess the likelihood of each. Instead, it discusses the outcomes in the context of the motivations discussed in this research.

1. Treaty Renewal: This outcome preserves the treaty through renewal. This would likely occur after some bilateral conversations. If the motivations on each side are about preserving strategic stability, it seems logical they would extend the treaty.
2. Treaty Non-Renewal: The treaty may simply expire, due to a failure of renewal talks or other reasons. There is also the possibility that either country decides to simply let the treaty expire. It is short of completely withdrawing from or “cancelling” participation, but it has the same long-term effect.
3. Treaty Cancellation: This outcome has a very similar result.
to option 2. However, this is defined here as an active cancellation of the treaty by either the United States or Russia. Instead of renewal negotiations collapsing and the treaty not being renewed, this outcome would involve U.S. or Russian officials unilaterally suspending participation in the treaty. If the short-term history is any indication, one of the ways this could occur is a dispute over compliance with the treaty. As of now, there has not been any robust allegations of non-compliance from either country. If the ideological view in the United States is in favor of more flexibility and less arms control, the ideological motivations discussed in this research could provide a way for U.S. officials to suspend participation in the treaty.

Each of these three key questions have a range of options that both countries will be calculating in the next couple of years. It is our intuition that the most likely case is treaty non-renewal which addresses U.S. desire for flexibility without compromising public trust since there are no clear and existing violations of New START. In the case of non-renewal, Russia would also be unable to induce the United States into negotiating since there would be no clear statements made on either side regarding formal withdrawal or cancellation. It appears that the U.S. could be preparing for a new arms race and a renewal of New START would only inhibit those capabilities.

CONCLUSION

When research first began for this paper, the biggest point of tension in the U.S.-Russia nuclear relationship was whether or not New START would be renewed. Since then, the U.S. has publicly announced intent to withdraw from the INF Treaty, claimed irreconcilable Russian violation of the treaty, and fully initiated the six-month withdrawal process. Though we originally hypothesized that the public announcement of intent to withdraw was a convenient threat - one that aligned well with the smoke and mirrors tactic and public image interest of this administration - it seems that there is no future for the INF Treaty on the horizon.

There appears to be little regard for any renegotiation or discussion from the U.S. side and an unwillingness to cede fault or validate any of the perceived violations of the treaty on either side. Given the erratic nature of the timeline just within the research period of this paper, we emphasize that it is the motivations outlined here that are of most concern and importance in the years to come. The state of the Russian economy is not due to change suddenly anytime soon and the U.S. desire to seek nuclear superiority or rein in its European allies also appears to be indefinite. With heightened tensions across the U.S.-Russia relationship ranging from cyber weaponry, the war in Syria, to energy disputes - it is of utmost importance that diplomatic dialogue be maintained within the nuclear relationship between these two countries. An example was set in 1987 when the INF Treaty was first negotiated and signed in order to bring about peace between two countries and reduce the global nuclear threat. While the INF Treaty and even New START may no longer be the ideal solutions, this precedent should be followed to ensure the longevity of the U.S.-Russia relationship and establish nuclear safeguards for all.
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Predicting Cooperation: Examining the Association of Media Framing and International Conflict Outcomes

II. Conflict Resolution Working Group

Madelaine Graber and Irina Bakhareva

Abstract

This project explores the issue of conflict resolution between the United States and Russia through an examination of previous conflicts with application of psychological methods. Specifically, the primary aim of the project is to develop a model which would allow for a better understanding of whether and how American and Russian media are associated with conflict outcomes. The present study expands the psychological research that suggests the way an argument is framed can significantly affect its audience’s reaction. Specifically, the study explores the question of whether the way Russian and American media frame a conflict is significantly associated with the outcome of said conflict. We found that Russian and American media sources tend to be self-promoting in that they hold the home country in higher regard than the counterpart country. This self-promoting framing, however, was discovered to have no significant effect on the status of US-Russia conflicts. Though this is an unexpected result, it is important in that it could demonstrate a degree of resilience of governmental diplomacy to media depictions of conflict. This work leaves open many opportunities for continued research, and helps contribute to a growing body of literature investigating how psychological concepts such as media framing could be relevant for conflict resolution.

INTRODUCTION

The successful resolution of conflict among national powers has consistently been a primary foreign policy priority. In situations of conflict, each nation-state is required to act in its own national interests, which can be understood as a set of preferences over outcomes of a specific foreign policy issue. This can complicate successful cooperation and conflict resolution. The present study proposes a novel way to investigate this issue through use of psychological methods to understand the relationship between conflict outcomes and the ways Russian and American media frame their discussions about international conflicts.

Previous literature suggests that countries and their respective cultures differ significantly by psychological principles. For example, Stanford University professor, Dr. Jeanne Tsai, found that countries and cultures differ based upon their ideal affect (Tsai 2007). Ideal affect, as defined in the study, is an observed, culturally-based phenomenon in which individuals from different cultures value particular emotional states over other emotional states. The primary example is as follows: Western Europeans and Americans tend to value high arousal positive emotions, such as excitement, over low arousal positive emotions, such as serenity. In contrast, Hong Kong Chinese value the opposite (low arousal positive emotions over high arousal positive emotions). Furthermore, there is evidence that the common psychological mindset of a country can significantly affect citizens’ political preferences: extensive research has indicated that these cultural perceptions of ideal affect change individuals’ preferences for leaders. Americans tend to value leaders who have big smiles in their photos, while Chinese tend to value leaders who have calmer, closed-mouth smiles (Tsai et al 2016). These differences suggest that it is both important and relevant to examine psychological differences between countries, however, research examining conflict resolution specifically through the lens of psychology is sparse.

In this study, we aim to assess the extent to which American and Russian media framing could be associated with the outcome of a US-Russia conflict. The framework for this study is based on previous research which suggests the way
an argument or statement is framed significantly changes the way a reader perceives and understands the issue. Namely, Thibodeau and Boroditsky found that when they showed participants a paragraph that described rising crime rates in a city as “virus,” participants were more likely to provide options for “treating” the issue of crime with more emphasis on rehabilitating criminals. In contrast, when they described rising crime rates as a “beast,” participants were far more likely to suggest that crime was something to be “punished,” and they suggested far more solutions involving law enforcement (Thibodeau and Boroditsky 2011). Zullow and Seligman conducted a similar study in which they examined the speeches given by American presidents from 1900 to 1984. They found that the way in which presidential candidates expressed their arguments in speeches significantly correlated with whether they were elected. For example, presidents who were more pessimistic were far less likely to be elected than presidents who were more optimistic (Zullow and Seligman 1990). These studies suggest that the way an issue is framed is important when considering events that have the potential for different outcomes.

What is more, there is evidence that the way in which the media frames conflicts may be significant for the outcome of these conflicts. The main mechanism underlined in this literature is the effect media framing has on public perception of the conflict, which, in fact, affects the policies adopted by the government. The Vietnam War is one prominent example of the role of the media in political conflicts (Hersh 2015; Achenbach 2018). It has been shown that media framing of this war exposed an alternative narrative of events, thus undermining the trust of the population in the government’s ability to solve the conflict. This led the government to change its strategy in response to the broad antiwar sentiment. Some have gone as far as saying that the media “lost the war” on behalf of the country (Achenbach 2018).

The present study builds on this previous research and argues that the way a conflict is framed in popular and governmental media could be related to the outcome of the conflict. Specifically, we investigate the question of whether rhetoric in the media is associated with the outcome of an international conflict. It is important to note that the use of this model does not imply a claim about causality: rather, we examine the extent to which two variables are related, and the directionality of the relationship is not assessed. We hypothesize that there is a relationship between rhetoric framing and the outcome of international conflicts that could have the capacity to be predictive. We specifically examined conflicts between the United States and Russia (further defined in Methods).

**SPECIFIC RESEARCH QUESTIONS AND HYPOTHESES**

The research question structure for the present study is multi-tiered. Below, we demonstrate our general line of questioning.

1. Is there a relationship between the outcome of a conflict and the way that the Russian and American news media frame the issue?
   a. How do Russian and American media frame conflicts?
   b. Is Russian or American media framing more associated with the outcome of a conflict?

**PRIMARY HYPOTHESES**

We predict that there will be a significant association between general media framing and the conflict outcome, specifically that media framing has some ability to predict conflict outcome (question 1). We do not declare any hypotheses regarding the way in which Russian and American media frame conflicts (i.e. more positively or more negatively), and rather, will conduct exploratory media analysis to determine the extent of each country’s media sources (question 1a). Furthermore, we will conduct further exploratory analyses to determine whether there is a significant difference between whether Russian or American media are associated with the outcome of a conflict in order to assess whether one media source or another was more associated with the actual outcome of the conflict (question 1b).

**SIGNIFICANCE**

This research is particularly important and relevant as it grounds the issues of conflict resolution in verified and reliable psychological theory. By applying a robust psychological theory in a new context, it will be possible to develop a practice of conflict resolution through an understanding of the psychological basis of information dissemination. As a consequence, the present study contributes significantly to the field of applied psychology. Furthermore, this study presents potential for developing a more comprehensive picture of how different forms of media, be it government-owned or independently published, relay issues of international content to the public. The results of this line of questioning could ultimately contribute to a better understanding of how to accurately present information to the public, and could potentially provide data on media sources that appear to approach issues most objectively or most in line with the conflict’s ultimate conclusion. This type of data collection is especially important in this era of misinformation dissemination; any research that could provide information on how to better protect citizens around the world from false or fake news is immensely important at this time.

Although nation-states may fundamentally disagree on many issues, it is evident that in the majority of nation-states, international cooperation is broadly approved and pursued. Areas of cooperation, however, can be difficult to find when different nations approach issues fundamentally differently; science, however, is a pathway to cooperation that is supported by rich history. This is something that was reiterated to us throughout our conferences during the Moscow Conference in November. Though the United States
and Russia have experienced substantial conflict and tension throughout the history of their relations, they have also demonstrated consistent cooperation through scientific fields. We believe that this research continues this history of scientific cooperation between the United States and Russia, and we hope that the results of the present study will contribute to the international effort to stop the spread of misinformation.

METHODS

PROCEDURE

The procedure for the present study was as follows: both authors collected source material based upon mutual conversations about the types of sources that should be used. The authors both coded 50% of the media source material such that each author worked in their native language in order to avoid any misunderstanding of colloquialisms or idioms used in the source material. The authors convened regularly to discuss coding mechanisms in order to ensure inter-rater reliability of the codes given, and both authors based their coding mechanism on previous research so as to ensure coding validity. Codes were then input into R-Studio for coding analysis and development of the statistical models.

DEFINITIONS

This study approaches the definition international conflict in the manner proposed by political scientist Robert Keohane (Keohane 1984). Specifically, Keohane theorizes that there are three types of interstate relations: discord, cooperation, and harmony. Discord, which we use interchangeably with international conflict, is “a situation in which governments regard each other’s policies as hindering the attainment of their goals, and hold each other responsible for these constraints.” Harmony is in direct opposition to discord, as it refers to a situation in which the policies that states pursue in their own self-interest and without regard to other actors perfectly align with the interests of others. In Keohane’s view, harmony can only exist in an “idealized, unreal world.” Cooperation, in turn, can be understood as a strategy which allows states to mitigate conflicts; it is a situation in which states make an effort to coordinate their policies so as to facilitate the realization of the interests of others without significantly hurting their own interests. This interpretation of conflict and cooperation allowed us to only choose those cases in which U.S.-Russian relations were truly in a conflictual state; the New START Treaty and other instances of U.S.-Russian agreements, which were initially considered for the purposes of the study, were excluded as examples of cooperative efforts to solve a conflict but not examples of conflicts themselves. By studying the ways in which the media on both sides framed conflicts alone, we were able to minimize the effect of potential confounding variables.

This study proposes that international conflicts can have two broad outcomes: they may be resolved or frozen. Examples of unresolved conflicts were excluded from the study for the reason that these conflicts can be understood as ongoing, which makes us unable to interpret the way in which media framing affects conflict outcomes. The final list thus only contains resolved and frozen conflicts. The fact that conflicts are resolved does not mean that both sides are satisfied with the outcome; it merely means that at least one of the sides of the conflict reached the result aligned with its preferences or the sides reached a compromise. The Nord Stream 2 pipeline is an example of such a conflict. Though the United States has demonstrated its discontent with the construction of the pipeline, Russia has proceeded with the construction, and the pipeline is expected to become operational in 2019-2020. Frozen conflicts have not reached any kind of long-term resolution on the side of either party and still involve a massive point of contention. The de facto independence of South Ossetia and Abkhazia as a result of the Russo-Georgian War is an example. With Russia’s continued military presence in these areas, the situation cannot be considered stable; the conflict will be resolved once these territories are able to maintain their status without Russia’s direct involvement.

COMMUNICATIONS SOURCE MATERIAL

The present study investigates multiple conflicts between international powers in order to study the relationship between media framing and conflict outcome. Specifically, the study focuses on conflicts between the United States and Russia. The final list of conflicts to be examined is presented in Table 1. All of the conflicts in question fit the definition of discord presented above. Moreover, they all represent a series of events, which, however, differ in their overall duration. Our list of conflicts includes only those that occurred after the collapse of the Soviet Union. The reason is that, though Russia is the successor state of the Soviet Union, it has not inherited the national defense strategy or the ideology of its predecessor. The bipolar confrontation

<table>
<thead>
<tr>
<th>Conflict</th>
<th>Dates</th>
<th>Location</th>
<th>Key Players</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russo-Georgian War</td>
<td>2008</td>
<td>Georgia</td>
<td>Georgia, Russia, USA (as an ally)</td>
<td>Frozen</td>
</tr>
<tr>
<td>The Bombing of Yugoslavia</td>
<td>1999</td>
<td>Yugoslavia</td>
<td>Yugoslavia, US (NATO), Russia</td>
<td>Resolved</td>
</tr>
<tr>
<td>Snowden’s Asylum in Russia</td>
<td>2013</td>
<td>USA / Russia</td>
<td>USA, Russia</td>
<td>Frozen</td>
</tr>
<tr>
<td>The Rose Revolution</td>
<td>2003</td>
<td>Georgia</td>
<td>Georgia, Russia, USA (as an ally)</td>
<td>Resolved</td>
</tr>
<tr>
<td>Nord Stream 2</td>
<td>2012 - today</td>
<td>Russia, Baltic Sea, Germany</td>
<td>Russia, USA, EU</td>
<td>Resolved</td>
</tr>
</tbody>
</table>
between the USSR and the U.S. that characterized the Soviet period was due to the clash between the socio-economic differences, ideological outlooks, and political systems of the two countries. This great-power competition was conducive to confrontation. Analyzing both the conflicts before and after the collapse of the Soviet Union might skew our results, which is why we only analyze post-Soviet conflicts in this paper. Finally, we are refraining from analyzing current conflicts between the United States and Russia (such as those in Syria or Ukraine) for the reasons laid out in the Definitions section of this paper.

In examining these conflicts, two media domains were collected. First, we examined governmentally controlled media—these included direct publications from the governing body and presidential or governmental representative speeches. Second, independent media outlets were examined, and conscientious effort was made to gather a diversity of political ideology in these analyses. We also took caution when comparing Russian and American independent media, as Russian independent media might be less visible to the public and hence less influential because of the government’s actions to limit their activities. For each media source, descriptive information was be collected, as demonstrated in Table 2. Media sources were selected through internet searches with keywords which included the name of the conflict and the source type (i.e. “Russo-Georgian war New York Times”). Sources were then selected on relevance to the keyword search, and deliberate attempts were made to select sources that were published within a year-long time period and prior to the resolution of the conflict (60% of articles were successfully selected within a year of publication, see Table 4 in Results for descriptive statistics). Furthermore, sources were selected only if they included some reference to the key countries in question: the United States and Russia. This was manageable in nearly all situations with the exception of the Rose Revolution and the Russo-Georgian War, as we established that Russia and the country’s media interpreted these as primarily Russo-Georgian conflicts. Though most of the articles that we used in our analysis of these two conflicts did mention the United States, it was often done in passing, since the United States was not interpreted as a legitimate side of the conflict but rather as a country meddling in Russo-Georgian affairs. Moreover, where articles directly mentioning the United States were unavailable, we chose the ones that talked about “the West,” which can be understood as a proxy for the United States. For an exact list of media sources collected, please refer to Table 6 in Supplemental Materials.

DATA ANALYSIS

Analysis of media sources. After gathering primary source material from the aforementioned forms of media, analyses were conducted in order to determine the way in which the particular media item approaches the conflict of concern. Specifically, we used the methods of media discourse analysis and media framing analysis to study these conflicts. The academic research on media framing is characterized by a lack of a uniform approach to the issue (Sheufele 1999). However, there is overall agreement that media framing goes beyond the use of words and individual sentences but can also be inferred from the overall tone, phrasing, references, thematic and rhetorical structures, and imagery used in the article (Pan and Kosicki 1992; Matthes 2009). In order to interpret the framing of an article, it is essential to place it within a field of meaning that journalists seek to convey when constructing the public discussion of an issue; they do so to reduce the complexity of the story. Since every issue requires asking specific questions that would be irrelevant in other situations, we used the broader lessons derived from media framing research to develop our own framework which would allow us to best analyze the framing of the conflicts in question.

We analyzed each article based on the two primary aspects of media framing: narrative structure, or the “villain” and the “hero” of the piece, if any, and the “global rating,” or the extent to which the article empathizes with the opposite side of the conflict. For each of these criteria we asked certain questions to determine the discourse structure of the piece; based on the answers to these questions, we gave the articles the ratings of -1, 0, and 1 for each one of these questions. The rating of -1 was given whenever the article presented the opposing country in a positive light or the home country in a negative light (for instance, when a Russian article presented Russia as a villain and/or the United States as a hero, or when the American article empathized with the Russian side). The rating of 1 was given to articles that sided with their own country, and the rating of 0 was given to those articles that presented no side as a hero/villain or empathized with no side of the conflict. Consequently, each article received a certain score representing the sum of scores for every criterion. The higher the score of the article, the more it sides with its own country; the lower the score, the less it does so. Table 3 depicts a detailed description of the codes.

Table 2. Media Descriptives (General)

<table>
<thead>
<tr>
<th>Source Name</th>
<th>Country</th>
<th>Source Domain</th>
<th>Domain Specifier</th>
<th>Political Ideology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential Speech</td>
<td>United States/Russia</td>
<td>Governmental</td>
<td>Presidential Speech</td>
<td>Multiple</td>
</tr>
<tr>
<td>Wall Street Journal</td>
<td>United States</td>
<td>Independent</td>
<td>Newspaper Article</td>
<td>Conservative/Balanced</td>
</tr>
<tr>
<td>The New York Times</td>
<td>United States</td>
<td>Independent</td>
<td>Newspaper Article</td>
<td>Liberal/Balanced</td>
</tr>
<tr>
<td>Kommersant</td>
<td>Russia</td>
<td>Independent</td>
<td>Newspaper Article</td>
<td>Liberal/Balanced</td>
</tr>
<tr>
<td>Vedomosti</td>
<td>Russia</td>
<td>Independent</td>
<td>Newspaper article</td>
<td>Conservative/Balanced</td>
</tr>
</tbody>
</table>
Descriptive Statistics. In our descriptive statistics, we present the length of time between article publications in an effort to demonstrate our attempts to keep articles written within a year-long period. Additionally, we conducted basic percentage analyses in order to determine the general ways in which Russian and American media framed conflicts (i.e., more for or against their own countries), as well as the general political leanings of each country’s selected sources.

Data validation. For the purposes of validating our measures, we first computed Pearson’s chi-square tests of independence between variables we would expect to be dependent, such as narrative structure (nar.neg or nar.pos in Table 4) and overall ratings of media framing (global in Table 4), or language of the source (Language in Table 4) and media source (Medium in Table 4).

Media framing predicting conflict outcome. Finally, to test our primary hypothesis, we tested whether overall rating of media framing (global in Table 4) significantly predicted conflict outcome (conflict in Table 4) using logistic regression modeling.

**Table 3. Coding Scheme**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Explanation</th>
<th>Possible Codes</th>
<th>Code Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>Language of source</td>
<td>0</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Russian</td>
</tr>
<tr>
<td></td>
<td>Media source from which material was gathered</td>
<td>1</td>
<td>English Speech</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>The New York Times</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>The Wall Street Journal</td>
</tr>
<tr>
<td>Politics</td>
<td>Political leanings of the media source in question</td>
<td>0</td>
<td>Liberal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Conservative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-1</td>
<td>Own country is the villain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Neither country is the villain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>Opposite country is the villain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Who is the Villain (-1 if country of source; 0 if none or both; 1 if the opposite side)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-1</td>
<td>Opposite country is the hero</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>Neither country is the hero</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Own country is the hero</td>
</tr>
<tr>
<td></td>
<td>Who is the Hero (-1 if the opposite side; 0 if none or both; 1 if country of source)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extent to which media source empathizes with the other country is correct</td>
<td>0</td>
<td>Opposite side is empathized with</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Neutral: both sides are right/wrong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Opposite side is not empathized with</td>
</tr>
<tr>
<td></td>
<td>Measure indicating whether the conflict is resolved</td>
<td>1</td>
<td>Frozen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Resolved</td>
</tr>
<tr>
<td></td>
<td>Measure of the relationship between the United States and Russia regarding the conflict, e.g. a direct or proxy conflict</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RESULTS**

**DESCRIPTIVE STATISTICS**

Tables 5 and 6 provide basic descriptive information about the sources we analyzed as well as descriptive information regarding the codes given to each media source.

**DATA VALIDATION**

Narrative Structure and Overall Media Framing. A chi-square test of independence was performed to examine the relation between positive narrative structure (wherein the country rated itself positively) and overall media framing. The relation between these variables was significant, $X^2 (2, N = 55) = 11.53, p < .01$. A second chi-square test of independence was performed to examine the relation between negative narrative structure (wherein the country rated its counterpart negatively) and overall media framing. The relation between these variables was significant, $X^2 (2, N = 55) = 12.13, p < .01$.

Language and Medium. A third chi-square test of independence was performed to examine the relation between language of the source material and the particular media sources selected. The relation between these variables was significant, $X^2 (5, N = 55) = 55, p < .001$.

**MEDIA FRAMING PREDICTING CONFLICT OUTCOME**

Using logistic regressions on the data when it was separated by language, we tested whether overall media framing from each media source significantly predicted the outcomes of the conflicts selected. We found that media framing did not significantly predict conflict outcome ($p > .5$), regardless of source language (English or Russian).

**Discussion**

The present study attempted to understand how the ways in which American and Russian media sources frame conflicts could affect the outcomes of said conflicts. We investigated the extent to which American and Russian media sources framed themselves (as a country) positively or negatively, and explored how that framing could be related to the outcomes of five either resolved or frozen conflicts. We demonstrated through our data validation measures that our coding system was internally consistent: measures we expected to be dependent on each other or to be associated with each other were indeed associated. For example, narrative structure, defined in our study as the extent to which the media depict the home country as a “hero” or a “villain” should be similar to our measure of general media framing, in which we determined the extent to which media from a particular country empathized with their counterpart coun-
try. An American media source which believes the United States is the "hero" in a particular situation is more likely to also empathize less with Russia; and vice versa. Demonstrating internal consistency within a coding system is crucial, as it lets us have more faith in the results that come from analyses of different variables.

Our initial analyses of the data demonstrated that both Russian and American media sources tended to depict themselves more positively in comparison to their counterpart country; in other words, American media were more likely to empathize with the United States, and vice versa. This may appear to be a relatively obvious finding—the media of a particular country may inherently be more likely to support their own country. Interestingly, however, we found that when we specifically investigated the narrative structure of these media sources, Russian media sources were far more neutral in their assessment of who is the “hero” and who is the “villain.” Though narrative structure and overall media framing were demonstrated to be highly dependent upon one another (as stated above), it is interesting that Russian sources could appear more neutral when the media sources were investigated in more specific detail. This could be representative of the fact that we made significant efforts to use independent media sources, which, in Russia, could be more oppositional to governmental practices than their counterparts in the United States. We also found that Russian government sources often sought to present an issue in a neutral light, which could have been done for a variety of reasons, including the fact that the Russian government often does not even view the United States as a participant of certain conflicts, as was discussed earlier in Methods.

Finally, the results of our primary analyses to test our hypothesis that general media framing could significantly predict the outcome of a conflict between the United States and Russia were most interesting. Though we predicted we would find a significant relationship between these variables, our analyses suggest the media framing from both the United States and Russia have little predictive power for conflict outcomes. While unexpected, we believe this is nonetheless an interesting result that has many implications. Both Russian and American media sources tended to depict themselves more favorably than their counterparts; this could be interpreted as somewhat counterproductive to conflict resolution. Though we were unable to test public opinion data due to time constraints, it is possible that media such as the those analyzed could influence the public’s perception of the counterpart country. Previous research suggests that public opinion affects political decision-making; if public opinion about conflicts is affected by their media framing, then we expect media framing to be strongly correlated with the outcome of said conflicts. This prediction stems from research showing that public opinion has a significant effect on policy, and more so than policy does on public opinion (Page and Shapiro 1983; Burstein 2003). While public opinion is usually discussed in relation to democracies, non-democratic regimes’ policies have also been shown to be affected by it (Ojieh 2015). As such, we could predict that self-promoting media framing could influence the country’s populace against the counterpart country, which in turn could affect cooperation between the countries. In this case, however, we found that resolution of conflicts still largely occurred despite self-promoting media from both the United States and Russia. This information could be demonstrative of a greater trend that is present in media: the tendency to swing in a partisan direction with regard to foreign relations. It could also be demonstrative of the relatively small influence media actually may have over the resolution of a conflict, and that, in fact, much more occurs in diplomatic discussions than is discussed in media. Furthermore, it is also crucial that the conflicts we studied rarely resulted in productive cooperation; they either became frozen conflicts or were solved in the interests of one particular country. It could well be that a more positive framing of the counterpart would help to solve conflicts in a more cooperative manner. This could be a productive area of future research.

### Table 4. Descriptive Statistics—Dates

<table>
<thead>
<tr>
<th>Conflict</th>
<th>Earliest/Minimum</th>
<th>Latest/Maximum</th>
<th>Time between (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russo-Georgian War</td>
<td>8/8/08</td>
<td>8/26/08</td>
<td>18</td>
</tr>
<tr>
<td>Snowden</td>
<td>6/25/13</td>
<td>5/23/14</td>
<td>332</td>
</tr>
<tr>
<td>Rose Revolution</td>
<td>11/17/03</td>
<td>5/10/05</td>
<td>540</td>
</tr>
<tr>
<td>Nord Stream 2</td>
<td>6/16/17</td>
<td>2/12/19</td>
<td>606</td>
</tr>
<tr>
<td>Yugoslavia Bombing average range</td>
<td>3/24/99</td>
<td>7/16/99</td>
<td>322</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>606</td>
<td>588</td>
</tr>
</tbody>
</table>

### Table 5. Descriptive Statistics—General trends within Russian and American media

<table>
<thead>
<tr>
<th>Item</th>
<th>American Sources</th>
<th>Russian Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>against</td>
<td>neutral</td>
</tr>
<tr>
<td>Narrative Structure</td>
<td>0 (0%)</td>
<td>5 (18%)</td>
</tr>
<tr>
<td>Negative</td>
<td>0 (0%)</td>
<td>16 (60%)</td>
</tr>
<tr>
<td>Global Ratings</td>
<td>2 (7%)</td>
<td>9 (33%)</td>
</tr>
</tbody>
</table>

**Politics**

<table>
<thead>
<tr>
<th>Item</th>
<th>Liberal</th>
<th>Conservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Politics</td>
<td>13 (48%)</td>
<td>14 (52%)</td>
</tr>
</tbody>
</table>
er nation-states. In order to build cooperation between the United States and Russia, it is important to understand how each country presents conflict to its populous, as it can be indicative of greater points of contention or potential points for cooperation. This study demonstrated that Russian and American media framing was overwhelmingly in favor of the home country, but that despite consistent presentation of a country-first mindset, conflicts managed to be resolved (though not always in a cooperative manner). This suggests that conflicts can be resolved despite potentially hostile media conditions. Furthermore, this study provides a basis for future studies that could examine the relationship between the media's presentation of another country and the population's perception of that country. These data could then be incorporated into this study's model in order to create a more complex, but potentially more all-encompassing, model.

LIMITATIONS AND CONSIDERATIONS

This study is complicated both in source material and in statistical manipulations. A primary limitation to the structure of the study is that it requires the exploration of several conflicts, and inherently requires a conflict to have an "outcome." Though in our Methods we provide a definition of what we considered to be an "outcome" of a conflict, it is likely that many of these conflicts have continued to have lasting impacts on US-Russia relations or have remained "unresolved" in other countries. While in order to create the model, we may need to use imperfect definitions of "resolved conflicts" and "frozen conflicts," we believe the conclusions we can draw from the data are significant in the field of conflict resolution. Namely we demonstrated that negative media framing of the counterpart country is associated with non-cooperative conflict resolution strategies. We believe that a change in the framing could have significant outcomes for the extent to which states choose to cooperate when resolving conflicts.

The overall procedure for this project was inherently limited by time constraints and personnel available for analysis. Much of the analysis of communications materials done for this study has yet to be done in the Russian language, though much progress has been made in automated analysis of media sources in English. Furthermore, comparative studies attempting to understand the ways in which Russian and American media sources may frame conflicts have yet to be conducted. As such, our communications analysis was largely exploratory, and as a consequence, likely done with less precision than if we had access and time to develop and verify a reliable coding system. For example, we were limited in that our coders (the authors of this paper) needed to develop a system of coding articles in the method of content discourse analysis. Content discourse analysis—in comparison to automated media analysis methods like sentiment analysis—is a far more subjective coding method, and given the limited coders and time, we could only lay the foundation for developing a robust coding method. Furthermore, given the authors' intimate understanding of these conflicts, we were unable to be blind to the outcomes of the conflict. As such, it is possible that our knowledge of the outcome codes could have subliminally influenced our content discourse codes. We acknowledge this is a serious limitation that could not be remedied at the time of presentation, but note that this work still lays important groundwork for an extension of this study. The fact that we demonstrated internal consistency within the coding system helps ameliorate some of these coding limitations.

FUTURE DIRECTIONS

Aside from general refinement of the methods of this study, including utilization of coders blind to the outcome of the conflicts, it will be important for future research to consider other variables which could be helpful in explaining the lack of an association between media framing and conflict outcome that we found. For example, it would be interesting to investigate how public opinion factored into the aforementioned relationship, as that could help us understand, for example, the extent to which governmental entities involved in conflict resolution could be swayed by public opinion. Finally, largely due to time constraints, the number of articles analyzed is relatively limited. Though our analyses appeared sufficiently powered, it will be important for future studies to increase the number of articles for each conflict, and to consider covering a larger number of US-Russia conflicts.

CONCLUSIONS

In the present study, we found that Russian and American media sources tend to be self-promoting in that they hold the home country in higher regard than the counterpart country. This self-promoting framing, however, was discovered to have no significant effect on the status of US-Russia conflicts. This is important in that, though it is an unexpected result, it could demonstrate a degree of resilience of governmental diplomacy to media depictions of conflict. This work leaves open many opportunities for continued research, and helps contribute to a growing body of literature investigating how psychological concepts such as media framing could be relevant for conflict resolution.
### Supplemental Materials

<table>
<thead>
<tr>
<th>Article Name</th>
<th>Date of Publication</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNN Bush's speech about Russian invasion of Georgia</td>
<td>8/11/08</td>
<td>Speech</td>
</tr>
<tr>
<td>Russia and Georgia Clash Over Separatist Region</td>
<td>8/8/08</td>
<td>NYT</td>
</tr>
<tr>
<td>Georgia and Russia Nearing All-Out War</td>
<td>8/9/08</td>
<td>NYT</td>
</tr>
<tr>
<td>The War in Georgia: A War for the West</td>
<td>8/11/08</td>
<td>WSJ</td>
</tr>
<tr>
<td>Smoldering Fued, Then War</td>
<td>8/16/08</td>
<td>WSJ</td>
</tr>
<tr>
<td>Interim telecommunication C-N-E-Nk</td>
<td>8/26/08</td>
<td>Speech</td>
</tr>
<tr>
<td>Заявление Президента Российской Федерации Дмитрия Медведева</td>
<td>8/26/08</td>
<td>Speech</td>
</tr>
<tr>
<td>Пятнадцатая война</td>
<td>8/18/08</td>
<td>Kommersant</td>
</tr>
<tr>
<td>США поймали России на слове</td>
<td>8/18/08</td>
<td>Kommersant</td>
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<td>От редакции: Мираж врака</td>
<td>8/21/08</td>
<td>Vedomosti</td>
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<tr>
<td>От редакции: С легким сердцем</td>
<td>8/26/08</td>
<td>Vedomosti</td>
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<td>Obama &quot;disappointed&quot; in Russia's Snowden decision</td>
<td>8/7/13</td>
<td>Speech</td>
</tr>
<tr>
<td>Edward Snowden: Barack Obama not spoken to Russia or China over extradition</td>
<td>6/27/13</td>
<td>Speech</td>
</tr>
<tr>
<td>Defiant Russia Grants Snowden Year's Asylum</td>
<td>8/1/13</td>
<td>NYT</td>
</tr>
<tr>
<td>U.S. Envoy and Putin Aide Discuss Snowden</td>
<td>8/2/13</td>
<td>NYT</td>
</tr>
<tr>
<td>Snowden Asylum Hits U.S.-Russia Relations</td>
<td>8/1/13</td>
<td>WSJ</td>
</tr>
<tr>
<td>Snowden Asks Russia to Grant Him Asylum</td>
<td>7/16/13</td>
<td>WSJ</td>
</tr>
<tr>
<td>Путин: Любые обвинения в адрес России по делу Сноудена — это бред и чушь</td>
<td>6/25/13</td>
<td>Speech</td>
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<tr>
<td>Путин о Сноудене: Россия не та страна, которая выдает борцов за права человека</td>
<td>5/23/14</td>
<td>Speech</td>
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<td>России нечего связываться с США, но тут уж положение обозначено</td>
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<td>После неизбежной по жанру реакции США предсказали отводимое ему Сноудену на периферию</td>
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<td>Второй мир: США и Россия поделили Сноудена</td>
<td>8/1/13</td>
<td>Vedomosti</td>
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<td>«В контакт» со Сноуденом</td>
<td>8/2/13</td>
<td>Vedomosti</td>
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<td>George W Bush visit to Tbilisi, Georgia</td>
<td>5/10/05</td>
<td>Speech</td>
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<td>GEORGIAN LEADER AGREES TO RESIGN, ENDING STANDOFF</td>
<td>11/24/03</td>
<td>NYT</td>
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<td>Russian Intentions Are Questioned During Transition in Georgia</td>
<td>11/30/03</td>
<td>NYT</td>
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<td>Pro-West Leaders In Georgia Push Shevardnadze Out</td>
<td>11/24/03</td>
<td>WSJ</td>
</tr>
<tr>
<td>Georgia's Opposition Vows to Escalate Protests</td>
<td>11/17/03</td>
<td>WSJ</td>
</tr>
<tr>
<td>СТЕНОГРАФИЯ ОТВЕТОВ МИНИСТРА ИНОСТРАННЫХ ДЕЛ РОССИИ И.С. ЛИПАНОВА НА</td>
<td>12/6/03</td>
<td>Speech</td>
</tr>
</tbody>
</table>

**WOPROSY SMI PO ITOGAM PEREGOVOROV S PRESIDENTOM AJARIJOM A.ABAISHIDZE. MOSKVA, 28 NOVEMBERA 2003 GODA**

**ИНТЕРВЬЮ МИНИСТРА ИНОСТРАННЫХ ДЕЛ РОССИЙСКОЙ ФЕДЕРАЦИИ И С.ИВАНОВА, ОПУБЛИКОВАННОЕ В ГАЗЕТЕ**

«КОМСОМОЛЬСКАЯ ПРАВДА» 4 И 6 ДЕКАБРЯ 2003 ГОДА ПОД ЗАГОЛОВКОМ «ОБ ОТСТАВКЕ ШЕВАРДНАДЗЕ РЕЧЬ НЕ ШЛА»

Все началось с Джойсем Бекера

**СТРАНА ЧУДЕС: ТОЛКО**

Barrasso Questions Pompeo on Russia's Nord Stream II Gas Pipeline

**BEHIND NORD STREAM 2: THE RUSSIA-TO-GERMANY GAS PIPELINE THAT FUELED TRUMP'S ANGER AT NATO MEETING**

**SENATE COMMITTEE TO CONSIDER RESOLUTION AGAINST NORD STREAM 2 PIPELINE**

**U.S. AND GERMANY DEFUSE AN ENERGY DISPUTE, EASING TENSIONS**

Germans, Take a Stand Against Nord Stream 2

**U.S. OPPOSITION TO PIPELINE HANGS OVER MEETING BETWEEN PUTIN AND MERKEL**

Пресс-конференция с президентом Финляндии

"Северный поток - 2": Трамп и Путин посияли ситуацию

Санкции США приблизились к европейскому бизнесу

**США сочли «Северный поток-2» подводной трубой**

Что общего у НАТО и Nord Stream 2

**Деньги обозначили цель США**

**MILITARY STRIKES ON YUGOSLAVIA**

Angry Serbs Hear a New Explanation: It's All Russia's Fault

**CRISIS IN THE BALKANS: THE OVERVIEW; BOMBING ENDS AS SERBS BEGIN PULLOUT**

**SEROBIA: THE RUSSIAN EQUATION**

**NATO'S DIPLOMATIC RELATIONS WITH RUSSIA ARE STILL STAINED DESPITE END OF BOMBING**

1. **Russia: Yeltsin renews criticism of NATO's bombing**
2. **Russia: Yeltsin renews criticism of NATO's bombing**

**НАТО начало бомбить Сербию**

**Удар**

12/4/03 | Speech |
11/24/03 | Kommersant |
11/29/03 | Kommersant |
11/24/03 | Vedomosti |
11/24/03 | Vedomosti |
4/12/18 | Speech |
7/11/18 | Speech |
2/7/19 | NYT |
2/12/19 | NYT |
12/16/18 | WSJ |
8/18/18 | WSJ |
8/22/18 | Speech |
7/16/18 | Speech |
9/29/18 | Kommersant |
5/17/18 | Kommersant |
7/13/18 | Vedomosti |
6/16/17 | Vedomosti |
3/24/99 | Speech |
7/16/99 | NYT |
6/11/99 | NYT |
5/13/99 | WSJ |
5/10/99 | WSJ |
5/6/99 | Speech |
5/6/99 | Speech |
3/25/99 | Kommersant |
3/25/99 | Kommersant |
BIBLIOGRAPHY


One such avenue for cooperation may be Afghanistan where Russian and American interests arguably converge. In that country, common interests would include providing security and stability, stopping the drug trade, and preventing insurgent-controlled areas from becoming a safe haven for global terrorist networks. On an international level, even modest cooperation in Afghanistan could serve as a much-needed example of how Moscow and Washington are still able to work together despite the present toxic environment.

At various levels, Afghanistan appears as an excellent place to re-launch Russian-American cooperation. First, it has played a pivotal role in previous rapprochements in 2001 and 2009 that several Western countries blamed on Moscow. Nevertheless, personal relations between President Vladimir Putin and President Donald Trump continued to be cordial, as shown at the Helsinki Summit in July 2018. For this reason, there may be some hope to witness an improvement in relations between Moscow and Washington if the two countries are able to identify issues on which their interests converge.

A series of points of confrontation have by now become institutionalised, including through economic sanctions and persona non grata lists imposed on Russia. This would make any rapid improvement of the relation unlikely, especially on the US side where the embattled Trump Administration has to, on one hand, fend off bipartisan accusations of being soft on Russia, and, on the other, deal with a whole range of other issues having to do as much with domestic as with international politics. In that sense, it may be expedient for Washington and Moscow to explore more modest avenues for cooperation before turning to the big questions of Syria, Ukraine, and the Intermediate-Range Nuclear Forces Treaty.

Since 2014, relations between Russia and the United States (US) have worsened as the two countries clashed over crises in Ukraine and Syria. In the aftermath, tensions have further intensified over the alleged Russian cyber interference in the 2016 US presidential elections and the poisoning of a former Soviet intelligence officer in the United Kingdom in 2018 that several Western countries blamed on Moscow. Nevertheless, personal relations between President Vladimir Putin and President Donald Trump continued to be cordial, as shown at the Helsinki Summit in July 2018. For this reason, there may be some hope to witness an improvement in relations between Moscow and Washington if the two countries are able to identify issues on which their interests converge.

Abstract

Cooperation on and in Afghanistan has several times been at the centre of Russian-American rapprochements in the past. In 2019, Afghanistan remains a strategic challenge for both Moscow and Washington in the context of an increasingly assertive Taliban. This article argues that it is also a country where Russian and American objectives remain broadly aligned. Both countries are interested in a stable, peaceful, and secure Afghanistan that would not again become a safe haven for radical Islamist terrorists from around the globe. Both countries are also interested in an Afghanistan that would stop being the world’s leading opiate producer. In this context, this article argues that renewed Russian-American cooperation in stabilizing Afghanistan may become a step toward overall better relations between Moscow and Washington. To achieve this, Russia and the United States need to take a pragmatic approach in discussing the joint challenges they are facing in Afghanistan.

Cooperation on and in Afghanistan has several times been at the centre of Russian-American rapprochements in the past. In 2019, Afghanistan remains a strategic challenge for both Moscow and Washington in the context of an increasingly assertive Taliban. This article argues that it is also a country where Russian and American objectives remain broadly aligned. Both countries are interested in a stable, peaceful, and secure Afghanistan that would not again become a safe haven for radical Islamist terrorists from around the globe. Both countries are also interested in an Afghanistan that would stop being the world’s leading opiate producer. In this context, this article argues that renewed Russian-American cooperation in stabilizing Afghanistan may become a step toward overall better relations between Moscow and Washington. To achieve this, Russia and the United States need to take a pragmatic approach in discussing the joint challenges they are facing in Afghanistan.
ers that have a vested interest in the Afghan problem. This should help in making any rapprochement not only about Russia-US relations.

This article is structured in four parts. It starts with a discussion of the history of the American war in Afghanistan and of its current interests. The second part then examines the issues that have plagued previous Russian-American contacts on Afghanistan. In its third part, the article looks at current Russian interests in Afghanistan in the context of the American intervention. Finally, the fourth part assesses ways for renewed Russian-American cooperation in Afghanistan.

AN ENDLESS AMERICAN WAR

Within twenty-four hours of the terrorist attacks on 9/11, the United Nations (UN) Security Council passed Resolution 1368 that expressed ‘readiness to take all necessary steps to respond to the September 11 attacks’ (Council on Foreign Relations, 2018 (A)). A week later Congress signed S.J. Res. 23 that authorized the use of ‘all necessary and appropriate force against those nations, organizations, or persons’ (Ibid.). The resolution paved the way for the Global War on Terror, and served as the legal foundation for the actions the United States undertook for the conduct of the war. Over the years, Washington gradually leaned toward a more liberal interpretation of the powers implied under that broad counterterrorism umbrella. It evoked the resolution early and often as it expanded its efforts to fight terrorism both at home and abroad.

The opening salvo of Operation Enduring Freedom commenced on October 7, 2001. Before the year was over, the Taliban government crumbled and al-Qaeda disintegrated. The terrorist organisation then quickly regrouped across the border in Pakistan. In March 2002, the last major coalition offensive, titled Operation Anaconda, squeezed the remaining insurgents out of the contested periphery areas. The United States officially declared an end to combat operations a year later when Secretary of Defense Donald Rumsfeld remarked: ‘we are at a point where we clearly have moved from major combat activity to a period of stability and stabilization and reconstruction’ (Ibid.). As the war effort dwindled, the international community formed and supported a transitional government in Afghanistan.

Following the Bonn Conference in December 2001, Hamid Karzai emerged as the President of a beleaguered country that had seen thirty years of war. He proved the more acceptable candidate for all parties, including Russia. Meanwhile, the US and its Western allies believed that a democratic central government was vital to preventing Afghanistan from falling back into the hands of the Taliban. This perspective was born from the optimism that followed the American victory and showed little understanding of the Afghan context. After toppling the Taliban regime, Western powers were keen to assist the new Afghan government and support the reconstruction of Afghanistan. But, at the same time, Washington, and much of the West, shared the idea that all countries would quickly and decisively adopt a path that would lead them to become a Western-style liberal democracy. Inspired by Francis Fukuyama’s ‘End of History’ paradigm that had emerged after the end of the Cold War, this belief was at the core of the nation-building approach adopted by the US in Afghanistan (Fukuyama, 1989; 1992).

Ironically, such an approach was particularly poorly suited to Afghanistan given its history of tribalism, and ethnic, political, and religious fragmentation. Nonetheless, the UN, driven by the United States, passed a string of resolutions to support Karzai’s central government. Though assessments vary, these early days following the Taliban’s total defeat may appear in retrospect as a unique chance that was lost to consolidate and secure Afghanistan with limited American and international support (Dobbins, 2008). That failure appears even more damning given that the Afghan population was then generally relieved to see the Taliban go and supportive of the American intervention. Conversely, the quick stabilization of Afghanistan could have also paved the way to end the Global War on Terror.

Overall, the push to promote ‘democratization’ as a solution to the world’s problems, including in areas of the former Soviet Union, came to define American policy in the 2000s to the great annoyance of Russia and other authoritarian regional powers. In Moscow’s perception, democratic “colored revolutions” in Georgia in 2003, Ukraine in 2004, Kyrgyzstan in 2005, and up to the troubles in Andijan in Uzbekistan in May 2005 were in fact western-supported and directed to undermine Russian influence within the Community of Independent States (CIS). In Central Asia, the “Greater Central Asia” project that aimed to link post-Soviet Central Asia with Afghanistan and South Asia, postulated by scholars such as S. Frederick Starr (2008), came to be seen in the Kremlin as essentially a western ploy aimed at detaching Central Asian from Russia on the heels of the region’s “democratization”. This was at the core of the rupture between Moscow and Washington after 9/11. The latter was amplified by rising disagreements between the US and Russia, France, and Germany over Iraq.

In the early 2000s, instead of concentrating on Afghanistan, the US and some of its allies went headlong into Iraq to topple Saddam Hussein’s regime and famously destroy any “weapons of mass destruction” that may have allegedly been there. The United States’ hasty shift in focus to Iraq stalled any potential momentum towards a more stable and prosperous Afghanistan, diverting resources, personnel, and attention to another theatre of operations. To make matters worse, Washington was then however drawn back to Afghanistan, where it would end up fighting the country’s longest war in the decade to follow. At the time, staying in Afghanistan was in no way inevitable for the United States. In 2003, Washington had arguably achieved its strategic objectives: to deny Al Qaeda a safe haven to plan and conduct terrorist activities, and to dismantle the Taliban’s government. This is what victory in Afghanistan could have looked like and this could have also arguably been a reasonable response to the attacks of 9/11. However, strategic drift, personal ambitions, and a lack of a defined idea about how an end state should
have looked like among American policymakers resulted in an endless war in Afghanistan.

A first miss-step on Washington’s road to getting bogged down in the Afghan quagmire came on May 23, 2005. On that date, a joint declaration by Presidents George W. Bush and Hamid Karzai allowed the United States to combat terrorism from local bases in Afghanistan, but more importantly, signaled an ‘indefinite presence’ of the United States military in the region (Council on Foreign Relations, 2018 (A/B)). Despite the North Atlantic Treaty Organization (NATO)’s ‘optimistic assessment’ in mid-2005 that the insurgency was all but over, the summer of 2006 revealed a bloody resurgence of suicide and improvised explosive device attacks (Ibid; Rashid, 2008). Insurgents took advantage of the Afghan government’s inability to provide basic services in outlying provinces and its failure to maintain control of areas after coalition forces had cleared them. Over the next few years, the insurgency swelled even while coalition troop numbers, regrouped in the International Security Assistance Force (ISAF) until December 2014, steadily increased. In late 2009, American General Stanley McChrystal solicited President Barrack Obama for more troops. Obama acquiesced under conditions, and ISAF troop numbers in Afghanistan surged to nearly 100,000, almost on par with what Soviet military presence had been in the 1980s. At the same time, the American President insisted that the surge was only a necessary step for transition, and marked the calendar for a seemingly arbitrary 2011 drawdown of total forces. Among most of the military, the surge was seen as no less than the culminating blunder of several years of misguided and often absent strategy.

After the surge failed to achieve its rather unclear strategic goals, Obama announced an operational shift in Afghanistan. In 2014, the White House rebranded the Afghan campaign as the Resolute Support Mission. That new plan called for only 9,500 American personnel to stay on the ground to serve as advisers and trainers for the Afghan National Security Forces (ANSF) by the end of 2015. That number was to be reduced to 1,000 troops after 2016 (Council on Foreign Relations, 2018 (A/B)). However, as the situation in Afghanistan deteriorated, Obama waivered and the withdrawal plans faltered though the large majority of international troops did leave Afghanistan by the end of 2015. Despite the continuing presence of more than 25,000 military contractors and 16,000 foreign troops in support roles, the international withdrawal put the increasingly difficult burden of providing security and fighting the Taliban on the ANSF. In 2017, top American military commanders assessed that the latter, despite American aerial support, was struggling against the Taliban. On the ground, it had at best achieved a stalemate (Ibid.).

This was the situation inherited by the administration of President Donald Trump. Based on the military’s grim assessment, the latter allowed for less restrictive rules of engagement and provided the military more autonomy to strike targets of opportunity in Afghanistan. Then, despite his initial instincts to conduct a complete withdrawal, Trump unveiled a different strategy for Afghanistan in August 2017. The strategy favored a condition-based approach instead of arbitrary timetables and troop caps. General John W. Nicholson, the top commander in Afghanistan, hailed the shift as setting ‘the conditions to win’ (Ibid.). Nevertheless, information from the White House in December 2018 indicated the President’s desire to actually see American troop levels reduced by half (Gibbons-Neff and Mashal, 2018). As of February 2019, there were no definite details about the specific timelines of such a curtailing of American presence and on what troops would return. However, most experts agree that numbers were likely to fall below 9,000 by 2020 (Nelson, 2018; Gibbons-Neff and Barnes, 2019).

Against this background, opinions in the US military leadership are split with regard to the effects that a decrease in American presence would have on Afghanistan. Though some seem to believe that decreased American support would necessarily result in deeper turmoil in Afghanistan, an increasing number of military and civilian leaders in the US see it as a prerequisite for meaningful negotiations with the Taliban. In September 2018, this seemed to be the position adopted by Defense Secretary James Mattis who opened the way for negotiations to occur in order to integrate part of the Taliban to a coalition government during a surprise visit to Kabul. Mattis alluded to the possibility of reconciliation with the insurgents saying that, ‘right now, [the US had] more indications that reconciliation is no longer just a shimmer out there, no longer just a mirage. It now has some framework. There’s some open lines of communication’ (NBCnews.com, 2018).

Such talk by a senior American official was a significant development, as it opened the way for an entirely new approach to the Afghan problem. At the very least, a deal with the Taliban would presuppose that the authorities in Kabul would be ready to share power and cede control over some regions to the insurgents. At this stage, this may appear as the only viable approach for the US and the Afghan authorities. By suggesting negotiations with the Taliban – with whom authorities in Kabul and Washington have been in informal contact for a long time –, the US is acknowledging the reality of a split Afghanistan and accepting that in parts of it the Taliban have an actual political legitimacy. In January and February 2019, negotiations between high-level representatives from the US and Taliban were indeed held in Afghanistan and Qatar. They allegedly centred on agreeing that ‘Afghan territory [would] never be used by terrorists’ in the future, and on getting the Taliban to accept the legitimacy of the authorities in Kabul (Mashal, 2019).

Under these circumstances, Washington’s main objective in Afghanistan should be to maintain a low-level of commitment in the future, as an insurance policy against the threat of terrorists using the country as a springboard to strike at the United States, as well as to show its enduring commitment to authorities in Kabul. Nevertheless, Washington should this time make good on its intention to actually leave responsibility for security in Afghanistan to the ANSF after nearly two decades of war. In 2003, President Bush missed a fleeting moment to declare victory in the Global War on Terror, and instead invaded Iraq while Afghanistan festered.
In 2014, President Obama marred his legacy with a disastrous strategy, or lack thereof, towards a failed campaign in Afghanistan. Under the present conditions, there could arguably be no victory on the ground in Afghanistan, but perhaps President Trump’s recent efforts provide the best opportunity for the United States to once and for all terminate the Afghan War amidst a negotiated deal with the Taliban.

**A HISTORY OF HESITANT COOPERATION BETWEEN RUSSIA AND THE US**

Russia has traditionally had a stake in Afghan affairs, seeing that country, as a buffer along its southern flank. Though the collapse of the Soviet Union created five independent states in-between Moscow and Kabul, enduring instability in Afghanistan continued to be seen in the Kremlin as a security threat. Hence, although the trauma of the Soviet-Afghan War weighted on Russia, it nevertheless decided to re-engage in Afghanistan in the 1990s. After 1996, Russia together with Iran and the Central Asian states supported the anti-Taliban Northern Alliance with equipment and weapons (Mamaev, 2000). From that point forward, Moscow’s engagement grew in parallel to its assessment of the importance of the threat represented by the Taliban. In 2000, a senior member of the Putin Administration even floated the possibility that Russia would conduct airstrikes against Taliban military bases (Mihailov, Sokut, and Gornostaev, 2000).

Since the end of the Cold War, Afghanistan has also often been at the centre of Russian-American negotiations, a somewhat ironic fact given the role played by the Soviet-Afghan War in fostering the collapse of the Soviet Union. In fact, three moments can be identified when Moscow and Washington simultaneously turned their gazes to Kabul since 1991. First, in 1992, the launch of the “negative symmetry” framework, the mutual cut of military support to clients in Afghanistan, was the final step of the Soviet/Russian and American disengagement from the Soviet-Afghan War. It was a symbolic moment in the post-Soviet transition because Moscow accepted to abandon its principal foreign client. The move also removed a major hurdle on the path to greater Russian-American cooperation. For Afghanistan, this however marked the start of a period of international disinterest that saw the eventually establishment, with Pakistan’s support, of the Taliban radical Islamist regime in Kabul (Tomsen, 2013; Coll, 2004).

Second, in 2001, Putin was one of the first foreign leaders to commit to President Bush’s War on Terror and support the military intervention in Afghanistan. Despite the opposition of the Russian General Staff that saw American deployment to Afghanistan and military basing in Central Asia as infringements upon Moscow’s traditional sphere of influence (Korotchenko, 2002), Putin accepted American presence, believing that it was also in Russia’s interest to see the end of the Taliban and of international terrorist groups in Afghanistan. In addition, this brought a rapprochement between Moscow and Washington on anti-terrorism, including US support for Moscow’s own “counterterrorism operation” in Chechnya.

Third, in 2009, Russian support to the NATO-led ISAF in Afghanistan was at the centre of the Russia-US “reset”. Moscow green-lighted the transit of ISAF supply missions through its airspace and of non-lethal equipment through its territory as part of the so-called Northern Distribution Network (NDN) (Kuchins, Sanderson, 2010). This allowed the ISAF to lessen its dependence upon supply routes through Pakistan. In addition to the NDN, Russia-US cooperation integrated Russian participation in American operations against drug-production facilities in Afghanistan and a trilateral agreement between Russia, the US, and the Government of Afghanistan for the supply of dozens of Russian helicopters to the Afghan military paid with American money (Puhov, 2011; Skosyrev, 2011; Topychkanov, 2013).

These three moments in Russian-American relations are also interesting in what they constituted lost opportunities to anchor Russia in the Western camp. They were times of incomprehension when, on one hand, Washington believed that Russia was ready to abandon its great power pretenses and mold itself into the western liberal model, and, on the other, Moscow assumed that it was being offered a vice-Chairman role in the Western military alliance. In all three cases, conflicting perceptions arose over the representation of Russia’s power and status. In this context, the last two attempts to start genuine Russia-US cooperation in Afghanistan in 2001 and in 2009 failed for similar reasons. Each time the Kremlin considered that the White House was treating it as junior partner whose interests could be discarded the moment they stopped coinciding with the interests of the US. Other international issues also each time came in the way. Hence, after a brief honeymoon period, Washington and Moscow’s perspectives both times diverged and cooperation stopped despite the fact that the two countries’ objectives remained broadly aligned.

In the early 2000s, Russia’s support to the War on Terror...
was rewarded with Washington bypassing Russian and other countries’ objections to invade Iraq. The Iraq War subverted, in the Kremlin’s perspective, the rationale for intervening in Afghanistan. It destabilized the Iraqi regime, paving the way for the possibility of having another failed state become a safe haven for radical Islamist groups. At the same time, it diverted US focus to the Middle East while the Afghan War was not over. In Afghanistan, the US then failed to commit necessary economic resources to rebuild the country and military presence to prevent the Taliban’s resurgence. Subsequently, American and Russian policies further clashed when Washington backed colored revolutions to unsettle pro-Russian authoritarian regimes in Russia’s “near abroad” of the CIS.

In 2012, the breakdown of Russian-American cooperation can be attributed to a combination of factors. The two main issues were a disagreement over American reluctance to address the rising opiates production in Afghanistan, and, in Russia’s perspective, an apparent American lack of commitment to stabilize Afghanistan (Trenin, Malashenko, 2014). In this context, contacts on Afghanistan dwindled amidst rising Russia-US confrontation in the Middle East and Ukraine. As in the mid-1990s and early 2000s, the Kremlin believed in the mid-2010s that the US was refusing to acknowledge Russia’s legitimate interests in international politics (Kremlin.ru, October 16, 2016). This in turn led to Moscow wanting to increase its political influence in Afghanistan as a way to hedge against the possibility of an unruly Afghanistan arising following the American withdrawal. The policy was also a way to secure a power of nuisance to be used in case the Kremlin considered US policy in the region to be detrimental to Russian interests.

RUSSIAN INTERESTS AND INFLUENCE IN AN “AMERICAN AFGHANISTAN”

Russia’s influence and role in Afghanistan have been dwarfed by the start of the American and NATO interventions. Nevertheless, it is worth stressing that there will always be a substantial difference between Russian and American stakes in Afghanistan. While the importance of Afghanistan for American foreign policy is dependent on the current international environment, Russia’s concerns with the stability of Afghanistan are permanent because they are determined by geography. In this context, instability in Central Asia will always represent more of an issue for regional powers such as Russia than for the US. Nonetheless, Russia’s view of Afghanistan is not akin to its perception of areas that used to be part of the Russian Empire. Although there is the negative legacy of the Soviet-Afghan War, Moscow’s relation with Kabul is actually not as emotionally charged as its relation with countries of the former Soviet Union or even of the Warsaw Pact. Until 1979, Afghanistan was a buffer state along Russia’s southern flank. It had good relations with Moscow, but had never been part of its sphere of influence. In many senses, this means that Russia’s policy towards Afghanistan is more “de-emotionalized”, including with regard to US involvement.

This is an aspect that Washington needs to keep in mind when dealing with Moscow in and on Afghanistan. Unlike in Central Asia and in Ukraine, Russia is likely to operate in Afghanistan based only upon what it pragmatically perceives to be its interests. In turn, there is little doubt that the US could benefit from the support of Russia and other regional powers in its Afghan mission, especially now that it has reduced its military role on the ground. As Afghanistan is sliding back into chaos, finding a way to stabilize the country remains an American priority. This will be complicated to do if Washington is unable to coopt at least some regional powers in support of its policies. In this regard, Russia appears as one of the likelier candidates for that role. Unlike Pakistan, it does not wish for the establishment of an uncontrolled and aggressive radical Islamist regime in Kabul. And, unlike China, it is less worried about continued American military presence in Afghanistan. With regard to Beijing, Moscow may in fact play a constructive role in facilitating contacts with the US, especially given that China and Moscow now tend to jointly operate in Central Asia through the Shanghai Cooperation Organisation (SCO). The latter entity also includes all the Central Asian states, except Turkmenistan. The latter are similarly concerned with insecurity in Afghanistan and have their own ways of dealing with their respective joint border with that country (Safranchuk, 2017).

Russian interests in Afghanistan are mainly in countering
two threats that Moscow sees as emanating from that country. First, the Kremlin is concerned with destabilization spillover from Afghanistan to Central Asia and then to Russia, possibly fueling the radical Islamist insurgency in the Caucasus. Since 2015, Russia’s concerns have grown exponentially as the Taliban became more active in areas bordering Central Asia, particularly Tajikistan (Iskandarov, Iskandarov, Safarshchuk, 2016). The occupation of Kunduz in October 2015 – the first time the Taliban seized a provincial capital since 2001 – came as a sign of shifting conflict patterns. For Moscow and its Central Asian allies, the consolidation of radical Islamist armed groups’ in Northern Afghanistan means an increased risk that instability would transfer to Central Asia. That threat is compounded by the fact that radical Islamist armed groups in Afghanistan include fighters from Central Asia and the Caucasus, who may, after a Taliban’s victory in Afghanistan, shift their attention back to their home countries. Since 2016, this threat assessment has been re-evaluated to include the risk that radical Islamist groups from Iraq and Syria – notably the Islamic State (IS) – may likewise try to establish themselves in Afghanistan. The recent appearance of areas controlled by IS-offshoots in Afghanistan gave considerably more credence to that risk. In this context, Moscow’s assessment of the situation in Afghanistan has led it to favor any type of political authority that could bring some stability to the country.

Second, drug trafficking from Afghanistan to Russia and Europe has had catastrophic proportions since the fall of the Taliban. Since the late 2000s, Russia regularly ranked among the top heroin-consumer countries while all opiates in Russia come from Afghanistan. In 2016, almost a quarter of the people who injected drugs worldwide resided in Russia and Ukraine (UNODC, 2016). After a decrease, the volume of opiates trafficked on the northern route from Afghanistan through Central Asia to Russia grew again, recovering in 2014 the level it had in 2009. Over 6.3 tons of narcotics were thus smuggled along that route in 2014 (UNODC). Although Russia registered its lowest level of drug-related deaths in 2014 in over a decade and synthetic drugs have increasingly come to dominate the domestic drug market (UNODC, 2018), the use of opioids remains a major issue in Russia. To address what has become a national health emergency, Russia had initially reinforced the role of its Federal Drug Control Service (FSKN) and tried to put pressure on Central Asian regimes to tighten border control in the Fergana Valley in the early 2010s (Sabir, 2010). In addition, Moscow insisted to Afghan authorities that the drug economy was fueling the insurgency. In 2015, a senior Russian official from the Ministry of Foreign Affairs (MFA) claimed that armed groups in Afghanistan made some $500 million a year from the drug trade (Mid.ru, December 29, 2015). At the same time, Russia repeatedly reached out to Washington to push it to more actively destroy poppy fields in Afghanistan, especially as most of them were located in insurgent-controlled territories. Yet, as shown by the steady amount of drugs going through the northern route, these policies have so far proved ineffective. While Moscow’s concern with opioids had at some point diminished, leading notably to the dissolution of the FSKN in 2016, it has again become high on the agenda in 2018 (Federation Council, 2017).

With regard to both issues, despite existing divergences, Russian and American interests broadly converge. The US is interested in a consolidation of the authorities in Kabul and in a decrease in opiates production in Afghanistan. The latter issue is likewise important for American allies in Europe. In both the United States and Western Europe, the use of opiates – in particular heroin – has been on the rise in recent years. In the US, the annual prevalence rate of heroin use has actually doubled between 2010 and 2016 (UNODC, 2018). Yet, unlike in Russia and Western Europe, American heroin does not predominantly come from Afghanistan (Council on Foreign Relations, 2019).

At the same time, while competing views have always existed in Moscow over military presence in Afghanistan and Central Asia (Safranchuk, 2009; Trenin, Malashenko, 2010; Kazantsev, 2012), there are indications that Russia is now more worried that a complete US withdrawal would leave Afghanistan worse off than it was in 2001. Since 2014, Moscow’s concerns over American influence in Central Asia have been eased up by the withdrawal of most NATO forces (Bordachev, Small, and Qingsong, 2016). In this context, and as it sees how the Afghan military struggles to not lose ground to the Taliban, Russia may assess that the window of opportunity to prevent the country from sliding back into anarchy is closing. In case of a full American political and military disengagement, Russia would need to immediately step-up its level of commitment in Afghanistan. The latter is problematic for Moscow, as it is unlikely that it would ever consider or be capable of staging a ground military involvement on its own, and it is far from certain that it would be able to set up some form of cordon sanitaire around Afghanistan even if it tried.

Last but not least, Moscow took steps to increase its ties with Kabul since 2007, stressing the importance of pre-1978 Soviet-Afghan relations and the positive aspects of the communist modernization project (Laruelle, 2009; Klimentov, 2011). That rise of Russian influence was initially marked by a rise in bilateral trade that almost doubled between 2010 and 2014 to reach close to $1 billion (Rusexporter.ru, May 25, 2015), even though it was still driven by Russian raw materials exports and came in parallel to Afghanistan increasing its bilateral trade with all its neighbors. Although economic relations plummeted since 2015 because of Afghan instability and limited resources – with bilateral trade being at around $200 million as of 2017 (Afghanistan.ru, 2017), both sides remain keen on strengthening them.

At the same time, Moscow has reinforced its political influence in Afghanistan. In that case, it was able to rely on some of the former Afghan pro-communist leaders such as Rashid Dostum, an Uzbek warlord from Jowzjan Province who is now serving as the Afghan Vice-President. The latter hence came to visit Ramzan Kadyrov in Chechnya in October 2015. Most recently, Russia has also been able to expand its contacts with the Taliban. This was evidenced when Moscow hosted an inter-Afghan peace summit in November 2018. The later was followed by another round of talks gathering
different Afghan political actors in February 2019 (Higgins and Mashal, 2019).

Though it was efficient in rebuilding some presence in Afghanistan, Russia does not have the influence, nor the resources to steer Afghanistan back to stability by itself or for that matter to significantly thwart American policy in the region. Russia likewise does not appear capable of dealing with the issue of Afghan opiates by acting only at the levels of transit in Central Asia and consumption in Russia. To advance its interests, it needs to cooperate with the US and with the pro-American government of President Ashraf Ghani in Kabul. The latter has so far been at the same time open to Russian involvement, but also wary of Russia reaching to the Taliban and befriending opposition political figures such as former Afghan President Hamid Karzai.

**CHARTING A WAY FORWARD**

Rising conflict levels and a complex political environment have created the need for Russia-US cooperation in Afghanistan. Thus, the handover of security to the ANSF and the end of combat operations by the US have exacerbated an already dire situation. According to the Special Inspector General for Afghanistan Reconstruction, the Taliban and other armed groups controlled 12.3% of the Afghan territory while another 33.9% of the country was contested as of October 2018 (SIGAR, January 13, 2019). Since August 2016, the trend is for more areas to fall under the control of insurgent forces or become contested (Ibid). In this context, the growth of uncontrolled areas may allow for the implementation of radical Islamist and transnational terrorist networks (Forest, 2016). This would represent a major security threat for both Moscow and Washington and helps explain why both have warmed up to negotiating with the Taliban on the condition that they ensure that Afghanistan does not become a safe haven for international terrorism. In this context, despite speculations that the US would be further reducing their presence in Afghanistan in 2019, the future of American policy in the region remains mostly unclear (Gibbons-Neff and Mashal, 2018). As of late 2018, the fact that American air strikes in Afghanistan were at ‘levels unseen since the height of the war’ did not indicate a loss of commitment of the American military to stabilizing the country (Ibid.).

While it has from the start been ambivalent about the prospect of prolonged US presence in Afghanistan – even pushing Washington to pledge that it would make Afghanistan into a neutral country as part of the “reset” (Mid.ru, February 18, 2011) – Moscow appears to have come to terms with some level of American presence by the mid-2010s. Furthermore, Russia seems to be now genuinely worried about the possibility that the US would leave without achieving a solution. In 2016, the former Russian Ambassador to Afghanistan, Zamir Kabulov, was forecasting that the US might need to re-deploy to Afghanistan to maintain an acceptable level of security in the country. More surprisingly, he seemed to not be against continued American involvement and was mostly critical about US lack of progress in propping the fighting capacity of the ANSF (Mid.ru, April 6, 2016; October 9, 2016). This was in line with similar statements by Kabulov dating back to 2015 when he was most critical about ISAF’s failure to build a ‘democratic centralized government’ in Afghanistan, the unclear strategy behind Obama’s Resolute Support Mission, and the ANSF overall incapacity to fight the Taliban on its own. At the time, the Russian official seemed most concerned about the possibility that the Afghan crisis would worsen amidst the American withdrawal. Among major issues, he listed the Taliban resurgence, the opiates trade, and the arrival of IS to Afghanistan (Mid.ru, December 29, 2015; October 9, 2015). According to Kabulov, given the scope of these challenges, ‘it [was] difficult to imagine that [the Afghan authorities] would be capable of solving even part of these problems on their own’. To achieve this, ‘Kabul would need the efforts of the entire international community’ (Ibid.).

This is not to say that Russia is not already charting its own course in Afghanistan with the latter being at times at odds with the American strategy. However, repeated US claims that small quantities of Russian arms were making it to the Taliban should not be taken as evidence of a ‘proxy war’ as put by some analysts (Blank and Kim, 2018), but more as a sign that Russia is hedging against a US withdrawal by developing contacts with all Afghan political actors. In any case, Russia has neither the capacity, nor – most importantly – the interest to see the US fail in Afghanistan. In that sense, Moscow was pleased with the fact the Washington finally opened direct negotiations with the Taliban. Speaking positively about this development, Kabulov has recently pushed for regional powers to be included in the talks (Krivosheev, 2019). In addition to negotiating with the Taliban, the Kremlin still wants for the US to invest resources to strengthen the ANSF. Although it believes that a complete military victory is not possible for Kabul, Moscow is assessing that to be able to realistically negotiate with the Taliban, the ANSF has to be able to hold its own without American support. This is also the assessment made by the American military.

In this context, Moscow has long lamented the breakdown of cooperation with the US on Afghanistan, arguing that a joint approach may help improve the situation and had the support of various political forces in Afghanistan. In December 2018, Hamid Karzai thus stressed the importance of including regional powers – Russia and China – in discussions over the future of Afghanistan (Afghanistan.ru, December 6, 2018). On the Russian side, Alexander Grushko, the Representative to NATO, claimed in July 2016, that ‘[Rus sia] [was] not putting up any condition’ to re-start contacts on Afghanistan and that ‘by stopping cooperation’, ‘[NATO] [was] worsening the situation in this country’ (Mid.ru, July 7, 2016). Against this background, Washington allegedly proposed to reboot the Russia-US working group on Afghanistan in late 2018. If confirmed, the move would signal that the US is also ready for a constructive dialogue with Moscow on the issue (Mid.ru, November 2018). The fact that Washington has warmed to the idea of an intra-Afghan dialogue may have also played a role in that regard, and Kabulov’s recent remarks suggest that Russia may in return be part of the dialogue developing in Afghanistan. In that sense, Moscow
would be exceptionally well placed to channel the interests of the countries neighbouring Afghanistan.

In addition to political support, possible areas for Russia-US cooperation include the fight against opiates production in and trafficking from Afghanistan and the support to the ANSF. While the issue of drugs is higher on the Russian agenda than on the American, there is little doubt that Moscow and Washington agree that strengthening the fighting ability of the ANSF is a top priority. On both issues, Russia, with its geographic proximity to and influence in Afghanistan and Central Asia, may be a valuable partner to the US.

For long, Moscow’s capacity to fight opiate production in Afghanistan was limited. Since 2001, disputes on the necessity to eradicate poppy fields in Afghanistan, even if it meant alienating the Afghan peasantry, have plagued Russia-US talks (Trenin and Malashenko, 2010). Finding a way to resolve this issue would remove a major hurdle toward renewed Russia-US collaboration, potentially allowing for the re-start of intelligence sharing on drug production facilities and other forms of cooperation. While ISAF’s limited commitment to destroy poppy fields in Afghanistan has produced mixed results in curbing support to the insurgency, it has fueled corruption at all echelons of the Afghan State bureaucracy (Rashid, 2008). To date, poppy cultivation in Afghanistan remains most prevalent in insurgent-controlled areas and contested districts (SIGAR, January 13, 2019), indicating how the latter is closely linked to the dynamics of the conflict. Ironically, this issue may be however now less central in bilateral discussions due to the fact that American forces are less active on the ground in Afghanistan. To address this issue, Moscow and Washington would both need to work through Kabul and/or devise other ways to prevent the flow of opiates from Afghanistan. One possibility would be to see to which extent eradicating poppy fields by aerial chemical spraying in areas under Taliban control might be acceptable to Kabul. At a regional level, opiate production in Afghanistan is an issue that is also high on the agenda of other countries.

Since Soviet times, the Afghan army has been a bastion of Russian influence in Afghanistan. Many Afghan officers were trained in Moscow, fought for the communist regime, and are used to operating Russian armaments. Joint support to the Afghan military with the US is also attractive because it has the backing of authorities in Kabul. The main opportunity would be in re-starting US-Russia collaboration to equip the Afghan Air Force with Mi-17 and Mi-35 military helicopters, as well as work on joint programs to train Afghan crews and deploy Russian teams to refurbish and maintain aircraft dating back to Soviet times (Topychkanov, 2013). During the “reset”, a contract to supply 21 Mi-17 helicopters was signed. The helicopters were delivered by Rossoboronexport and paid for by the US (Skosyrev, 2011). By 2014, 63 helicopters had been supplied by Russia under new contracts (FSVTS, December 9, 2014). Talks for additional aircraft were frozen after the US imposed sanctions on Rossoboronexport, the Russian state arm exporter. Some ties were however maintained to allow for the maintenance of the delivered helicopters by Russian specialists.

Although the Afghan authorities have pushed for the supply of more helicopters, Moscow has made clear that it will not supply advanced weapons free of charge. And, in late 2016, Kabulov called for the Afghan authorities to use Western money to buy Russian helicopters (Mid.ru, February 15, 2016; October 8, 2016). He however confirmed that Russia would continue to supply the Afghan army with a limited number of small arms as it has done since the 1990s (Ibid.). Since 2017, the US have initiated a transition to replace Russian helicopters with Black Hawks, though the latter’s characteristics are apparently less adapted to Afghan terrain. The new helicopters also cannot be serviced by Afghans and are more expensive (Defensenews.com, July 27, 2018). To date, this remains an issue, particularly given that more Mi-17 are planned to be retired by 2021, which may impact on the fighting capability of Afghan forces. In this context, it would may be possible to devise a plan to have both types of helicopters operate in Afghanistan, especially since Afghan pilots often continue to be trained on the Russian models.

At this stage, a first step toward renewed cooperation on security matters may include the resumption of intelligence sharing on Afghanistan and of contacts between Russian and US military experts. As a second step, Russia and the US could consider expanding such consultations to include China, Pakistan, India, and Central Asia countries in a joint format. For Washington, it is important to note that American reluctance to liaise with regional powers may lead them to chart their own policies in Afghanistan, including ones that would be against American interests, as Russia is already sometimes doing. At the same time, Washington retains the leadership in Afghan affairs since no other country, including Russia, would be ready to deploy troops, although Russian MFA officials have at times not discarded the option of conducting airstrikes, notably against IS (Mid.ru, October 9, 2015).

In turn, cooperation with Russia in Afghanistan may bring a series of returns for the US. While the NDN is no longer needed, it may be useful to not discard this option for the future given the chronic instability of the region. In parallel, Washington needs to be careful to not again make the mistake of outsourcing its regional foreign policy to Pakistan as it has done in the 1980s and in the 2000s (Tomsen, 2013; Coll, 2004; 2018). Because Islamabad has proved duplicitous in the past and likely remains interested in the establishment of a militant radical Islamist regime in Kabul to have “strategic depth” against India, keeping Pakistani influence in Afghanistan in check is important. A way to do so would be to balance US support to Pakistan with consideration toward the interests’ of other regional powers. In this context, Russia, China, India, and Iran represent natural counterweights to Islamabad.

CONCLUSION

There are international issues on which Russia-US collaboration may be perceived as being more immediately needed than on Afghanistan. However, it is difficult to start with
the most politicized problems where positions have become entrenched. Instead, it is easier to first build understanding by addressing problems where interests are broadly aligned. Afghanistan is one such issue in Russia-US relations, and has been so for a long time. With regard to overall Russia-US relations, though it is unlikely that cooperation on Afghanistan may by itself lead to a definitive improvement in bilateral ties, it may constitute an area immune to the occasional degradations in the relation.

At the same time, Afghanistan represents a strategic issue, which Russia and the US cannot afford to disregard. The international community’s best bet at stabilizing Afghanistan is in presenting a united front. The US should lead the way, but work to include regional powers – Russia, Pakistan, China, India, Iran, Uzbekistan, Turkmenistan, and Tajikistan. One way to do so may be to involve the SCO in which Afghanistan became an observer state in 2012 and that has a contact group to manage contacts with Kabul. This would mean however that regional powers would also have to do their part. For Russia, this could mean agreeing to American military bases and influence in the greater Central Asian region. By contrast, if the US fails at bringing regional actors together, each one of them is likely to try to safeguard its own interests against an increasingly volatile Afghanistan. In this scenario, Moscow, Iran, and the Central Asian states may want to again maintain a buffer in North Afghanistan by supporting local non-Pashtun militias. Such a scenario would open the way to the partition of Afghanistan and likely result in even more violence and insecurity.
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MONEY WITH DIAGNOSIS: U.S.-RUSSIAN COLLABORATIONS IN BIO TECHNOLOGY FOR THE FUTURE OF HEALTHCARE

INTRODUCTION

The healthcare industry encompasses various organizations that offer products and services to people in need of preventive, rehabilitative, or curative treatments. This industry encompasses a complex network of organizations including government-run entities, private companies, hospitals, and non-profit agencies. Global healthcare spending is projected to exceed $8.7 trillion USD by 2020 and is one of the largest workforces in the world. The healthcare industry is a significant component of every nation’s economy and can also serve as a powerful unifying common ground between countries, because of the singular mission to provide the best quality medical care for patients. [1] Innovation is an integral part of the healthcare industry. Private sector businesses largely drive the translation of innovations into practice, as incentivized by vast monetary gains.

Biotechnology is one of the key areas of the high-quality technological development in a number of industries. In a broad sense, biotechnology could be defined as a scientific discipline and field of practice between biology and technology, studying the ways and methods of changing the surrounding natural environment in accordance with a person’s needs [1].

The biotechnology sector can be broadly divided into three...
key areas: biomedicine (60% of the biotechnology market), industrial biotechnologies (35%), and agrobiotechnology (5%), as seen in Figure 1. Since, biotechnology is used in various industries and affects many spheres of human life, the following “color” classification of biotechnology is globally accepted [2):

1) «Red» – healthcare biotechnology, including potential genome editing, as well as the production of biopharmaceutical preparations (proteins, enzymes, antibodies);
2) «Green» – development and creation of genetically modified (GM) plants, resistant to biotic and abiotic stresses, defines modern methods of agriculture and forestry;
3) «White» – biotechnology in the food, chemical and petroleum industries;
4) «Gray» – environmental activities, bioremediation;
5) «Blue» – usage of marine organisms and raw materials.

In this paper, we will largely be focusing on biomedicine, under the segmentation of «red» biotechnology, due to its direct impact on the healthcare sector. Modern biotechnology projects look like they just stepped out of a sci-fi book, from reviving the dead, cloning pets, to restoring youth. The goals and achievements of these companies are hyped by the media, whereas in fact, their success may well be more modest. “In a world where there’s no value, this one, certainly, I would serve up as a value play,” says a partner at Stifel Nicolaus Investment Bank, Chad Morganlander [3]. However, the value of various biomedicine products and companies is enormous and filled with potential.

Medical biotechnology is a new favorite field for investors globally. According to FierceBiotech, in 2013, 39 biotechnology companies’ Initial Public Offerings (IPOs) were held worldwide. These companies raised over $3 billion USD, which nearly doubled in 2014 to 79 placements for more than $6 billion USD (Figure 2,3). Growth will continue at a momentous rate, as the global biotechnology market is expected to reach $727.1 billion USD by 2025, according to Grand View Research, Inc [4].

HISTORICAL PERSPECTIVES

Cooperation in healthcare, biomedical sciences, and biotechnology has been a prominent aspect of U.S.-Russian relations since the 1950s when the United States and the Soviet Union signed the Lacy-Zarubin Agreement “on Exchanges in the Cultural, Technical and Educational Fields” [5]. This agreement fostered scientific exchanges and broad achievements, including enhancing biosafety systems at Russian research centers, exploring molecular structures in the laboratories of both countries, and investigating microbes. Despite international political turmoil, scientific collaboration between the two countries has led to astonishing results in addressing infectious diseases, mainly to prevent potential epidemics of deadly communicable diseases, including smallpox, Severe Acute Respiratory Syndrome (SARS), polio, Human Immunodeficiency Virus (HIV), avian influenza, and even the A/H5N1 virus [1].

During the Soviet era, the two countries coordinated their healthcare relations and medical investigations through a complex set of mechanisms, including high-level official summits and ministerial meetings. With the Soviet Union’s collapse in 1991, further development required new ways of dialogue in the healthcare field. This initiative took form as the 1993 Gore-Chernomyrdin Commission, a special bilateral treatment established to maintain political collaboration. Within the field of healthcare, the commission emphasized infectious disease control, quality care access, preventive medicine, and treatments for depression, substance abuse, alcoholism, diabetes, cardiovascular diseases, maternal and child health, reproductive health, and environmental health [5].
The post-Soviet period has been marked by a struggle for survival for the Russian biotechnological sector. Before the collapse of the USSR, the industry lived and developed centrally under the full control of the government, which did not function productively until the 2000s. The end of the USSR hit the pharmaceutical industry particularly hard: it was forced to function in new market conditions. The main goal of pharmaceutical companies was to profit from already developed and approved medications, however, there was no one to invest in domestic innovative developments [6].

At this time, Western countries continued the development of evidence-based medicine and pharmaceuticals. The pace of their development spurred as breakthroughs in fundamental science and technological advances in biotechnology continued. The National Institutes of Health (NIH) in the U.S. invested billions of dollars in the development of fundamental science, which funded major scientific developments and led to the commercialization of scientific products by private funding [6,7].

In more modern times, in 2009, Presidents Barack Obama and Dmitry Medvedev established the U.S.-Russia Bilateral Presidential Commission (BPC), as an essential component of their commitment to break the political tension between the two countries and foster collaboration over a wide array of topics. Unlike the Gore-Chernomyrdin Commission, the new commission was not as formal and permitted some level of flexibility. Instead of focusing only on government-to-government programs, this new strategy developed institution-to-institution and scientist-to-scientist relationships in both the public and private sectors.

Both the U.S. and Russia have vast scientific resources that, if consolidated, could boost innovation and economic growth in both countries. Joint endeavors to fight against noncommunicable diseases, including heart disease, diabetes, and cancer – critical drivers of mortality and morbidity – could improve and prolong the lives of millions of Americans and Russians. Innovations cannot be fully impactful when they cannot be translated into reality and brought to the customer, in this case to physicians, hospitals, and the patients themselves. This current point in time is a critical moment to create joint U.S. and Russian healthcare collaboration between both private sector company partnerships and government initiatives.

RESEARCH QUESTION

With the mission to understand the needs of biotechnology corporations and support U.S.-Russian collaborations, we aim to pursue the following primary research question: How can Russian and U.S. companies and government representatives collaborate to support healthcare innovations?

This research question will require action from both the private and public sectors in each country. First, both U.S. and Russian governments can learn from each other by identifying and implementing successful federal policies from the other country that support the translation of innovations into clinical practice. Then for private businesses interested in bilateral collaboration, there are opportunities to jointly develop discoveries (research and development (R&D), big data, and medical devices) and enter the other country’s market. Through our research, we aim to identify specific policy proposals for both the U.S. and Russian governments to support biotechnology companies to transition from R&D to the market. Additionally, we will propose specific opportunities for collaborations between both countries to support healthcare business growth.

THE BIOPHARMACEUTICAL INDUSTRY

The Russian and the U.S. healthcare systems have different core structures, resulting from divergent government and market-centric values. However, both countries have undertaken significant healthcare reforms in the last 25 years that have led to systems that both rely upon private and public stakeholders. The U.S. government has focused on creating a system that is driven by the private-sector. With the Affordable Care Act, this system has been increasingly complemented by larger government expansion of access and insurance schemes for the elderly and low-income individuals, through Medicare and Medicaid respectively. While there are still several millions of uninsured patients in the U.S., all individuals in Russia have access to free healthcare and medical coverage provided by the government. However, the Russian healthcare system has also become more reliant on private, market-driven corporations to provide cost-effective and efficient care to individuals who can afford out-of-pocket insurance and medical bills [8]. These principles also have a trickle-down effect to how the biotechnology industry is situated in the larger healthcare sector.

Both the U.S. and Russian biotechnology sectors are in periods of rapid expansion, which could allow for fruitful collaborations. The U.S. biotechnology industry is the most successful in the world based on revenue, R&D, and size. The prominence and success of U.S. companies within the biotechnology market mean that there is a wealth of companies that are looking to expand in the international sphere. In 2017, the biotechnology industry had a total revenue of $112.2 billion USD, despite a slight decline within the last two years. There has been a steady growth of publicly traded companies, from 317 in 1997 to 460 in 2017. This growth is remarkable, especially given that there has been an overall declining trend of total publicly listed companies in the US over the same last twenty years [9]. A select number of multi-billion-dollar corporations control the biotechnology industry in the U.S. In particular, Gilead, which primarily develops and commercializes antiviral drugs, contributed to 30% of all U.S. biotech revenue, $18.11 billion USD, and also accounted for 44% of the total industry growth. The other significant biotechnology corporations include Amgen, Biogen, Celgene, and Regeneron Pharmaceuticals. These five companies all together make up almost 85% of U.S. biotech-
The Russian pharmaceutical market is one of the fastest growing markets globally and is set to comprise $20.91 billion USD of every 2016 to $38.56 billion USD by 2021. This pattern speaks to a compound yearly development rate of 13%, as indicated by research and consulting firm GlobalData [11]. This growth in the Russian market is driven by improvements in regulatory guidelines and government initiatives to develop the domestic pharmaceutical industry. For instance, the Federal Drug Reimbursement Program gives uniform free access to more than 350 medications to Russian nationals notwithstanding financial status [12].

The execution of a state program in 2014, which had the goal of enhancing the social insurance industry, has positively influenced medication production in Russia [13]. The program’s essential objectives incorporate creating household drug generation, expanding residential restorative gadget creation, and enhancing state directions for the dissemination of prescriptions and medicinal gadgets. In 2015, the local component of the overall drug industry of medication was 27.2%, and the administration intends to build this number to 50% by 2020 [11].

In Russia, the creation of a focused market for non-marked conventional prescriptions has determined pharmaceutical deals. In 2015, the share of generics, accounted for 59% of all medications in Russia. At the point when considered by volume, conventional medications represented 85% of promoted deals [14]. In this sector, the Russian organization Pharmstandard is one of the leading conventional makers in the nation, and delivers and showcases a scope of generic and branded pharmaceuticals, biogenerics, and dynamic active pharmaceutical ingredients.

Notwithstanding generics, the Duma has supported a strategy to develop the domestic biotechnology industry. In particular, the legislature stated its desire to build ten production lines committed to assembling biosimilars by 2020, a considerable venture that would cost $265.3 million USD. Russia is now building up its biosimilars rules for medications which are almost indistinguishable to existing items. Draft rules were set up in 2014 by the restorative and pharmaceutical enterprises and submitted to the Ministry of Health, which are relied upon to be ordered later in 2018 [13].

For pharmaceutical organizations that want to benefit from the Russian market in the coming years, the nation’s expanding center around biotechnology offer a critical opportunity. In 2012, the administration adopted the Comprehensive Program for the Development of Biotechnology in the Russian Federation through 2020. The program sets as its focus the advancement of the biotechnology industry and will require $31.8 billion USD in financing from 2012 to 2020. [15]

**DRUG DEVELOPMENT REGULATIONS**

Drug development is a lengthy, expensive, and rigorous process. In the U.S., after companies identify and optimize the medicine of interest, an average of 10-15 years and $2.6 billion USD is required to gain FDA approval. The stages in drug development that a novel product must pass include: laboratory and animal preclinical tests, investigational new drug applications, Phase I-III clinical trials in humans, new drug or biologic license applications, and approval. Additionally, the process is highly risky, as many investigative medicines fail to enter the market in the final stages, as only 12% of medicines that enter clinical trials become approved by the FDA [15]. Since each step requires significant capital and time before potential profit, many startups cannot afford to undertake parts of this challenging process and instead desire to be acquired by larger companies after they prove their idea and concept.
Since over 90% of the private sector’s R&D budget goes to proving safety and effectiveness to regulatory bodies, efforts to simplify the process can highly incentivize companies to work to bring a product to market [15]. For especially desirable products, the FDA has policies to access expedited review for high-need drugs and incentivize companies to focus on research and development (R&D) on specific drugs. There are several major FDA programs to increase drug development: Fast Track, Breakthrough Therapy, Accelerated Approval, and Priority Review (Figure 3). Both Fast Track and Breakthrough Therapy help to make the process of pre-market less burdensome for companies by expediting the review of new medical products that treat significant or life-threatening conditions. Some conditions that are included in this category include AIDS, Alzheimer’s, heart failure, cancer, diabetes, and depression. Products that would qualify for these designations should dramatically improve existing therapies through clinical outcomes, effectiveness, diagnosis, or safety. Accelerated Approval allows for drugs filling unmet medical needs to be approved by surrogate endpoints. A surrogate endpoint is associated with, but not itself, a direct measure of clinical benefit, such as the reduction in tumor size or a laboratory measurement. Finally, Priority Review provides a four-month reduction in review time, from 10 to 6 months, for drugs that improve safety, effectiveness, diagnosis, or prevention.

Currently, similar expedited processes exist in Russia for seven nosologies only: hemophilia, cystic fibrosis, pituitary nanism, Gaucher disease, malignant neoplasms, and others [16]. However, we believe that the list of diseases should be expanded by the Ministry of Health, given the success of the FDA process to direct drug development in the U.S. private sector.

**THIRD EXTRA MECHANISM**

Russian companies have a potential to become a “window to the market” for Western companies that are looking for opportunities to expand their customer base. However, foreign entities must work with Russian companies to enter the markets based on the “Third extra” rule. “Third extra” is a specific regulatory mechanism that is designed to support Russian manufacturers of medicines and medical supplements for public procurement. Under this policy, a foreign supplier is not allowed to compete if at least two companies from the countries of the Customs Union have filed applications with their analogs [17]. However, these partnerships can provide an excellent opportunity for all parties to access new customers and tap into billions of potential revenues. The Russian market still offers a tremendous opportunity for potential profit, as there is significant demand for products that outweigh the current supply. Government officials should also recognize the significant diplomatic potential in healthcare. Private sector partnerships could play a crucial role in establishing cooperation, exchanging shared experiences, and harmonizing Russian legislation with high international standards.

The import substitution law spurred the industry, especially significant players. Russian pharmacists are rapidly increasing their presence in the domestic biotechnology market, ousting foreign suppliers. Just two years ago, the share of domestic drugs in the Federal program “Seven Nosologies” providing free drugs for patients with the costliest diseases did not exceed 9%. In 2018, this program was expanded to encompass five additional diseases. Today that number has tripled to 26%, according to Dmitri Morozov, CEO of BioCAD [18]. One result of these changes is that Russia is now a new market leader for hemophilia medicine, “Generium”. Preparations from hemophilia are included in the state program for the purchase of expensive drugs for the treatment of rare diseases, «Seven Nosologies», mentioned before. However, the main volume of supplies worth about 5.8 billion rubles is provided in cooperation with the US company Baxalta (acquired by Shire Plc). Thus, together, the companies acquired about 70% of the market for hemophilia drugs [19].

While there has been a focus on encouraging domestic production of medical products in Russia, there still are substantial existing needs for specific drugs and medical devices, such as for cardiovascular diseases, cancer therapeutics, and other chronic diseases. Additionally, the rapid growth of the Russian biotechnology sector serves as a valuable opportunity for U.S. companies that are seeking to expand their product market and develop valuable scientific relationships. To access the full benefits of Russian biotech-

**AREAS FOR U.S.-RUSSIAN COLLABORATION:**

The field of healthcare and biotechnology provides a wealth of opportunities for mutually beneficial U.S.-Russian relationships. Major areas where we propose specific collaboration include: the creation of private sector partnerships to enter the Russian market for U.S. biotechnology companies and the development of international medical clusters.
nology policies, U.S. companies should prioritize the development of Russian partnerships, which would allow them to enter the market despite the “Third Extra” policy.

INTERNATIONAL MEDICAL HUBS

The creation of international medical hubs provides a productive environment for innovation and fosters cross-country collaboration between the U.S. and Russia. These hubs bring together multiple biotechnology startup companies, healthcare experts, and/or clinics for product incubation and experimentation. Some examples of already established medical clusters where there are significant U.S.-Russian interactions include the Moscow International Medical Cluster (MIMC) and Texas Medical Center (TMC).

In order to support the development of a modern healthcare system in the Russian Federation, the Moscow government announced the development of the Moscow International Medical Cluster to promote cooperation in creating an independent platform to consolidate the expert community and various industry participants [20]. MIMC is part of the Skolkovo Innovation Centre, on the outskirts of Moscow and will open in early 2018. In this international cluster, there will be several clinics from different countries that can apply their domestic treatment protocols, medicines and equipment without extra licensing. Uniquely, this model allows for the application of a flexible regulatory framework within a single territory and the autonomy for each participant to act as independent experts for clinical care and testing of pharmaceuticals and equipment [21]. The University of Pittsburgh Medical Centre (UPMC), has confirmed interest in opening a branch in MIMC, in addition to clinics from Israel, South Korea, Japan, the U.K., Germany, and Spain. The main goals of MIMC are to promote new models of healthcare organization, medical care, and health technologies [22].

Texas Medical Center (TMC) became the prototype for the implementation of the MIMC. TMC is the largest medical complex in the world, composed of 50+ hospitals in Houston, Texas. Within TMC also includes TMCx, a startup accelerator that help participants develop their biotechnology companies, and TMC3, a biomedical research hub between industry and academia. For these partners, TMC acts as an umbrella association, giving a framework and hierarchical help, yet generally giving them a chance to work autonomously. TMC has a profoundly worldwide clientele base, inferable from Houston’s diversity and globally renowned status [23].

International medical clusters can help with the issue of the length of clinical trials, which may act as a bottleneck for drugs to enter the market. Clinical trials are required in Russia and the United States for the successful submission of a registration dossier [24, 25]. Biotechnology and healthcare businesses have high social responsibility and obligations, yet certain precautions must be made to ensure drug safety. However, international medical clusters can become platforms for multicenter international clinical trials, as well as act as guarantors of the purity, reliability, and credibility of the trials. These areas can establish sustainable international collaborations to speed up the adoption process of new drugs without compromising on quality or regulatory standards. In these hubs, companies can conduct a full range of clinical studies in an area that will allow for the registration and release of the drug in multiple country markets.

POLICY PROPOSALS

Biotechnology development is affected by the following four main policy areas: 1. Research Collaborations, 2. Intellectual Property Rights, 3. Regulatory Approval, and 4. Market Access [26]. We will apply this policy framework to the issue of U.S.-Russian biotechnology collaborations and propose policies in each category to facilitate biotechnology partnerships between across both private and public sectors.

RESEARCH COLLABORATIONS

Research is the basis for biotechnology innovation. Basic and translational sciences act as the foundation for novel drug discoveries and medical technologies. The governments of each country can support collaborative research endeavors across university research facilities, government laboratories, and private organizations.

Continuous Support of Annual U.S.-Russia Scientific Forum: In 2011-2013, there were two inaugural meetings of the U.S.-Russia Scientific Forum, hosted by the Foundation for the National Institutes of Health, which manages public and private relationships for the NIH. In these meetings, prominent scientists from each nation shared research insights and discussed areas where specific collaborations could be established, specifically for rare disease research [27]. In order to continue these productive conversations and cross-country connections between scientists, the U.S.-Russia Scientific Forum should be reestablished as an annual event and given joint funding from the NIH, Russian Academy of Sciences, and third-party companies and organizations. Scientists could use this forum as stimulus to create U.S.-Russian research collaborations and joint academic fellowships between specific laboratories.

Establishment of Collaborative Medical and Biotechnology Clusters: Many specific medical and biotechnology clusters already function in both the U.S. and Russia. These clusters bring various clinics, companies, and accelerators together to create a centralized area of healthcare innovation. Preliminary collaborations have already occurred, specifically the sharing of knowledge between the Moscow International Medical Cluster (MIMC) and Texas Medical Center (TMC). These collaborations should be formalized and expanded, such as by sending U.S. clinics to operate in the MIMC and Russian startups to participate in U.S.-based accelerators. Major biotechnology clusters also exist in the following U.S. metropolitan areas: Boston/Cambridge, the San Francisco Bay Area, New York-New Jersey, San Diego, and the D.C.-Maryland-Virginia Metro Area. Russian companies can
establish offices in these regional biotechnology clusters to benefit from investors willing to offset high R&D costs, large pharmaceutical companies that can acquire smaller companies’ products, and potential research collaborators [11,15].

**INTELLECTUAL PROPERTY RIGHTS**

Biotechnology requires significant time and financial investment in order to successfully develop products, especially in the pharmaceutical industry. In recent years, both Russian and U.S. intellectual property laws have become more uniform with global standards, such as the U.S. taking more steps to recognize international patents and establishing first-inventor-to-file rule through the America Invents Act of 2011, and the Russian legislation to facilitate monetary payment in cases of patent infringement [28].

Promotion of Transparent Foreign Intellectual Property Guidelines: In order for corporations to be comfortable entering a new foreign market, they need to feel secure that their intellectual property will be adequately protected. A major barrier for U.S. companies to sell products in Russia is the lack of effective protection in comparison to U.S. regulations and standards. In 2018, Russia was placed on the Priority Watch List of the Special 301 Report of the Office of the United States Trade Representative, indicating the country as having high trade barriers [29]. Some of the issues that are of specific concern to companies are compulsory licensing, parallel imports, and lack of patent linkage before the approval of generic drugs. Likewise, Russian companies may not be familiar with the strict regulations and procedures in the U.S. necessary for approval. First, an updated and transparent source of guidelines relevant to intellectual property rights should be distributed. Next, to further facilitate trade and cross-country collaboration, both countries should establish a consultant service to facilitate the process of securing intellectual property rights in the opposite country. For example, the United States Commercial Service has trade specialists that can perform this role, however, a service should exist specifically for issues related to biotechnology. This service would help companies register trademarks with the Federal Service for Intellectual Property (Rospatent), record patents in the Russian Federal Customs Service’s IPR Register, and gather support from trade organizations. Finally, the Russian government can collaborate with the U.S. on strengthening its intellectual property rights. For example, a Russian version of the FDA’s Orange Book, which provides information on patents for drugs that the FDA has approved for public use, would allow both companies to identify generics infringing upon patents. Additionally, patent linkage in Russia would allow state registers to explicitly state whether specific pharmaceuticals have patent protection. These steps would improve intellectual property protection for both Russian and foreign companies, improving trade and promoting incentives for the pharmaceutical industry.

**REGULATORY APPROVAL**

The regulatory processes for medical biotechnology products for both countries are lengthy and rigorous in order to ensure that products have met adequate safety and effectiveness criteria before being delivered to the bedside. However, due to the different registration processes by FDA and Roszdravnadzor, companies are often limited in marketing their existing drugs overseas.

Unification of international registration processes: Alignment of the two regulatory approval processes would streamline registration for products that are already successfully used to treat patients abroad. For drugs that are already approved and used for treatment abroad, FDA and Roszdravnadzor should mutually recognize the data collected from clinical trials conducted in the other nation in their drug registration processes instead of requiring new local clinical data. These organizations can also collaborate to determine if there are ways to align their standards with each other and internationally recognized regulators by collaborating through arenas such as the World Health Organization’s International Conference of Drug Regulatory Authorities. Examples of areas where the FDA can share lessons learned is in the expansion of expedited review in Russia beyond the current twelve nosologies, similar to the FDA’s Fast Track, Breakthrough Therapy, Accelerated Approval, and Priority Review processes. Additionally, each organization should make an effort to clarify any ambiguous dossier documentation requirements to make them accessible for international companies. These changes will help ensure that drugs developed and approved in the domestic market are also accepted in global markets, creating new opportunities for local biotech innovators to expand and grow.

**MARKET ACCESS**

Finally, the accessibility of the market environment is very important for the growth of biotechnology companies. Biotechnology corporations are more likely to develop products when the markets are competitive, transparent, and non-discriminatory [11].

Promotion of Clinical Research and Private Business Collaborations: One way to incentivize the growth of the biotechnology industry is through the promotion of international collaborations in both clinical research and private industry. First, clinical research represents an opportunity for U.S.-Russian relationship building due to pre-existing relationships and need. Russia is already a popular location for international clinical trials by U.S. entities, due to the low costs, high recruitment rates, and stable infrastructure. The cost of conducting clinical research in Russia is around half the cost of a comparable trial in the U.S., which makes it a popular location for international trials, with the fastest growth rate compared to other countries [30]. As of April 2019, there were a total of 4,406 NIH-registered studies that were being conducted in Russia [31]. Russian companies may also want to hold clinical trials in the U.S. if they are working towards future U.S. approval by the FDA. The NIH can provide support for clinical trials in Russia by connecting interested parties to academic institutions and related companies with experience in these areas, and vice versa
from the Ministry of Health. In addition to clinical trials, there are many shared needs in the US and Russia where tailored joint business opportunities could create substantial positive social impact. The field of healthcare innovations is particularly suited to these aims, especially in medical technologies, biosecurity, and chronic disease management. Legislation through the “Third Extra” regulatory mechanism and increased focus on local manufacturing also mean that businesses require mutualistic relationships more than ever to enter the Russian market. There are many opportunities present in this space to create biotechnology focus groups in U.S.-Russia business working groups or in organizations such as the U.S.–Russia Business Council.

CONCLUSION

Overall, U.S.-Russia political relationships have reached a historic low in the last 20 years. In particular, the last four years of the tumultuous U.S.-Russia relations led to the breakdown and demolition of many established biotechnology collaborations and their results. After 2014, there was a break of contacts and little-disseminated information about the current status of previous partnerships. There are also other sources of tension due to U.S. sanctions and shifts to support local Russian production, such as the State Duma of the Russian Federation even considering a bill on the cessation of the import of medications from the US. However, this situation underscores the importance of cooperation in the field healthcare, which is more essential now than ever before. The thriving biotechnology sector in both countries will facilitate partnerships that will not be only about increasing profit and money, but also improving people’s wellbeing and saving lives. In particular, both the private and public biotechnology sectors would benefit from cross-country collaborations detailed in this paper within the following areas: research collaborations, intellectual property protection, regulatory approval, and market access.

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Data Collection Methodology.

Over September - December 2018, we conducted a series of interviews with entrepreneurs, and academics, including an employee of the Russian Foreign Direct Investment Fund, Professors at Skoltech, Big Pharma and Big Biotech representatives, several Russian entrepreneurs with active start-ups. Interviews were held in accordance with the custom-developed interview guidelines. These do not represent a statistically large data sample, however, their opinions support general trends.
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The potential benefits of a successful incubator program are widely recognized, with multiple incubators popping up across the US and Russia. However, we argue, challenges remain that prevent many incubator programs from maximizing success rates of their participating startups. Academic incubators in the US and Russia seem to be well positioned to inspire US-Russia collaborations by operating as hubs in the global entrepreneurial network and granting participant entrepreneurs increased access to foreign investors’ capital. However, many incubators do not live up to this promise and offer limited cross-border exposure.

As a key contribution of this work, we identify several challenges that seem to limit the participation of incubators and the startups they represent in the US-Russia cross-border transactions. The fundamental challenge has to do with the high level of perceived risk associated with Russia: (1) perceived risk of Russian investors and sources of funding in the eyes of entrepreneurs, which incentivizes them to migrate abroad and incubate there in search for more benign capital and partnerships; (2) perceived risk of Russia as a destination for capital, which scares off foreign investors. On the more technical level, collaboration is further undermined by the lack of current and granular information on the early-stage startup universe across US-Russia incubators, by the underdeveloped legal framework in Russia, which prevents straightforward implementation of standard Western venture capitalist contracts, and by the lack of entrepreneurial training at a university level. We discuss these challenges in detail and outline possible solutions.
destination for investing, which scares off foreign investors. On the more technical level, collaboration is further undermined by the lack of current and granular information on the early-stage startup universe across US-Russia incubators, by the underdeveloped legal framework in Russia, which prevents straightforward implementation of standard Western venture capitalist contracts, and by the lack of entrepreneurial training at a university level. We provide detailed analysis of these challenges further in the report.

We also identify possible solutions to these challenges, building on strategies adopted by most successful incubators and startups involved in cross-border transactions, in the hope of encouraging greater international participation in the entrepreneurial ecosystem.

In the analysis, we build on four main data sources: (a) secondary data, such as industry trend reports and startup information databases (CBInsights, Seed Accelerator Rankings Project), (b) interviews with entrepreneurs, VCs, and academics, (c) US and Russian legislation, and (d) academic articles.

In the following sections, we (a) provide key definitions, (b) analyze the current state of university-based incubator programs in Russia and the United States and their effectiveness when deployed, (c) illustrate how incubators can benefit entrepreneurs and investors by encouraging US-Russia collaboration, (d) explore challenges when encouraging such collaboration, and (e) outline feasible solutions.

**INCUBATORS AND ACCELERATORS IN RUSSIA AND THE US**

Until recently, many countries considered natural resources to be their competitive advantage, but now there is a global shift towards wanting to build an innovation-based economy. In this new economy, the most important natural resource is a human: talent and how one nurtures talent are important above all. At the 2018 St. Petersburg International Economic Forum, Meir Brand, VP of Google, argued that to create an innovation-based economy, three things are crucial: an adaptive educational system, access to capital, and, most importantly, the development of a culture of entrepreneurship and risk taking. Entrepreneurship and risk-taking, however, are learned by doing, and the Bachelor-level classical education systems, arguably both in the US and Russia, still currently often fail at this. University incubators are the solution. Entrepreneurs raised in such incubators are the people who will shape the world.

Universities are breeding grounds for new ideas and companies, where the use of cutting-edge technology, the rigor of thought and the fluidity of idea exchange contribute to the success of academia-sourced entrepreneurship. Global companies like VMWare, a global leader in cloud infrastructure and digital workspace technology, have grown from university-level side-hustles to world-changing businesses; even Google sprouted from graduate students’ PhD paper.

More recently, university-affiliated incubators (also referred to as academic seed accelerators or academic startup incubators) have become the key institutional framework aimed at assisting the student population in their entrepreneurial endeavors. The unparalleled access to young talent ready to take risks differentiates university-affiliated incubators from their peers. Partly for this reason, they are popular among investors as an opportunity discovery pool. While seed investment through academic incubators tends to be particularly risky due to the early stage of the venture, it also tends to be very lucrative if the enterprise succeeds.

The US has been a leader in this area (at least based on the generated company valuations), with examples that include university-affiliated StartX (Stanford) and New Venture Challenge (University of Chicago), as well as accelerators with strong presence on university campuses, such as Y-Combinator (“Seed Accelerator Rankings Project” 2018) (Konrad 2017) (Y Combinator 2017). Other countries are following on this path too. In China, examples from Beijing alone include TusStar and X-elerator at Tsinghua University, as well as PKU Incubator at Peking University (Hsu 2018). Russia has experienced rapid developments in this area too, including BioPharmCluster affiliated with Moscow Institute for Physics and Technology, Lomonosov Moscow State University Incubator, InCube (Russian Presidential Academy of National Economy and Public Administration), and Far Eastern Federal University accelerator (“All business incubators and accelerators” 2018).

**Definitions**

In order to be precise about the object and scope of the work, we need to define the terms ‘startup’ and ‘academic startup incubator.’

**A. Startup**

The term ‘startup’ is typically applied to young, innovative firms with growth ambition, often operating under conditions of significant uncertainty such as unproven technology or a new business model. According to this definition, startups are usually a subset of small and medium enterprises, but they are not one and the same. It is important to remember this differentiation as many initiatives and policies that are designed to promote innovative startups are not the same as initiatives and policies that aim to assist small firms (Gale & Brown 2013).

Development stages of startups may also need clarification, since the commonly-used terms are imprecise. In what follows, we consider the ‘pre-startup’ phase as the period in which entrepreneurs may have little more than an unproven idea, and so the focus of support is predominantly on the entrepreneur or founder with emphasis on testing the idea and identifying the product-market fit. In the ‘startup’ phase,
companies are in the process of being set up. ‘Early-stage’ ventures may have initial market traction but require further funding for commercial manufacturing and will likely not yet be generating profits. Later-stage ventures will usually demonstrate viability, growth and potential profitability (Dee et al 2015). For the purposes of this report, other than where the development stage is specifically mentioned, we use the term startup to mean very early stage firms.

B. Incubating categories

The incubation and acceleration industry is evolving rapidly, and it is becoming increasingly difficult to define. As new models emerge, the term ‘accelerator’ describes an increasingly diverse set of programs and organizations, and, often, the lines that distinguish accelerators from similar institutions, like incubators and early-stage funds, become blurred. For the purposes of this report, accelerators can be defined according to Miller and Bound (2011), and share these common traits (Bound 2013):

1) An application process that is open to all, yet highly competitive.
2) Possible provision of pre-seed investment (grant or equity).
3) A focus on small teams instead of individual founders.
4) Time-limited support comprising programmed events and intensive mentoring.
5) Cohorts or ‘classes’ of startups rather than individual companies.

A range of the following specific definitions can be found in the literature (Dee et al 2015).

A startup incubator, such as YCombinator, 500 Startups, and TechStars, is a facility or a mentorship program for early stage startups. Resident companies receive assistance refining their business ideas and preparing the product for market launch. In exchange, the incubators receive equity in the companies they help.

A startup accelerator, such as RocketSpace, Kicklabs, BootstrapLabs, BlackboxMansion or i/o ventures, picks up where incubators leave off. If an incubator is similar to an undergraduate education, an accelerator is like graduate school. Typically, for-profit accelerators are funded with private capital from investors interested in generating long-term profit. Not-for-profit accelerators support industries that provide a specific public benefit, such as Healthtech and Edtech.

A university incubator represents any incubation program that is directly managed by one or more universities or is formally affiliated with one or more universities. A university associated incubator works closely with one or more universities but is not formally affiliated with any university.

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In contrast to the definitions above, in this work, we use phrasing ‘academic incubator’, ‘university incubator’, ‘university-affiliated incubator’, or ‘incubator with universities’ somewhat laxly to mean most broadly incubators or accelerators that have some notable connection to universities, work closely with them, or have felt presence on campuses, but need not be formally affiliated with universities. Thus, our definition would include a wide range of institutions, from StartX to Y-Combinator.

Incubator and accelerator trends

As of 2016, there has been US$206,740,005 invested in 11,305 startups by 579 accelerator and incubator programs internationally. The US, Canada and Europe have the most established startup ecosystem, and therefore support the largest quantity of incubators (Brunet et al 2018).

In 2016, there were 178 exits reported by 77 accelerators. Similar to what was reported in 2015, 64.5% of accelerators internationally self-identify as for-profit ventures (Brunet et al 2018).

The majority of accelerators globally indicated that they intend to follow the typical cash-for-equity model, as first established in 2005 by Y Combinator. This involves investing a small amount of seed money in a startup (on average US$25,000) in exchange for equity (Grof 2017). However, accelerators have relied on, and continue to explore, new models of revenue generation. 90.4% of accelerators plan to increase their revenue in the medium to long term by incorporating alternative revenue models in addition to exits. These include charging for mentorship, subletting office space, hosting events, and working with corporations (Brunet, S. et al 2018).

The relationship between accelerators and corporations has grown in strength and frequency. 52.1% of accelerators are at least partially funded by a corporation, and 67.2% aim to generate future revenue from services sold to corporations (Brunet, S. et al 2018).

Corporate revenue generated by accelerators came from two main sources in 2016: corporate partnerships, generally in the form of a white-labeled or jointly-run acceleration program created by the accelerator on behalf of the corporation, and corporate sponsorship packages sold by accelerators. Corporations can benefit from partnering with accelerators in three ways (1) by accessing best options on the market with low investments, (2) by enhancing deal flow, and (3) by innovating their brands and corporate culture (Ream & Schatsky 2016).
Another key trend is verticalization. Simply put, verticalization, as opposed to horizontal applications, addresses the needs of a specific industry such as retail, automotive, and insurance. A verticalized accelerator typically begins with identifying one key business problem in a sector and addressing that problem. The global accelerator and incubator landscape is increasingly moving towards a vertical system where over 50% of accelerators are running programs focused on a particular industry or sector niche (Ream & Shatsky 2016). This trend is expected to continue, especially as regional startup ecosystems continue to develop and mature. In general, verticalized accelerators bring more value to startups through larger pools of quality mentors within the industry and access to corporate ties to related markets (Lewis et al 2011).

Certain sectors are attracting more interest. Currently, the ‘hot markets’ are fintech, internet of things, big data analytics, and SaaS. Other sectors of interest include: health, mobile apps, agritech, e-commerce and education (Brunet et al 2018).

International expansion of accelerators is also a growing trend. After reaching a certain level of maturity, expansion is the logical next step. International expansion usually happens by (1) merging or acquiring an already existing accelerator or (2) partnering with a local player, for example a VC (Venture Capital) fund, a university, or a corporation (Brunet et al 2018).

Focus on academic incubators

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<th>Table 1. Comparing the Russian and US Startup Ecosystem</th>
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Russia are quite distinct. Table 1 outlines some of the key differences. For example, recently, Russia has been experiencing a shrinking amount of VC funding, with corporations participating very little in the funding of startups. At the same time, the US has been experiencing growing VC funding, with increasing funds coming from corporations. Universities in Russia in general are not perceived to support the spirit of collaboration and entrepreneurship, in contrast to US universities. Startups in both countries tend to focus on domestic markets first, but Russian entrepreneurs tend to overestimate domestic market size (Grabowski et al 2015). A strikingly low number of startups in Russia go abroad for funding. Such differences result in differences in the incubation process and suggest possible paths for incubators to better aid their participants, for example, by helping and positioning early-stage startups to secure foreign funding.

### ENABLING US-RUSSIA INCUBATOR COLLABORATION

In this paper, we argue that academic incubators can become cornerstones of the global entrepreneurial network that would facilitate collaboration between entrepreneurs, investors, and government bodies across US and Russia by enabling cross-country opportunity discovery, talent recruitment, and funding.

#### Benefits

Some factors make this collaboration potentially very attractive to parties in both countries. The involvement of the US partners in Russian entrepreneurial community through incubators could offer multiple advantages over domestic-only programs, providing an effective entrepreneurship curriculum, direct and easy access to substantial entrepreneur-friendly capital (Sokolov 2018), and network and contacts to assist with international market expansion. An indication that demand for such a program could exist from Russian-originating US-funded enterprises ("These Are The US Startups That Russian Investors are Backing" 2017) and purchases of the Russian incubated companies by US counterparts (Grinstein 2016) in the recent past. There is even a Russia-focused VC firm based in the US (Somerville 2018), however, it is funded by Sberbank, the largest retail bank in Russia.

Furthermore, there is substantial interest from institutional investors to gain exposure to emerging markets, especially Russia's technology industry (Mellow 2013). Both the technologists in Silicon Valley and the professionals in academia recognize the vast potential of Russian talent in STEM related fields. However, conventional methods to gain such exposure are limited - the Russian stock market is dominated in market cap by non-technology firms. As in the US, absent a formalized incubator investment management niche, the early stage venture space can be very difficult for would-be investors to access. Building a formal university incubator space could expand these opportunities to potential and interested investors.

Similarly, Russian investors have demonstrated substantial interest in investment opportunities in the US. Examples include Uber, Facebook, and Twitter, as well as many smaller startups, where Russian capital (directly or indirectly) participates side-by-side with the capital from the US ("These Are The US Startups That Russian Investors are Backing" 2017, Kiselyova 2016, Swaine & Harding 2017). Investors could be interested in getting access to investment opportunities that are yet to come out of US universities. US entrepreneurs could further benefit from their Russian partners' knowledge of the Eastern European market and access to cheap and talented human capital ("How Software Development in Eastern Europe Transforms the Way We See Outsourcing" 2018).
From a policy standpoint, cooperation in the venture space is a natural next step towards collaboration between the US and Russia in engineering and sciences. More than once have discoveries on one side surprised the other as the solution to a problem that the latter had felt was intractable. One of the more famous stories revolves around Leonid Khachiyan, a researcher in the Soviet Academy of Sciences, who had discovered a polynomial time solution to linear programming. His counterparts in the US only realized that a polynomial time solution was even possible when his paper was casually mentioned at a math conference by a third party (Kalantari 2005). There is a lot of value in pooling together our problem-solving abilities, especially in tackling the hardest problems in engineering and the sciences. The same principle applies in both the academic and the startup worlds. Incubators may encounter similar challenges, but find different creative approaches, accelerating progress towards an optimal solution. Dialogue between university-level incubators can thus be immensely productive.

Barriers

However, there are challenges that complicate cross-country investment and collaboration between Russia and the US.

Two fundamental challenges that stand in the way of such collaboration are the high perception of risk associated with Russian investors and sources of funding and Russia as a destination jurisdiction for investing. We also identify several issues on the technical level. The first such challenge is a lack of universally adopted legal startup investment vehicles or schemes, which would mitigate concerns about and simplify technically cross-border investments into startups in foreign jurisdictions, including cases when a local government is a co-investor. The second challenge is a lack of a tool for live search and exploration of the global early-stage startup universe across world incubators. A tool like this should be accessible to international investors and thus enable them to easily contact the startup and incubator executive teams. While tools, such as AngelList contain data on the Russian entrepreneurial ecosystem, the data is often lacking on the very early-stage companies. The third challenge is a lack of appropriate entrepreneurial education at the university level.

A. Russia-sourced funding and investors are perceived to carry risk, leading to brain drain

While substantial investment funds are available within Russia, a large portion of such funds come, directly or indirectly, from the Russian government or oligarchs.

It is known, however, that participation by Russian government or government-affiliated institutions in the stock tends to be perceived as poisonous, even within Russia. Illustrations of this include:
- A recent drop in Yandex stock after an announcement that Russian Sberbank was considering taking a substantial stake in the company (Smith 2018).
- Negative media coverage of Russian state capital participation (though indirect) in Facebook and Twitter stock (Swaine & Harding 2017).

Our interviews with young entrepreneurs in Moscow in 2018 also confirmed that Russian government money is generally perceived as toxic, unless a startup is focusing exclusively on the domestic market. Accepting oligarch money is also undesirable, but more tolerable, if the source is not overly involved in politics. There are several key concerns.

First, there is a perception that such investment could prevent a startup from obtaining further capital from foreign investors down the road. The anecdotes cited above about the negative market reaction to Russian government capital in a startup provides some explanation for why such perceptions may exist.

Furthermore, our interviews suggest that there is some correlation between a startup receiving funding from the Russian government (as well as accelerators associated with government or oligarch investors) and an inability to attract foreign capital later.

Some direct quotes from them include: “With current trends we will never have a good ecosystem. There is a ‘national discount’ driving people to start in the [Silicon] Valley instead of Russia”, “We have zero investment climate which is tied directly to politics”, and “...rational [entrepreneurs] have no incentive to build anything long-term in Russia”.

Second, there is a concern of a cultural nature that Russian investors tend to differ from their Western colleagues in terms of their tolerance for failure in startup building and degree of interference. Westerners are perceived as more forgiving and hands-off. Combined with perceptions of oligarch funding being ‘criminal money,’ some of our interviewees have commented on their reluctance to accept such domestic funding and their desire to find foreign sources of capital. For instance, in a conversation with a Russian entrepreneur whose startup is already funded by a non-Russian business partner, it was mentioned that this partner advised not accepting additional funds from the Russia-China Investment Fund (a joint venture between the Russian Direct Investment Fund and its Chinese counterpart), since this would potentially prevent the startup from receiving future funding from abroad due to negative perception by Western investors, in particular, of Russian government ties.

Accepting substantial foreign capital in the early stages of startup development, while beneficial to entrepreneurs in Russia, very often leads to ‘brain drain,’ the emigration of highly trained or intelligent people from a particular country. US investors frequently request teams of young entrepreneurs to relocate to the US in order to secure funding. Interestingly, even Russian venture capital funds, which are
relatively small players compared to government funds, often require direct emigration of the startup to the US. Russian startup teams are attracted by better compensation, funding opportunities, and international exposure (Todorova 2018).

The paradoxical situation that results is that large government investments into academic incubator programs, such as Skolkovo, indeed yield talented entrepreneurs, but do not offer enough incentive for such entrepreneurs to remain in Russia, as the US tends to offer more entrepreneur-friendly capital as well as more opportunities for corporate partnerships.

This situation could be perceived as a threat by Russian authorities, who would not have much incentive to encourage foreign investor participation if the enterprises end up moving to the US without a direct way for the Russian economy to benefit from their subsequent success (Iontsev et al 2017). Even when Russian investors can overcome this negative reputation, maintain a financial stake in the emigrating startup, and reap financial reward when the startup exits, this only leads to limited entrepreneurial collaboration between countries and usually does not result in the creation of jobs in Russia, which would be the more important desideratum for the government (Henry 2018).

Thus, such collaboration could be discouraged by Russian government.

B. Russia perceived as a risky jurisdiction

Investment directly in Russian companies is perceived as risky in its own right. In part, this perception arises out of significant government bureaucracy and interventions in business affairs, as well as an unfamiliar legal regime, often unfavorable to entrepreneurs (Sobolevsky 2018) (Vasiliev 2013) (Lotakov et al 2017). Furthermore, there is an increased risk of the US sanctioning Russian companies due to current tensions between the countries - the devastating effect of these has become clear recently, when the share prices of Russian aluminum giant United Company Rusal Plc dropped by over 40% on announcement of US sanctions on the company (Kwok 2018). Such factors scare off US investors. In fact, since 2012 there has been a fall in the number of Russian venture deals with US-based investors (“These Are The US Startups That Russian Investors are Backing” 2017). These factors severely restrict the growth of the Russian VC market.

C. Limited opportunities to implement standard VC contracts

Development of the venture capital industry in the US has been reflected in increased standardization of deal structures, optimized over time to secure interests and appropriately incentivize entrepreneurs and investors participating in the transactions. In terms of early-stage investments, this trend has manifested itself in open-sourcing of standardized venture funding documents by some of the flagship funds, such as Y Combinator, TechStars, and Andreessen Horowitz (“Standardized Venture Funding Docs 2010” (Levy 2018) (“Series Seed - Version 3.2” 2014) (Loizos 2010).

The standardization can be seen in the unified language of the legal documents, such as term sheets, stock investment agreements, and incorporation documents, as well in the adoption of standard deal terms. For example, Y Combinator adopted in 2013 its open-source Simple Agreement for Future Equity (SAFE) as a guiding document for securing early-stage funding (Levy 2018). Y Combinator has also adopted a standardized deal for all startups it chooses to fund – a $150,000 investment using SAFE, which converts into 7% of stock in the company (Nathoo 2018). Moreover, Y Combinator specifically requires the use of Delaware C-corporation legal structure from the unincorporated startups it funds (set up via an incorporation service Clerkly, partly owned by Y Combinator), which provides the benefits of well-developed and well-understood corporate law (Nathoo 2018) (Bhardwaj 2018) (YCombinator 2013). Other investors have followed suit, preferring a standardized investment process when dealing with early-stage startups (McGee 2017).

As a result, startups that cannot provide an investor with a familiar standard way to invest in them are at a stark disadvantage. This specifically creates issues for investment of the US capital in Russian startup companies (Russian investors funding US startups can take advantage of the standardized US deal structures). In fact, it is a common practice for US investors to require young startup teams, as a funding condition, to relocate to the US and incorporate there in order to secure better economic and legal environments.

Additionally, despite ongoing advances, the Russian legal system is not finetuned to support the usual VC deal structures. There are several ways US venture capital investors usually invest in a startup: via preferred equity (the most usual choice), via ordinary shares or common stock (an option in case of very early stage companies), or via convertible debt instruments. However, the concept of preferred equity is not recognized for Russian limited liability companies (most used corporate form for Russian startups), and is underdeveloped for other types of companies. Russian law also does not permit convertible debt. Moreover, regulations are restrictive when it comes to initial public offerings of stock. All these make it unattractive for foreign investors to participate in direct investment in Russian entities (Batalov & Piper 2017). This presents a challenge to direct foreign investments in Russia.

As a consequence, exit options for Russian-originating startups are often limited, with an acquisition by a large corporation being the primary option, as IPOs are hard to orchestrate (Meyer 2017).
D. Lack of transparent information about incubator participants

Cross-border sourcing of seed-level deals, including identification, research, and interaction with foreign young companies supported by incubators, remains challenging for investors in both the US and Russia.

One of the issues is that startups seeking funding and their incubators often do not do a good enough job at advertising themselves to foreign investors. While AngelList has been instrumental in democratizing investment processes for early-stage companies (Davidson 2013), information on Russian startups and incubators is often not available or is outdated. The situation is aggravated by overall low publicity regarding investment activities in Russia. This results in a climate of information obscurity, where opportunities that could have attracted attention of foreign VCs, remain unnoticed.

E. Cultural and education issues

Some cultural aspects play into this issue (Golushko & Guchigov 2015). Whereas in the US entrepreneurs tend to advertise their involvement in a venture, there is generally low respect for entrepreneurs in Russia. Startup founders often claim that there is a lack of entrepreneurial culture (“St Petersbourg’s Startups Must Continue to Bootstrap, as Russia’s Economy Limits Investors to Moscow” 2017).

Russian startups are also not used to working with outside venture capital and often do not expand outside of the domestic market (Frolov 2018). This is an issue that can interfere with cross-border transactions even when there is active interest on the side of foreign investors (“St Petersbourg’s Startups Must Continue to Bootstrap, as Russia’s Economy Limits Investors to Moscow” 2017).

The situation is not helped by the fact that many young aspiring entrepreneurs in Russia who possess the right technical knowledge to generate a profitable idea, receive no or little training during university years in ‘soft’ skills such as teamwork, idea generation and validation, minimum viable prototype (MVP) creation, marketing research and market validation, legal aspects of creating a company, hiring employees, or obtaining funding, etc.

Solutions

Fundamental challenges discussed earlier are not easy to address at the incubator level. A fundamental solution would need to create an environment to encourage talented entrepreneurs to stay in Russia and be comfortable with accepting funding from domestic investors. Such an environment could only emerge with an improved economic and legal regime. Therefore, the solution lies in the space of policy, politics, and economics – inherently something outside of reach of the average incubator.

Incubators could mitigate the brain drain situation somewhat by encouraging startups to create business operations offices in Russia (research and development, software development, call centers, sales), something that, for example, the Russian Direct Investment Fund encourages the startups it finances to do. This not only provides much needed jobs and experience for Russian developers, but also provides startups with access to a cheap, talented labor force. As a limitation of such a strategy, the US investors could have reservations about allowing startups they fund to store customer data on Russian territory, which would limit the kind of functions such a business operations office would be able to perform.

Incubators could also try to attract more neutral players to invest in startups on the verge of emigrating to the US. Involvement of a greater number of corporate sponsors in startup investing could be a particularly clever way to accomplish this goal.

The development of a greater number and higher quality of educational programs focused on VC investing and entrepreneurial culture training could also be a potential solution. Programs like this could be based on experiences of American or Chinese investors, and could be run partially abroad.

Addressing technical challenges is easier. The solutions below could be adopted by incubator programs to mitigate these challenges, encouraging collaboration of capital and talent between US and Russia and maximizing the chances of success for their participating startups.

A. Standardized offshore investment vehicle

A tool to mitigate issues and concerns related to direct investment in Russian startups can be borrowed from the cross-border transaction toolkit of big corporations.
Specifically, we advocate that the incubator community in Russia formally adopt, as a matter of standard policy, required incorporation of startups via an offshore funding vehicle (see Figure 1), which would constitute a contracting device for foreign and domestic investors to circumvent unfavorable Russian laws and implement US-style contracts, all without requiring the actual emigration of the startup. Such vehicles are often used in practice in case of investments in China and Russia (Li 2012) (Batalov & Piper 2017).

A typical foreign investment structure would consist of a holding company in a jurisdiction that permits typical preferred equity and convertible debt, and one or more Russian wholly-owned operating subsidiaries. The holding company’s jurisdiction is chosen based on tax, fundraising, and market access considerations. Russian companies seeking capital in the US or planning to access the US market usually incorporate the holding company in Delaware. Otherwise, such jurisdictions as Cyprus and the British Virgin Islands are a common choice (Batalov & Piper 2017).

The vehicle would ensure that foreign capital could financially participate in the earliest rounds of startup creation, providing US and Russian investors (as well as the incubator, if it participates in financing), with legal protections and mechanisms necessary to implement US-style contracts with appropriate shareholder protections. The approach could also be deployed in the later stages of the startup’s life-cycle through the acquisition of the local subsidiary by the dedicated holding entity.

Importantly, the structure also provides the parties with attractive exit options, allowing for direct placement of the stock on public stock exchanges. This mechanism also preserves the ability of Russian institutions to financially participate in the startup success even if the startup later shifts its headquarters to a different country, mitigating the ‘brain drain’ concern.

Unfortunately, such an incorporation in a foreign jurisdiction is not a default standard option when it comes to what academic incubators in Russia advocate. In fact, the question of incorporation is often not considered carefully. Thus, startups are often not taught to think strategically about positioning themselves to be attractive to foreign investors. This is an area where incubators could make a difference.

**B. Search tool**

We propose the creation of a unified news and database resource covering all major ongoing deals and startups open to funding across participating incubator programs in Russia and the US to simplify the search for potential investors.

In fact, such a program could be government funded, for example, as part of the Skolkovo initiative. While the government helping attract foreign capital may seem to play into the ‘brain drain’ concerns, it is faulty logic in our view. To the extent that an economic emigration of a startup is triggered by the limited ability of local investors to provide capital, encouraging foreign direct investment in the early stage startups can, in fact, encourage substantial economic activity to remain in the originating country, reducing the risk of ‘brain drain.’

**C. Entrepreneurial training**

An effective entrepreneurial 101 curriculum has been lacking in Russia. At the same time, the US has been at the forefront of development of such a curriculum, with Lean Launchpad Stanford class by Steve Blank as one example (Blank 2017). Such a curriculum could be adopted by incubators to give aspiring and current entrepreneurs training in the soft skills such as teamwork, idea generation and validation, minimum viable prototype (MVP) creation, marketing research and market validation, etc. Such training, when delivered through academic incubators, could smooth over cultural differences, making entrepreneurs more prepared to work with foreign venture capital.

**CONCLUSIONS**

There are substantial benefits to be reaped by startups and investors in Russia and the US from cross-border VC deals. Moreover, interest in such deals exists on the VC side. However, there are barriers in a way of such deals. Domestic academic incubators could help change the situation for the better (a) by helping startups attract domestic capital that is not perceived as risky; (b) by helping startups intending to go abroad establish business offices domestically to save costs and support local talent development; (c) by positioning and preparing new startups for foreign investment via implementing a standardized offshore incorporation device to allow foreign investors to implement US-style VC contracts; (d) by producing a novel information aggregator tool to monitor current opportunities that exist within incubators in the US and Russia; and (e) by implementing entrepreneurship education modeled after innovative US programs.

General differences in entrepreneurial culture, especially the attitude towards entrepreneurial failure, arrest the development of the current ecosystem. Together with a lack of funding without the government connection, this leads to a ‘brain drain’ of top-tier entrepreneurs, even when they have the ability to receive plenty of funding through programs like Skolkovo. Driven by access to international capital and business partnership opportunities, Russian entrepreneurs often use the opportunities provided by Russian incubation programs as a platform for emigration. Some even consider starting right on the US soil to evade the stigma of being of Russian origin. By implementing the suggestions in this report, some challenges could be mitigated, but the major problems will remain until the toxic regulatory and political atmosphere is addressed.

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After critically examining Russia’s approach to cybersecurity, in Part III we consider dispute resolution options that can be feasibly accommodated within the existing international legal system. Multiple options are available, but we argue that arbitration is the most promising. We also bring to the fore additional considerations that must be assessed when developing an international arbitration body that is impartial.

PART I. BACKGROUND, HISTORY, AND CONTEMPORARY CHALLENGES

1. Technical Framework
There is no official definition of cyber security or consensus about what exactly it is, but generally it can be described as a set of measures aiming to protect information and systems from serious cyberattacks. Such attacks can take many forms, most common of them according to CISCO being:

- **Ransomware** is a type of malicious software. It is designed to extort money by blocking access to files or the computer system until the ransom is paid. Paying the ransom does not guarantee that the files will be recovered, or the system restored.

- **Malware** is a type of software designed to gain unauthorized access or to cause damage to a computer.

- **Social engineering** is a tactic that adversaries use to trick you into revealing sensitive information. They can solicit a monetary payment or gain access to your confidential data.

- **Phishing** is the practice of sending fraudulent emails that resemble emails from reputable sources. The aim is to steal sensitive data like credit card numbers and login information. It’s the most common type of cyberattack.

With respect to the purposes for which such techniques can be used, the following are of particular relevance for state security:
Cyberterrorism is the disruptive use of information technology by terrorist groups to further their ideological or political agenda. This takes the form of attacks on networks, computer systems and telecommunication infrastructures.

Cyberwarfare involves nation-states using information technology to penetrate another nation’s networks to cause damage or disruption. In the US and many other nations, cyberwarfare has been acknowledged as the fifth domain of warfare (following land, sea, air and space). Cyberwarfare attacks are primarily executed by hackers who are well-trained in exploiting the intricacies of computer networks, and operate under the auspices and support of nation-states. Rather than “shutting down” a target’s key networks, a cyberwarfare attack may intrude into networks to compromise valuable data, degrade communications, impair such infrastructural services as transportation and medical services, or interrupt commerce.

Cyberspionage is the practice of using information technology to obtain secret information without permission from its owners or holders. Cyberspionage is most often used to gain strategic, economic, political or military advantage, and is conducted using cracking techniques and malware.

2. International Landscape: Law and Norm-Building

According to Saskia Sassen, “the new geography of centrality is transnational and operates in good part in electronic spaces that override all jurisdictions”. Current legal regulations and international law often fail to pay attention to cyber security issues. This, in turn, reduces the stability and predictability of interstate relations, and may lead to tension and conflict. Indeed, during the past few decades, technology has developed at an unprecedented speed. While the digital sector has existed for decades, it has never, up until now, penetrated so many spheres of our lives. Digitalization revolutionized most of the existing industries while also creating new ones. But it came with significant costs by providing more space for radicalization, terrorism, and transnational crime.

States have been working together at both multinational and international levels over the past few years to identify norms of cyber behavior. Most notable in this regard is the work of the UN Group of Governmental Experts, which in 2014 consisted of representatives from fifteen states including China, Russia, and the United States. Moreover, there has been success in reaching regional and/or alliance-based agreements; the most illustrative examples include (i) agreements adopted by the states within the Shanghai Cooperation Organization, and (ii) consensus among NATO countries achieved in the writing of the first and second iterations of the Tallinn Manual, as well as developing guidelines. Other notable efforts include initiatives such as Microsoft’s initiative to develop international cyber norms, the norms developed by the Global Commission on the Stability of Cyberspace, and the Paris Call for Trust and Security in Cyberspace.

Despite all recent efforts, agreement on a bright-line test for qualification of non-destructive or injurious cyber operations that constitute an infringement of sovereignty proves to be elusive. One of the core controversies regards those operations that are beneath the threshold of causing physical damage or injury on another state’s territory. Many of the Tallinn 2.0 experts, for example, agreed that cyber operations constitute a violation of sovereignty when they result in (i) physical damage or injury, or (ii) loss of functionality of cyber infrastructure located in another state, but there was ample disagreement as to the precise threshold at which a loss of functionality amounts to a violation. Perhaps most significantly, certain kinds of cyber threats, such as cyber influence operations, do not result in physical damage or loss of functionality. As Michael Schmitt acknowledges, these operations fall within “a grey zone of normative uncertainty” with respect to the concept of territorial integrity.

In some cases, it is difficult to assess whether specific actions in cyberspace ought to be judged as crimes or as acts of war. Often, private infrastructure is attacked and although there could be a political purpose, it is difficult to make a direct causal linkage. In these circumstances, which international laws are most appropriate? How can it be determined whether national security has been undermined? Notably, technological advances have impacted our understanding of “security”, and some practitioners and scholars operate on a more capacious contestation of the term. But how should security be defined in a legal sense? In this broader debate, factors such as physical location and country ties of individuals carrying out the activity in question can be considered for establishing jurisdiction for potential litigation. Clearer terms need to be established.

Developing a set of governing norms is a difficult process because the stakeholders have different interests and goals, and the legal questions are embedded within complex political realities. Currently, the international community views each threat on a case-by-case basis and does not have a strategic blueprint to dealing with such issues. Jens Stoltenberg, the Secretary General of NATO, declared in 2016 that as there are almost no war-like conflicts that do not have a cyber component, cybersecurity should be taken just as seriously as physical security, and cybercrime should be treated like any other criminal offence. He also made it clear that cyberattacks can trigger Article 5 of North Atlantic Treaty according to which an attack against one NATO member-state should be treated as an attack against NATO.

Alex Grisby, assistant director of the Digital and Cyberspace Policy Program at the Council on Foreign Relations, has written that the most promising opportunity for US-Russia cyber cooperation will come in the Fall of 2019 at the United Nations. Russia will propose a resolution seeking the General Assembly’s endorsement of a code of conduct for state activity in cyberspace. According to Grisby, while the text of the resolution has not been made public, “it is likely to be a combination of existing cyber norms the GGE agreed to in 2013 and 2015 and previous iterations of another code of conduct members of the Shanghai Cooperation Organization (SCO) proposed in 2011 and 2015.” While Russia views this new set of norms as a concrete step toward building a new framework for cooperation, the United States and like-minded countries have balked at the negative human
rights implications. The “SCO-like” guidelines raise various concerns under International Human Rights Law, including (i) the lack of reference to the right to privacy, and (ii) a focus on limitations to freedom of expression rather than protections for it.

Norm-building both builds upon and extends beyond existing international law. Norms cannot be developed outside of the paradigm of international law, although we do rely on norms when the legal rules do not or cannot adequately address a new concern. The relationship between norms and law is important to keep in the foreground because the new norms we develop may shape future laws, and current laws will structure and inform the types of norms we deem feasible. The way in which existing international law applies to cyberspace will also be determined by (i) analogies to extant customary and treaty law, and (ii) state practice. Given the conflicting interpretations of existing law and the thin body of relevant cases from which legal scholars can derive judgments, state practice will play a significant role in shaping international law. Understanding the nuanced legal architecture of any given state’s approach to cyber is therefore essential in determining how international law in this domain may develop in the future and finding potential areas of shared approaches and interests.

It is necessary to emphasize that cyber security is not only important because of national security interests, as traditionally conceived, but also because of significant economic effects in the commercial space. The losses suffered due to cyber threats are enormous. In November 2017, the President of the Davos Forum quoted a report of the World Economic Forum analysts estimating global damage related to cyber security breaches at $1 trillion for 2017. According to a joint study of WEF and McKinsey Company, this number is likely to reach $3 trillion by 2020. The WannaCry attack in May 2017 cost $300 million, according to Jim Snabe, a company executive. Forbes magazine predicted the global cyber security markets to reach the size of 170 billion by 2020.

PART II: UNDERSTANDING THE BEAR’S PERSPECTIVE

Russia’s regulatory framework on cyber security issues is comprised of (1) the strategic planning documents, which articulate the state’s primary interests and goals in the cyber domain, and (2) the existing regulatory framework, which governs activities in the cyber realm. After explaining and (2), we will (3) contextualize and analyze Russia’s approach to cyber security.

1. Russia’s Strategic Planning on Cyber Security

The primary interests, concerns and threats that Russia perceives in the cyber domain have been delineated in numerous strategic planning acts of the state: (i) the Concept of National Security of the Russian Federation; (ii) the Concept of the Foreign Policy of the Russian Federation; (iii) the Doctrine on Cyber Security of the Russian Federation; (iv) the Foundations of the State Policy of the Russian Federation in the Field of International Information Security until 2020; (v) the Strategy for Development of Information Society in the Russian Federation; (vi) the draft Concept of the Strategy on Cybersecurity of Russia; (vii) 2011 Conceptual Views on the Activities of the Armed Forces of the Russian Federation in the Information Space.

According to the Concept of National Security and the Doctrine on Cyber Security of the Russian Federation, the cyber security of the Russian Federation refers to the state of protection of the national interests of a country (that is, the interests of an individual, society and the state on a balanced basis) from internal and external threats in the cyber domain. Robust cyber security ensures the realization of constitutional rights and freedoms of a person and citizen, decent standard of living for Russian citizens, sovereignty, territorial integrity, sustainable socio-economic development of the Russian Federation, state defence, and security. In more succinct terms, Russia’s national interests in the cyber domain include observance of constitutional rights and freedoms of citizens in receiving information and using it, developing modern telecommunication technologies, and protecting state information resources from unauthorized access.

This doctrine, approved by a Presidential Decree in 2016, also outlines salient cyber security concerns and threats from Russia’s perspective. One such pressing challenge is the fact that several states develop their informational technology capabilities to influence information infrastructure for military purposes. According to Russia, some states aim to destabilize the domestic political and social situation in various regions of the world, as well as to undermine sovereignty and violate the territorial integrity of other states. Russia also contends that new cyber threats outside of what is, traditionally speaking, the ‘national security’ realm will pose significant security challenges in the future. In particular, Russia is concerned about the information technologies used in economic development, the management of state institutions and the financial sector.

The Doctrine on Cyber Security calls for the formation of an international information security system. In agitating for the creation of such a body, Russia hopes that it will be capable of (i) countering threats that violate strategic stability, (ii) strengthening an equal strategic partnership in the field of information security, and (iii) protecting the sovereignty of the Russian Federation in the information space. While claiming that the support of domestic technologies is a priority of the Russian Federation, the Doctrine states that due to the cross-border nature of global networks, criminal activities within a state can only be effectively combated by adopting universal principles of protection against new types of threats and building an integrated security system. It is necessary, according to the document, to grow a network of interstate agreements on information security.

A similar sentiment is echoed in separate documents and decrees. According to the Foundations of the State Policy of the Russian Federation in the Field of International Information Security until 2020, cooperation in the formation of an international system of cyber security is in Russia’s national interest and contributes to the strengthening of its national security. The lack of international legal norms governing in-
terstate relations in the information space, as well as mechanisms and procedures for their application, makes it difficult to create a system of international cyber security aimed at achieving strategic stability and an equal strategic partnership, which Russia insists is vital.

2. Regulations of the Cyber Security Domain in Russia

The regulatory framework for cyber security in the Russian Federation is an organic component of the state policy for the development of the national sector of information technology. In addition to the official strategic decrees, the legal foundation for existing norms and laws on cyber security is based or drawn primarily from (i) the Constitution of the Russian Federation, (ii) the Law of the Russian Federation of March 5, 1992 “On Security”, and (iii) the Law of the Russian Federation dated July 27, 2006 No. 149-FZ “On Information, Information Technologies and Information Protection”.

Certain precautions are being taken in order to prevent cyber-attacks and minimize the potential harm, e.g. adoption of the Presidential Decree dated January 15, 2013 № 31c “On the Establishment of the State System for Detecting and Eliminating the Consequences of Computer Attacks on Information Resources of the Russian Federation”. It is also crucial to keep in mind related departmental regulatory documents (primarily those of the Russian Federal Service for Technical and Export Control) that also shape the regulatory framework.

The Convention on Cybercrime adopted by the Council of Europe in November 2001 is probably the most significant international document in the field of combating cybercrime for the Russian Federation. However, the document was not ratified by Russia, due to provisions allowing for investigative actions on a territory of another state without any formal approval. Even though the Convention did not become part of the Russian legal system, some of its provisions were reflected in the norms of the Russian criminal legislation aimed at countering cybercrime.

With respect to Russia’s cyber security approach, the main components of information security are identified as: (i) the protection of information (that is, protecting personal data, state and official secrets, and other types of information of limited distribution), (ii) the protection of information from accidental or deliberate effects of a natural or artificial nature, (iii) the implementation of guarantees of constitutional rights and freedoms of an individual and citizen in the cyber domain, and (iv) the security needs of citizens, individual groups and the general population to ensure protection from negative (intentional and accidental) information-psychological and information-technical influences. The adverse effect of such an expansive “protective” element is that the state is empowered to intrude into the lives of private citizens, and the balance between the state’s security and private interactions is collapsed.

Russian legislation lacks definitions of cyberspace and cybersecurity. The possibility of adoption of the “Concept of the Cybersecurity Strategy” was discussed at the beginning of 2014, but was never adopted, and its adoption in the near future is unlikely because of objections from the Federal Security Service. There were several legislative initiatives concerning cyber security but none of them were particularly successful. The draft Federal Law “On the Security of the Critical Information Infrastructure of the Russian Federation” established the basic principles for ensuring the security of the critical information infrastructure, the powers of state bodies in this area, the rights, duties and responsibilities of persons owning such infrastructure, telecommunications operators and information systems providing the interaction of these objects.

The document outlines what constitutes criminal liability for “creation and (or) distribution of computer programs or other computer information that are deliberately intended to improperly affect the critical information infrastructure of the Russian Federation”, thereby delineating the criminally-punishable cyber threats to critical infrastructure.

PART III. DISPUTE RESOLUTION

1. Opportunity Landscape

In order to enhance cooperation between the United States and Russia, it may be necessary to rely on external, impartial bodies who can adjudicate claims of state-sponsored cybercrime. Once a set of definitions and norms are agreed upon, the two countries may need to recognize that their positionality prevents them from judging, neutrally and impartially, a given complaint. Moving forward, all complaints need to be taken seriously, but the alleged victim cannot be the allocated judge.

Designing dispute resolution mechanisms presents a real challenge. While there are multiple ways to resolve an international conflict, they all have both advantages and disadvantages. In this section, we will provide a brief sketch of the five most promising options.

i. Traditional Litigation

The first dispute resolution option to consider is traditional litigation. A lot of conflicts are resolved this way, and there are several established institutions that can be used for international litigation of cybersecurity disputes. Even though this method of dispute resolution surely has its advantageous points, it also has potential problems: quite often litigation tends to be quite expensive and time-consuming, some conflicts may take years to settle. Taking the complexity and novelty of cyber-security issues into account, the formal litigation procedure might seem too cumbersome.

International litigation regarding international legal disputes between states is settled in fora such as the International Court of Justice (provided that the states involved in the dispute consent to the jurisdiction of the International Criminal Court (ICC), which the United States does not), the World Trade Organization (WTO) Appellate body, and the International Tribunal of the Law of the Sea (ITLOS). These fora are permanent institutions established by international treaties, and the decisions are binding and final for the parties of the dispute. Although (i) the United States does not recognise the jurisdiction of the ICJ and (ii) the other bodies...
are only aimed at resolving disputes within a specific domain (that is, international trade and law of the sea), these institutions have proved that international litigation can be an effective measure for dispute settlement. Consider this long list of resolved cases: 176 cases were entered in the General List of the ICJ, among which are the Corfu Channel case, the Fisheries case, the North Sea Continental Shelf case, the Barcelona Traction case, and many others; over 350 rulings have been issued by WTO Dispute Settlement Body; and 25 cases in front of the ITLOS.

ii. Ad-hoc Tribunals
Ad-hoc tribunals are created for resolving concrete disputes and exist for a limited period of time. Formation of a special tribunal for settling a particular dispute ensures it consists of experts who have relevant expertise and are trusted by all the parties involved. On the other hand, an ad-hoc tribunal might be difficult to organize, as it is built from scratch for every conflict.

This type of dispute settlement has been most notably used to address abuses of human rights and humanitarian law. For example, the International Criminal Tribunal for Rwanda (ICTR) and the International Criminal Tribunal for the Former Yugoslavia (ICTY), both of which were created by the UN Security Council. Special courts have been set up for the purpose of prosecuting domestic and international crimes, and they remain a significant feature of post-conflict settlement. e.g., Special Court for Sierra Leone, Special Tribunal for Lebanon, and of course the Nuremberg and Tokyo trials.

iii. International Organizations
Another way to resolve international conflicts regarding cybersecurity issues might be appealing to international organizations. Unlike ad-hoc tribunals, these are permanent bodies which are supposed to be independent and always available in case of conflict. However, this approach brings up several issues such as choosing (or creating) such an institution and ensuring its objectiveness and effectiveness. The United Nations has appointed various special commissions to address specific concerns and, in some instances, its approach has proven successful. This is also true for some regional organizations, such as the Organization of American States, for example; effective action was undertaken by the Organization of American States in Costa Rica in 1955. However, the decisions of international organizations as a method of dispute settlement are usually of a procedural character and when substantive recommendations are given, they are non-binding. In an important sense, these kinds of commissions more closely resemble reconciliation commissions rather than judicial tribunals, which lowers the effectiveness of the whole process of dispute resolution.

iv. Mediation
Traditionally, a mediator facilitates discussion between the conflicting parties and helps them to come up with a mutually beneficial solution. While playing an important role in resolving a conflict, the negotiation itself is performed by the parties of the dispute, and it is they who make the final decision; the mediator just smooths the interaction of the parties.

Usually, mediation is undertaken in parallel with diplomatic protection or “good offices.” For instance, the Committee of Good Offices on the Indonesian Question, appointed pursuant to the resolution of the Security Council of August 25, 1947, has engaged in mediation and investigation. Mediation can also be conducted under the auspices of the Permanent Court of Arbitration (PCA).

v. Arbitration
Arbitration normally assumes that the parties of the conflict choose an independent and trusted arbitrator who examines evidence provided by them and makes a confidential binding decision that usually cannot be appealed. This method of conflict resolution is advantageous in that it allows countries to choose a trusted and knowledgeable arbitrator and is usually significantly cheaper than normal litigation, but it also entails a series of risks. Private dispute resolution may not be suitable for international cybersecurity issues, and the person assigned as an arbitrator might be biased. We contend, however, that arbitration is the best option available.

Arbitration has been effectively used to resolve international legal disputes, particularly in the spheres of international investment law and law of the sea. For instance, in 2018, the International Center for Settlement of Investment Disputes (ICISID) registered 57 new cases. In the 37 concluded arbitrations, 24 disputes were decided by a tribunal, and 13 cases were settled or otherwise discontinued. Throughout its history, the ICSID has overseen hundreds of cases, among which are outstanding ones like Tokio Tokeles v. Ukraine, SGS v. Iran, and Salini v. Morocco.

The PCA also acts as an efficient body for international law dispute settlement, in particular for investment and law of the sea disputes. Some famous cases include: Yukos v. the Russian Federation, Romak v. Uzbekistan, Guyana v. Suriname, and the South China Sea Arbitration.

2. Prospective Arbitration
One of the possibilities to resolve the fundamental disagreements regarding the cyber security realm between Russia and the United States is to provide an objectively comprised independent international arbitration forum for existing or potential dispute resolution. Such a forum could be possibly based on the platform of an already existing international organization, such as the ITU, in order to possess established credibility. Another crucial issue is the list of potential arbitrators and what competencies are to be required from the candidates, as the cyber security realm not only relates to law, but also heavily to informational technologies. Finally, evidence rules, such as evidence production procedure, standards of proof, and so forth, are to be articulated carefully and precisely.

For now, it is quite hard to imagine that both states, despite their bottom-line disagreements, would concur to referring potential disputes in a systematic manner to a dis-
pute resolution forum. Especially when there is a state of mistrust between the states and their social systems. Priscila-Moriuchi, who led the National Security Agency’s East Asia and Pacific cyber threats office, called the creation of a joint group for investigating potential Russian invasion in 2016 American elections “counterproductive and dangerous”, claiming that providing Russia with more information on US cyber defence strategies and analytic capabilities “would put American citizens and businesses at even greater risk of attack”. This is especially curious given that the US already has such a working group with China. The position of the United States in UN discussions on regulating cyberspace is presented as the following image: “Imagine a bully who’s pounding your head against a wall. When you complain that it hurts and threaten to punch back, he offers to sign an international agreement against bullying. Meanwhile, he keeps pounding your head”. This image seems to signal the impossibility of a constructive approach by any state towards the potential of resolving cyber security international disputes. However, this is only at first sight.

Several potential forums and international legal instruments with the opportunity to refer a dispute to the forum have been proposed by experts. In the scholarly community, much attention has been given to the International Telecommunication Union (ITU), which is capable of providing both (i) a dispute settlement platform, and (ii) preventive and diplomatic measures, such as leading working groups, engaging all stakeholders, and establishing trust across the board. The ITU is an international organization under the UN auspices and is responsible for issues related to information and communication technologies. Russia and the United States have been able to find common ground and cooperate on various initiatives, e.g. both states supported the creation of the Global Cybersecurity Agenda initiated by the ITU to promote cyber security cooperation.

It is necessary to consider, however, the potential problems in creating this kind of dispute-resolution forum within the ITU. The ITU has a vast worldwide membership and its decision-making process is consensus-based. Therefore, it is questionable whether such a large and inclusive body is capable of sustaining such a dispute-resolution process or of being efficient in its enforcement. These problems could be avoided if a smaller body within the ITU, with its own procedural order and without the involvement of all members of the ITU, was responsible for dispute resolution. Moreover, the ITU lacks legitimacy in the eyes of powerful state actors. It is often viewed as an avenue for cyber capacity-development, especially for developing countries, but is not recognised as the appropriate arena within which high-stakes discussions on cyber security should occur.

Other possibilities for cyber security dispute resolution include (i) domestic cyber law or (ii) the United Nations Convention on the Law of the Sea (UNCLOS) for coastal states. However, the domestic courts are of limited utility in this situation, as neither state sufficiently recognizes the other state’s judicial decisions on issues of cyber security. UNCLOS, meanwhile, provides more promising ground. UNCLOS prohibits conducting any attacks that interfere with the security or good order of a coastal state, and could be used as a springboard from which to further develop cyber security dispute resolution. A significant problem with UNCLOS is that the United States never ratified the Convention (the US does, however, recognize UNCLOS as a codification of customary international law). Given this, while the US may be bound by the substantive provisions of the Convention, it is questionable whether it is bound by the dispute resolution clause as a procedural provision.

The last arbitration option is establishing an independent international dispute settlement body for the specific purpose of resolving cyber security related disputes. However, without any history, institutional weight and credibility, it is unpredictable how both states with their rigid positions would abide by the procedures and approach the enforcement of such a body’s ruling. With these considerations in mind, we contend that creating a forum within the ITU is the most plausible suggestion. The ITU has the potential to become an independent and efficient dispute settlement framework. Although the ITU does not have as much credibility amongst states like Russia and the US, this is an issue on which both can and should compromise until a better solution is available.

3. Choice of Arbitrators
The question of attribution has been a pressing issue in the realm of cybersecurity for a long time. The reason for that is the architectural anonymity of the internet; it is almost impossible to identify the sender of the signals or information. Hence, even arbitrators who are experts in international law should be able to acquire knowledge regarding the technological processes related to internet and cyber realm.

Specific requirements should be established from the very beginning and the list of potential arbitrators should be drawn up beforehand, so the lack of such guidelines would not instigate a mal fide behavior from disputing states.

4. Evidence Rules
The now notorious story of Russia’s alleged hacking into the 2016 elections of the US President gives rise to another important issue that should be faced by the procedural rules of a potential forum beforehand. Spokesman of the Russian President, Dmitri Peskov, responded to the allegations by saying that the States “should either stop talking about [Russia being responsible for the hacking the US President 2016 elections] or produce some proof at last.” The most detailed twenty-five-page report compiled and published by the Office of the Director of National Intelligence, which concluded Russia’s responsibility on the matter, is based (according to Russia) on little evidence of its involvement in the hacking. Although the American intelligence might have compelling reasons for attributing the attacks to Russia, the validity of the claims continues to be questioned by Russia’s legal community.

Referring again to technological issues and internet architectural anonymity, technological attribution is mainly focused on the question of whether it is possible to establish attribution of an attack based purely on technological
instruments. In public international law, the question of state responsibility is never resolved with solely technological means or technological evidence; a significant collection of direct and circumstantial evidence is required. This also applies to the issue of cyber security in the context of international law and attribution. Therefore, it is crucial to establish such a procedural framework of rules, in particular rules of evidence, which would satisfy the requirements of credibility and objectivity, and allow the forum to come to a well-grounded decision so to declare a state responsible for the cyber-attack.

CONCLUSION

Developing the legal means to adjudicate and resolve such disputes at the international level will take energy, time and good will to develop. As institutions adapt to the changing nature of war and new challenges posed by technology, it will be necessary to have both long-term strategies and immediate solutions to the current problems. Part III of this paper presents ideas for developing a long-term legal solution that builds on existing international arbitration methods. None of the options we outlined neatly map onto the unique problem of cybersecurity disputes; nevertheless, we can use existing dispute resolution mechanisms as a springboard from which to develop new strategies.

But what should we do right now given that such a dispute resolution forum does not exist? While we have no direct answers, we suggest that a better understanding of another country's approach to cybersecurity is a necessary first step. There are, of course, no easy political or legal solutions to problems posed in the cyber realm. In this context, the legal and political issues are closely intertwined. However, by striving to improve understanding and jointly develop dispute resolution mechanisms, we will move closer to a solution.


For a more detailed analysis, see McKune, Sarah. “Analysis of International Code of Conduct.” The Citizen Lab, 18 July 2017, citizenlab.ca/2015/09/international-code-of-conduct/


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See more: https://www.itlos.org/cases/list-of-cases/


Ibid., p. 120.

“Good offices” usually means that the parties agree that the third state will be permitted to make an attempt “to bring the parties together, so as to make it possible for them to reach an adequate solution between themselves.” // American Treaty on Pacific Settlement of Disputes (so-called Pact of Bogotí), April 30, 1948, art. IX, 30 U.N.T.S.86. The right of one or more states not parties to a dispute
to offer their good offices “on their own initiative” was also recognized in the Hague Conventions for the Pacific Settlement of Disputes of 1899 and 1907, in article III, reprinted in 2 MALLOY, TREATIES BETWEEN THE UNITED STATES OF AMERICA AND OTHER POWERS 2016, 2020, 2021, 2228-29 (1910).


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TRACEABILITY IN INTERNATIONAL CHAINS OF PRODUCTION FOR WOOD PRODUCTS: FROM THE RUSSIAN FAR EAST TO THE UNITED STATES

VII. Climate and Environment Working Group

Alexandra Nikolaeva and Sequoia Chun

Abstract

As a consequence of the 2014 Ukraine conflict, domestic and multinational energy companies in Russia face a new operational challenge: trade in illegally sourced timber is a widespread issue with a variety of negative impacts, from severe deforestation and the destruction of livelihoods for local communities, to the loss of tax revenues and worldwide depression of timber prices that undermine legitimate industry and hurt economies around the world. The United States is the second largest consumer of timber products in the world, and imports over $20 billion worth of timber products annually. Many of these products are sourced in Russia, where illegal logging is endemic, and so the problem of tracing chains of timber production to ensure legality has become one of mutual interest between the US and Russia, both economically and with regard to environmentally sustainable resource management. The US market for flooring products has been steadily expanding in the wake of the 2007-2008 economic crisis (1). Many American flooring retailers have multiple suppliers in the United States and abroad. China is one of the largest manufacturers of flooring products intended for sale in the United States, accounting for about 59% of all hardwood flooring imports into the US (2). The raw material for these flooring products, however, often does not originate in China, coming instead from resource-rich areas of the Russian Federation, particularly the Russian Far East. Accountability and documentation standards for timber products vary among the countries in these supply chains. As a result of these inconsistencies, timber supply chains lack sufficient transparency for importers and retail consumers to track their products throughout their supply chains and verify the legality and sustainability of their products’ origins. This paper will outline current systems of timber tracking in Russia, China, and the United States and laws and protocols in place to verify the origins and provenance of timber products across international supply chains. It will discuss contemporary challenges in timber tracking and identify the blind spots—the transitional points—when timber passes from one owner to another and where opportunities for fraud exist. The paper will specifically focus on the Russian Far Eastern region as one of the largest timber producers in Russia, and discuss the issues of illegal logging of hardwood species commonly used in manufacturing flooring panels. It will also consider the use of public knowledge as an accountability point and present an outline for a consumer guide. This will be a guide that consumers in the United States might consult when purchasing flooring panels and other products made out of wood. Ultimately, informed individual consumers at the ends of these supply chains, who buy retail goods made of timber products, have the power to shift demand and create markets based solely on legally obtained wood.
ternational standards. Issues with contamination when timber from a non-certified concession enters the supply chain have been reported (5). This problem is particularly salient during mass processing in nations with less rigorous reporting standards in place, like China.

In the Russian Far East, and Primorsky Krai specifically, only three companies (all operating under the same owner) have gone through a certification process. Often, the main reason for a company to obtain forest certification in the first place is to access markets where there is a demand for the certified product (6). In the region of Primorsky Krai in the Russian Far East, such demand comes from Japan, whereas Chinese buyers historically have not shown significant interest in product certification (7).

Nevertheless, a significant share of timber exports from Primorsky Krai is intended for China (8), which means that most exported timber is not certified and thus lacks the additional tracking information that certification reports can provide. Consumers and researchers interested in verification of timber origins have no simple way of figuring out where the product comes from and whether or not it had been legally harvested. Recommendations issued in 2018 by the World Wildlife Fund (9) for verifying the origins of Mongolian oak (Quercus mongolica) – one of the most popular hardwood species used in flooring production – suggest that any retailer interested in purchasing any oak products from China should create a map of the primary suppliers of the Chinese manufacturer. Retailers should also verify the availability of documentation, specifically Chinese Customs Declaration form and Chinese CITES Import Permit. CITES permits are a measure required by the multilateral Convention on International Trade in Endangered Species of Wild Fauna and Flora, which has been in force since 1975. However, these and other documents that might verify the origins of the product when it is sold to the final consumer in the US, including the US Customs Declaration form (the Plant and Plant Product Declaration, PPQ 505), are difficult to access in practice. Moreover, there are known cases in which paperwork has been forged in one or more steps of the supply chain. Consumers, both retailers and the individuals to whom they market their goods, may not be familiar with what these forms look like and what information they should include.

In this paper, we present an outline for a consumer guide (see Section 4 “Tracking timber back to its origins – a consumer guide”) intended to show how complicated it might be for a final consumer to trace timber back to its location of origin. Sections 1, 2, and 3 describe the official and unofficial systems that Russia, China, and the United States have in place to follow timber products as they move from country to country and from owner to owner, and problems endemic to the current accountability protocols.

1. HARVESTING AND TRACKING TIMBER IN RUSSIA

According to the World Bank, about 50% of the territory of the Russian Federation, 814 million hectares, is forested (10). Timber harvesting in Russia has been decreasing steadily since the end of the Soviet era due to retreating markets for timber products. In 2010 it was twice as low as in 1990 (Figure 1).

Primorsky Krai, located within the Far Eastern Federal District (Figure 2), is among the ten most productive Rus-
sian provinces in timber production. However, active mills in Primorsky Krai can only process 3-8% of the region’s total harvest (11). Most of the timber harvested in Primorsky Krai is intended for export.

According to FAO data (12) in 2016 Russia was still the global leader in roundwood exports, exporting about 16% of total export volumes worldwide, though the current export volume of roundwood (~25 million m³) is about a half of the volume exported in 2006. The Russian government implemented roundwood export tariffs in 2008 to stimulate the country’s domestic roundwood consumption. These tariffs caused a significant decrease in export volumes. On June 1st of 2007, the tariffs increased from 6.5% to 20%, then increased again in 2008 from 20% to 25%. The third stage of tariff increase planned for 2009 (an increase from 25% to 80%) was never implemented.

The timber industry was not prepared for the rapid changes brought about by these economic constraints, and infrastructure to process the increased supply of raw logs was also not in place. As the global economic crisis of 2008 unfolded, the implementation of the third stage of tariff increase was postponed and then canceled completely (11). As a result of these government efforts, exports of raw timber from Russia decreased by almost 2.5 times from 2007 to 2011, and the share of revenues from export of processed timber increased from 66.5% to 163.5% (11).

This measure indeed created a positive trend in building facilities for timber processing across the country. However, the physical volumes of processed timber remained at about the same levels as before the tariff increase, though its share in total volumes export increased from 19% in 2005/2006 to 47% in 2010 (11). This may indicate that the industry has not actually benefited from the measure, but simply favored the exportation of processed timber to compensate for the loss of profit from sales of roundwood. Another probable consequence of this measure is the increase of illegal exports in roundwood in an attempt to support the business (13).

The forested land in Russia is publicly owned and governed by the Ministry of Natural Resources and the Environment and its Federal Forestry Agency (Rosleskhoz). During the last 20 years, the functions of the Federal Forestry Agency have been modified several times, and this instability has been characteristic of the entire forestry legislation in Russia. Historically, the Federal Forestry Agency was a central regulator in determining forest policy and practice. In the Soviet period forest enterprises and forested land belonged to the government, however, silvicultural activities and industrial logging were carried out by different branches of the Agency (14). In the 1990s commercial logging enterprises were privatized, but the Agency continued to carry all of its previous functions: forest monitoring and inventory, development of forestry regulations, forest management planning, reforestation, forest land leasing, regulation enforcement and control, logging permits, oversight and inspection and development of silvicultural practices amongst others.

The decentralization of the forest management and the transfer of the state supervisory functions onto the subjects of the Russian Federation occurred in 2007 as a result of the implementation of the widely criticized 2007 Forest Code. One of the goals of this decentralization was to reduce the level of corruption related to the practice of sanitary harvests and intermediate logging, which was considered to be one of the most widespread illegal practices in Russia. The prescriptions for removal of old or damaged trees often resulted in overharvesting, in which commercial-grade trees were also removed and later sold at a higher price (14). Many academics, activists and policy experts, however, viewed the acceptance of the new Forest Code as a failure of the federal government to address structural and financial issues in the Russian forestry sector. The federal government relieved itself from any responsibility for determining the long-term economic strategy and developing forestry policies (15). Subventions from the federal budget were allocated to fund decentralized forest management and supervisory activities. However, regional authorities have criticized the funds’ allocation and the number of subventions intensively, saying that the allocation processes were not sufficiently transparent (16). This legislation also resulted in significant reductions in staff in local forestry offices (17).

The effects of the new legislation on the volumes of illegal harvesting – the very problem it was trying to solve – have not been fully evaluated. Illegally sourced timber encompasses any timber products that are harvested illegitimately or processed or transported with insufficient or fraudulent documentation. Vangderger and Newell suggest that in the Russian Far East trade in illegally sourced timber comprise 80% of all timber trade in the western and central administrative districts (which supply the Chinese market) and around 10-15% in eastern districts (which supply the Japanese market) (18). The research institutions and non-profit organizations in Primorsky Krai attempted to compare the exported timber volumes with how much was allowed to harvest in a particular year. They found that the export volumes of Mongolian oak (Quercus mongolica), the most expensive hardwood species, exceeded the permitted for logging volumes by 2-4 times (18). Rarer and more expensive hardwoods are attractive targets for illegal harvesting and are often logged several times in excess of their allotted volumes.

The primary consumer of the illegally sourced timber is China, where the demand for Russian timber has been steadily increasing, especially in light of the measures taken by the Chinese government to reduce domestic timber harvesting (18,19). Most of the illegal harvest occurs when a valid permit exists, but the cutting exceeds the boundaries of the unit. It is also common that a permit will be issued for a sanitary or salvage cutting, but the best and the most valuable trees will be harvested instead. The administration representatives do not have an incentive to investigate the
illegal logging incidents, and even if an investigation occurs, the local forest officials might downplay the volumes of the illegal harvest(19). Corruption amongst officials is a major problem, and many of the government employees at different levels continue to profit from illegal operations (18,20).

According to the report, issued in 2018 by WWF, China imports almost all oak, available for export in Russia. In 2016 and 2017 98% of all exported logs and 84% of oak sawnwood lumber were intended for China (9). As the authors of the report point out, “while there is a legal supply of white oak exports from Russia to China, discerning legal from illegally harvested and traded oak can be difficult, especially once the wood from multiple Russian exporters is commingled in Chinese log yards”.

To address the issue of illegal logging, in 2013 the Russian government passed a Federal Law that amended some articles in the Forest Code of the Russian Federation, #415-FZ (21). The law mandated the establishment of a federal database of all transactions with timber, EGAIS LES. Currently, a company that intends to sell harvested timber on the territory of Russia is required to submit the information about the transaction into the database before the harvested timber leaves the forest. The record should include the name of the seller as well as the name of the organization purchasing the timber and the volume of the transaction. The transaction data can be freely accessed online. This information might then be used during inspections at the point of export, for example by the customs officials, to verify the volumes of the transaction from EGAIS LES with what is actually being transported across the border.

The effectiveness of the system to prevent illegal transactions is still unclear. Some researchers point out that there is not a single Russian agency that is directly responsible for crime prevention in the area of the timber trade. The Customs Service agents verify that the exporter pays duties; the agents of the Federal Tax Service confirm that the value-added tax had been paid, but there isn’t a party that’s responsible for verification if the volumes harvested match the volumes that are being exported (22). The Customs Service does not have legal grounds, for example, to stop the loading operation to a transporting vessel before all papers had been checked. The volume verification occurs at the moment when the shipment had already been loaded and often it is very difficult to say how much timber there is without unloading the vessel. The agents often do not have the time and resources for such thorough verification (22).

The new Federal Law also introduced some changes to the rules of timber marking. The exporter was now required to mark all individual logs intended for export. The label on the log should include information on the seller as well as the number of the forest declaration that specifies the location of the logging site and the dates of the harvest. The information on the label should be visible, and a customs agent should be able to scan the label. This new measure was intended to allow for easier tracking of individual logs once they leave the forest. Also, the information on each log should match the papers for the entire shipment.

To export timber, a Russian company is required to prepare an extensive list of documents that include custom declarations, contracts with the foreign buyer of the timber, receipts, and a phytosanitary certificate that confirms the proper disinfection and disinestation treatment of exported products. In the customs declaration, a company has to specify a port or a railroad station from where the traded products will be shipped. In practice, access to these documents is limited, and a company-retailer does not possess those documents to confirm the origins of the product or its proper treatment.

A more difficult issue, however, is not ensuring access to customs declarations, but their authenticity and credibility. In practice, while a shipment of timber might contain the necessary customs documentation, existing documentation is often fraudulent. Senotrusova (23) explains that, for example, the exporter might submit a forged phytosanitary certificate or sale contracts. Commonly, declarations will contain misleading information regarding the weight or the volumes of associated shipments. The opportunity for fraud arises from the fact that in the transportation documents the total size of the shipment has to be declared in units of weight (tons), but in the customs declarations, the size is measured in units of volume (cubic meters). Errors often occur during this conversion and exporters can exploit those errors to their own advantage. Additionally, an exporter might change the name of the exported timber species in order to sell more valuable species under a customs declaration stating a less valuable species. In this way, exporters can be obligated to pay lower duties. Customs employees often check the price of an export based on average export data, and errors are common when distinguishing between certain hardwood species, particularly those of the same genus (for example, different species in the genus Quercus). It is not difficult for an exporter to declare a less valuable hardwood species that, when stripped of bark and sawn into lumber, is indistinguishable from a more expensive species.

2. CHINESE PROCESSING AND TRANSPORT OF TIMBER PRODUCTS

China is the destination of more than half of timber exports worldwide and has become a major processing and transit hub for internationally traded timber products(24). Russian roundwood exports decreased significantly following the enactment of export tariffs intended to stimulate domestic roundwood consumption in 2008. Despite this, Russia remains, by far, the leading exporter of both roundwood and sawnwood to China as measured by volume and value(24). While China has significant native forest resources, its market has increasingly relied on imports of timber to meet its large demand since the 1990s. In 1998, China adopt-
ed several environmental policies focused on habitat protection that included significant regional logging demands. As a result, domestic timber production has decreased in Chinese natural forests, most of which are under state control (25). Chinese manufacturers have instead opted to increase domestic processing facilities for imported roundwood, and manufactured goods from these facilities are sold in the domestic market, or else exported. Chinese timber processing capacity tripled between 2010 and 2015, and in 2017 timber imports in China totaled 471 million m3 of roundwood equivalent (24). Logs from the Russian Far East are usually shipped overland to Chinese industrial centers on trucks at one of three crossings on the long Chinese-Russian border. Many of these Chinese timber products, including over $800 million per annum of processed hardwood products, are sold to US consumers after manufacturing (2).

While major timber importers have passed legislation that prohibits trade in illegally sourced timber products – the 1900 Lacey Act and 2008 Lacey Act Amendment in the United States; the 2013 Timber Regulations in the European Union; and the Law on Promoting Green Purchasing in Japan-China – they do not hold a formal extant commitment to trading in solely legal and sustainable foreign-sourced forest products outside of the Convention on International Trade in Endangered Species (CITES). Correspondingly, documentation of the timber traded and processed in China is sparser than in those markets with more of an eye to environmental protection. The documentation required to accompany imported timber products in China includes a Chinese quarantine and customs declaration form and a Chinese CITES import permit for some species, as determined by the Convention (24). The Chinese government is also currently developing a new documentation system, the Chinese Timber Legality Verification System (CTLVS). Compliance with CTLVS standards will be voluntary, but will likely be adopted by two Chinese national associations comprising over 80% of Chinese timber companies to prepare the industry to meet future mandatory requirements currently in development (26). While provenance information is required for quarantine processes for plant product imports in China, species and provenance information is not normally included in Chinese customs declarations. This information must, however, be included when imported materials are from CITES-listed species like Mongolian oak, a hardwood often exported from the Russian Far East.

Once imported raw logs have reached a Chinese processing facility to be manufactured into consumer goods like hardwood flooring, they are often stored and processed alongside imports from different Russian regions or nations, or even timber of other plant species (9). As accompanying documentation standards and risk levels for each timber source may vary, mixing of wood sources in bulk processing and shipping facilities hampers tracking efforts by sellers or consumers downstream in the supply chain. This mixing can include mixing of woods from various harvesting sites and often various species.

3. AMERICAN TIMBER PRODUCT IMPORTS AND CURRENT TRACKING AVAILABILITY

The United States has a long-standing commitment to environmental conservation and has expanded the federal Lacey Act several times since signing it into law in 1900. The Lacey Act, and specifically, the Lacey Act Amendment of 2008 (LAA), makes it unlawful to import, export, acquire, sell or purchase any plant or animal species which have been taken, transported, or sold in violation of US, state, Indian, or foreign law. What this means is that timber harvested illegally in a country-exporter cannot be sold on United States territory, and the importer of such timber will be prosecuted according to law.

The main supporter of the LAA, Senator Ron Wyden (D) Oregon, argued that the new document will not only assist in addressing the issue of illegal logging but also protect the US lumber industry, since the inflow of cheap timber from outside of the country decreases the prices on the domestic market and puts loggers out of jobs. Theoretically, then, with the enforcement of the amendment, the lumber prices in the US would have increased had the amendment been successful in its intention to stop the illegally sourced timber from entering the US. A researcher with the US Forest Service, Jeffrey Prestemon, sought to test this theory by analyzing the monthly US import data on tropical lumber. His research indicated that there were double-digit percentage increases in prices and decreases in quantities of tropical lumber imports from Bolivia, Brazil, Indonesia, Malaysia, and Peru (27). This effect is in line with the projected effects of LAA enforcement on the domestic market.

In the paper, Prestemon also mentions that plywood imports from China had decreased by 14-21% since 2008, although there was not a significant effect on the prices. Overall, he concludes that even controlling for other factors, such as new policies within the country-exporters and their economic stability, it appears that “the prices of lumber and hardwood plywood imports into the US from suspected illegal fiber source countries have increased and their quantities have decreased upon enactment of LAA. Both price and quantity effects are consistent with a backward shift in the export supply of these products from these countries, which we posit would be the effect of removing illegally produced wood from the supply offered to the United States” (27). The LAA has so far been effective at reducing known sources of illegal imports into the American market.

The amendment, to our knowledge, has been enforced twice in its history. In 2013 Environmental Investigation Agency, a US non-profit organization, issued a report called Liquidating the Forests, in which it described how an American flooring company used timber illegally sourced from the Russian Far East. The report highlights the particular relevance of accountability in timber harvesting and processing in chains of production from Russia to the United States, with intermediate processing in China. It details how this timber was exported from Primorsky Krai to China, where it
was processed and manufactured into flooring panels, and then from China to the United States, where it was sold to American retailers. As a result of this report, the US Department of Justice (DOJ) launched an investigation into the activity of Lumber Liquidators, the company that had been purchasing this Russian lumber from Chinese exporters. The company pledged guilty in 2015 to violations of the US Lacey Act for the smuggling of timber illegally sourced in the Russian Far East and agreed to pay more than $13 million in fines and penalties. The second case involved Gibson Guitar Corporation (currently Gibson Brands, Inc.), which had imported illegally sourced ebony wood from Madagascar to be used in production of their guitars. The company admitted to the violations of LAA in 2012 and entered into a settlement with the United States Department of Justice. Gibson was required to pay a fine of $300,000 in addition to a $50,000 community payment (28).

The settlement text mentions that the wood that Gibson purchased from its German supplier had been declared for US Customs purposes under a different tariff classification. Moreover, Gibson did not ask any official assurances from officials in Madagascar where the ebony originated from, that the wood it was purchasing from Madagascar through its German supplier was legally harvested and exported from Madagascar. Instead, Gibson relied on the fact that the supplier participated in the FSC chain of custody. The document further suggests that “Gibson should have taken a more active role and exercised additional diligence with respect to documentation of legal forestry practices in the areas of Madagascar from which those shipments from its wood supplier may have originated” (28).

The Gibson Guitar case indicates that the reliance on the certification documents might not be sufficient to establish the legality of the purchased product. It appears as if Gibson was not aware of the fact that the ebony has been declared under a different tariff classification in the US customs form. The form (Plant and Plant Product Declaration Form, PPQ Form 505) requires a company-importer to state the country of harvest and the species, including a plant’s scientific name, as well as the tariff code. The information in this declaration can help a retailer to identify the origins of the product. Gibson Guitars did not request access to this form from its partner – the US company-importer of ebony wood.

The PPQ Forms 505 are not currently available to the public. The data contained therein may be purchased from marketing agencies, but retailers may not feel that these additional expenses are justified. Limited access to data makes it difficult for the final consumers to understand the origins of the product they purchase, and they have to rely on what little information that the retailer provides them. What, then, can a final consumer do to ensure the legality of the product? Below, we describe a product that American consumers of the wood products might consult to understand and mitigate the risks of acquiring a product made of illegally harvested material.

4. TRACKING TIMBER BACK TO ITS ORIGINS – A CONSUMER GUIDE IN PURCHASING WOOD PRODUCTS

Consumer education about illegal logging, its risk factors, and its negative environmental impacts can make retail consumers an important point of accountability in chains of production. American consumers interested in verifying the origins and legality of the manufactured wood products (flooring, paneling, wood veneer, sawn lumber, etc.) they purchase would benefit from the development of an informational consumer guide. Such a guide would likely focus on products sourced from the Russian Far East but could be extended to other Russian regions and beyond.

This brief guide will include: a listing of species known to have been logged illegally in the Russian Far East; documentation that should be available to potential buyers about the product’s chain of production; whether sellers have had voluntary forest certification through monitoring bodies like Forest Stewardship Council (FSC) and the Program for the Endorsement of Forest Certification (PEFC); the degree to which sellers have complied with the criteria of their certifications, as determined by reports from certifying bodies; questions to ask the seller about accountability for the legality and sustainability of the product’s sourcing; and contact information for organizations that a consumer could contact to make a report or inquiry. It will also include basic information about the Lacey Act and the 2008 Lacey Act Amendment. This guide will be a short and accessible online document, much like the Monterey Bay Aquarium’s Seafood Watch consumer guides, which are available in state-specific brochures and a mobile app. Improving consumer access to this knowledge will, in turn, incentivize companies operating in Russia and the United States to improve documentation and source their products legally and responsibly, and increase public awareness of illegal logging and environmental crime as international issues.

CONCLUSIONS

International trade in wood products is a complex process, regulated by multiple sets of policies and multiple actors that apply during different stages of this process. From timber harvesting to the final product, the material exchanges hands and countries. Although, some universal requirements for tracking wood exist, more often than not the opportunities for the illegally sourced material arise from the discrepancies in domestic and international legislation. Even with rigorous requirements for documentation and enforcement of these requirements in the US, there is no guarantee that the illegal timber has not entered the supply chain upstream, in China or Russia. Verification of the origins of the material and its legality is a tedious task that many retailers of the wood products are not willing to undertake. In this paper, we demonstrate that for an ordinary consumer it becomes almost impossible to trace the product back to the forest from which it had been sourced. Relying on the traditional methods of verification, for example, an FSC certificate, as recommended by many non-profit organizations, has proven to be an unsound practice.
Moreover, the definition for legality might be vastly different in countries along the supply chain, and often the understanding of environmentally sustainable harvesting depends on the culture and the long-standing tradition. In this situation, the final consumer of the product might have a very distorted picture of what sustainability and legality really mean for the country where that product had been sourced. However, despite some disagreements with the recommendations listed in the WWF report on responsible sourcing of white oak from the Russian Far East, we support the idea of creating a list of verified suppliers, studying documentation and ensuring its readability, and working to bypass intermediaries in supply chains. Purchasing directly from a Russian forest leaseholder that also manufactures the product can mitigate the risks of illegally sourced wood present in the final product. It is a safe precaution to hire consultants that speak the Russian language and are familiar with the forest industry in Russia to avoid confusion and ensure that all parties agree on the meaning of forest terminology, harvesting methods, volume conversions, etc. Consultants should have relevant knowledge of forest ecology to verify harvesters’ claims about the legality of their products. In the future, such a system could be used as a template in other nations where illegal logging is widespread.


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I. INTRODUCTION

The reciprocal relationship between a government’s national policy and the communication of scientific knowledge is a phenomenon worth investigating for both policymakers and scientists alike. In a society of varying objectives and subjective political beliefs, scientific methods and procedures provide a common platform on which to develop and comparatively evaluate policies and their societal impacts. However, subjective ideas, cultural narratives, and methods of communication can shape and legitimize not only policy agendas, but the course and applications of scientific investigation as well. In the United States, advocates for a specific technology policy must develop a strategy that accounts for the adversarial politics of Congressional budget wars, as well as the technocratic expertise and influence necessary to develop viable and meaningful relationships with key players in science and industry.

Considering the U.S. and Russian national space programs as a case study, this paper will explore the role that scientific communication methods and socially constructed narratives play in shaping technology policy agendas, and how methods of framing and presenting scientific objectives can influence and direct joint policy. To understand how scientific investigations are prioritized and translated into national policy, this paper considers four facets of influence: (1) cultural values and societal norms, (2) models of science communication used by stakeholders, (3) collaboration of commercial enterprises, and (4) political will and policy processes. Finally, by analyzing these methods of influence, a strategy for using effective science communication to foster continued support of U.S. and Russian collaboration in space programs is discussed.

II. BACKGROUND

The national space programs of the United States and Russia are at a crossroads. With heightened political tensions between the two countries, the increasing involvement of private industry, and the upcoming end of the International Space Station project, the future of collaboration between the two countries in space exploration – and the future of the national space agencies themselves – is uncertain. However, from both a scientific and political standpoint, continued investment in space exploration and international collaboration is important. From the standpoint of basic research, national investment in space sciences has the potential to shape research and development in areas such as deep space exploration that may not be pursued by emerging commercial enterprises for financial reasons. From the perspective of international cooperation, the large, intractable problems at the heart of space exploration mean that all involved parties can benefit from the cost-sharing, knowledge dissemination, and political sustainability that multi-governmental partnerships can bring.

Space exploration is an expensive, technologically difficult activity that does not immediately produce tangible benefits for most citizens of a country. Despite this, the governments of Russia and the United States have separately and jointly pursued successful national space programs for over half a century that continue to garner public and industry support. Science communication – the ways in which scientific ideas and objectives are communicated to policy makers and the general public to help inform decision-making – has had a large role in shaping and legitimizing the U.S. and Russian national space programs, as well as making this field an area of fruitful cooperation between the two countries.

Widespread narratives about the cultural and political importance of space exploration helped to popularize technical objectives in space exploration for each country at the programs’ inceptions. In collaborative efforts between the two nations, science communication has also played an important role. The 1975, the joint Apollo-Soyuz mission required a high level of bilateral technical communication, and provided evidence that scientific endeavors can be mutually beneficial areas over which to forge political cooper-
The relationship between science and policy is often reciprocal, with scientific evidence influencing the direction of policy, and policy impacting what kinds of scientific research is done. At the center of this exchange is science communication. This project will explore the reciprocal role that science communication has played in shaping Russian and U.S. technology policy agendas in space, as well as look towards the future of the field at a time when the political and industry landscape in space exploration is at a crossroads.

III. BUILDING POLITICAL AND PUBLIC WILL FOR LARGE-SCALE PROGRAMS: REPRIORITIZING SPACE EXPLORATION AS NATIONAL OBJECTIVES

The largest impediment to continued collaboration in space exploration between the United States and Russia is a lack of political will on both sides to maintain robust, collaborative national space agencies. At a time when national space programs are no longer deemed critical to meet security and defense objectives, political support, programmatic stability, and federal funding remain significant roadblocks to establishing effective, large-scale space program objectives. This is made evident by the fact that, in the United States, programs such as the Space Shuttle and the Constellation project have been cancelled on grounds that they are too expensive and do not fit with the administration’s strategic goals. On the Russian side, Roscosmos has been plagued with administrative issues such as corruption scandals and product failures that have undermined its legitimacy in the view of the Russian public.

Without the political and public will to continue funding and authorizing national space programs, large scale, international collaborative efforts will not occur. As defined by the World Bank, building political and public will involves four key tasks: (1) identifying key stakeholders in the issue area, (2) determining the existing problem and solution definitions, (3) aligning the problem and solution definitions, and (4) building firm commitments and mutual accountability.

While identifying stakeholders and outlining firm commitments may be challenging, yet tractable problems and real difficulties arise in determining and aligning the existing problem and solution definitions. The ability to define the scientific goals of a space exploration program and to align them with the goals and motivations of the public and of politicians requires understanding of the intrinsic values of the public, determining the motivations and processes of policymakers, and being able to convey scientific knowledge in a credible, salient, and legitimate way to those stakeholders involved. In order to understand what is necessary for public and political will for continued national space collaboration, this section looks at the cultural values in the United States and Russia that have underpinned both countries’ national space programs, as well as the processes that are used to translate scientific objectives into policy.

Cultural narratives as a foundation for policy: the motivating influences behind the U.S. and Russian national space programs

Both the Russian and U.S. national space programs have their origins in Cold War era geopolitics, but the perceptions of space exploration in each society are grounded in unique and powerful cultural values. As the United States and the Soviet Union engaged in a broad Cold War rivalry over profound ideological, economic, and political differences, space exploration and competing national perceptions of technological superiority in spaceflight emerged as a symbolic proxy for ideological superiority, which increased the salience and legitimacy of space exploration as a public policy objective.

The idea of a “sociotechnical imaginary” helps to explain how cultural values are used to define the objectives, beneficiaries, and logistics of science and technology policy in a society. As first described by Sheila Jasanoff (2015), sociotechnical imaginaries are “collectively imagined forms of social life and social order reflected in the design” of national policies or projects. Beyond being simply policy objectives or beliefs, these constructs describe a concept that, at its core, appeals to unquantifiable or irrational human motivations. Sociotechnical imaginaries give shape to a society’s values as they apply to different technological domains, and provide direction and legitimacy to progress in that area. It is upon these perhaps illogical foundations of a collectively imagined future that rational, technological progress takes shape.

Cultural perceptions of space exploration in the United States

The narrative of space exploration in the United States originated in classic American values and is still maintained to an extent through these avenues. Through the political language, art, and cultural contexts of the 1960s and earlier, outer space was presented as a unexplored, “final” frontier, awaiting colonization by entrepreneurial Americans. From cartoons such as the Jetsons that showed an American model of domestic life in space, to NASA-commissioned art and the symbolic decision to plant an American flag on the moon, the picture of outer space presented and reinforced to the American public was resoundingly “American” in nature. Even recently, NASA’s partnership with Hollywood on the film “The Martian” was viewed as a highly successful venture for both enterprises.

Cultural perceptions of space exploration in Russia

In Russia and the Soviet Union, formalized science communication and popularization of space research has been formed in a different way. During the height of the Cold War, science communication about space was designed to portray space exploration as a collective achievement and societal ideal. Non-fiction books for preschoolers, school children and adults were published; journalists worked at the Soviet space agency at the most crucial moments of space program success; and in the 1960’s, a journalist from Komsomolskaya Pravda, Yaroslav Golovanov, even prepared for a flight into space. Astronauts were ids of society.

Propaganda was also a significant part of space communication in the USSR and political goals were inculcated deeply in space science messages. All points of “cosmic success” were extolled as the achievement of socialism and
one of the primary aims of public relations at this period in time was to convince people that they were led by the most advanced and caring government in the world. It led to stringent requirements on the coverage of failures, with most failures not reported at all until the period of Glasnost took effect in the 1980’s. Political goals were inculcated deeply in space science messages.

Comparing impact and influence

Studying space and science propaganda from both countries is useful in order to assess how cultural values are selected, exaggerated and used to both form and legitimize national policies. Propaganda, by nature, “simplifies complicated issues or ideology for popular consumption” and in doing so employs recognizable symbols and existing cultural values to channel societal acceptance of a unified and collective cultural goal. In contrast to the American propaganda portrayal of space as a democratic frontier, Soviet propaganda art described space exploration as a natural extension of communism itself, evoking images of the state and collective ownership. The contrast of Soviet and American imperialism on earth in many instances is extended to the language and art surrounding space exploration: while American television shows such as Buck Rogers evoked images of cowboys and soldiers colonizing the cosmos in the name of freedom and democracy, Soviet art focuses on the role of the state in space, referring to cosmonauts as pioneers and communism as the propulsion force driving a technologically advanced society into a peaceful and utopian future. These contrasting examples provide an illustration of how cultural norms and institutions can impact views and values technical progress.

Communication models: translating cultural values into policy through scientific language

Once the cultural values of a society are more fully understood and defined, technical stakeholders can strategize how to most effectively shape their research objectives and convey their messages. This corresponds to the “define” and “align” steps in the process of building public will.

In the literature, three formalized models of science communication are defined that provide paradigms for the ways in which scientific knowledge can be communicated from experts to the public: the dissemination model, the dialogue model, and the participation model. These models provide a framework for analyzing the effectiveness and strategy for communicating technical information.

Generally, the dissemination model represents one-way communication from those with expert knowledge to the public, the dialogue model represents a communication strategy that engages the public in a two-way communication, and the participation model operates under the understanding that “communication about science takes place between diverse groups on the basis that all can contribute, and that all have a stake in the outcome”. According to Brian Trench (2008), who is credited largely with developing this framework, each of the models can serve a useful role in communicating knowledge and influencing policy, with strategic purposes ranging from defense to engagement.

NASA’s science communication approach

According to the National Aeronautics and Space Act of 2010, NASA has a mandate to communicate its research and operations to the wider public. The primary goals of NASA’s Office of Communications are to increase awareness of the
agency’s strategic goals and to “articulate the role to humanity” that space research plays.

As previously referenced, NASA’s original approach to science communication followed primarily a dissemination model, with a primary focus on human exploration in space. However, as the social climate and goals of the agency have changed over the years, the strategy of the agency has been to employ more dialogue and participation-based models of communication, with over 490 social media accounts and routine challenges that engage students in problem-solving activities related to space research. This strategy also aligns with and supports the emergence of a social “Maker Culture” which emphasizes informal, shared product development at a more grassroots level. Continuing to align with and build off these social trends may help NASA engage a wider, more invested base of civil society and commercial partners necessary to maintain public support and backing.

Roscosmos’ science communication approach

As with NASA during the Cold War, the Soviet Space agency predating Roscosmos relied on a communication strategy that was dissemination-based and rooted in cultural context. However, the Soviets maintained strict censorship over any information they released about their space program, and any details that were revealed to the public were done so in a tightly controlled and highly secretive manner. The general public was not informed of the overall goals, activities, or mission specifics of the program, and were not, under any circumstances, informed of failures in the program. At the same time, the successes of the program were portrayed as successes of communism and idealistic Soviet values. This resulted in a picture of the space program that was at once lofty and obscure for the average citizen at the time.

In recent years, Roscosmos and academia in Russia have embraced a strategy towards science communication that places more emphasis on the popular aspects of science. As recently as 2014, science communication as a discipline began to be recognized in Russia, with the emergence of popular science blogs and university programs focused on science communication, and Roscosmos began to implement active public relations policies. Although the field is still emerging, the beginning stages of commitment by government agencies, universities, and journalists throughout the country represents an opportunity to further use the avenue of popular science and media-based participation to engage citizens as invested stakeholders in a national space program. However, significant challenges still exist - only 3% of Russians claim that they currently read popular science publications, and usage of the participation and dialogue models of science communication from Roscosmos remains rare, with the exception of previous blogs run by cosmonauts living on the International Space Station. To fully attain the benefits of widespread public awareness and support, it will be necessary for Roscosmos and proponents of space exploration in Russia to invest further time and resources into communication strategies that both disseminate technical information in an approachable way and engage the public as involved stakeholders.

Translating policy into action: political process process

Even once public will for a technically-oriented policy has been established, political will can remain a roadblock. The U.S. national space program provides a striking example of how technological directions can be shifted by changing political parties and power dynamics, even despite favorable public opinion. As a federal administration, NASA and its directions have been influenced largely by the objectives and priorities of the Congress and Executive Branch in power. Beyond the changes in international affairs and policy objectives that have occurred as administrations change, new presidents and eras in American political life have brought about transformations in the way policy is assessed, justified, and formulated.

Cost-benefit analysis and formulation in American politics

When President Ronald Reagan introduced a policy of cost-benefit analysis into regulation, economic feasibility became the metric by which all policies were legitimized in the national agenda and accepted by political actors. Cost-benefit analysis, at a glance, appears to be an impartial mechanism of decision making. Especially in a capitalist society where impacts and value are measured primarily in terms of their dollar value, quantifying the potential gains and losses to society that may result from a policy appears to be a rational strategy. However, at the heart of this technique is a more subjective reality. The foundations of cost-benefit analysis require determining the value of a number of non-monetary elements, such as human lives or environmental assets. How these corresponding financial values are determined in the first place, however, is a construction that is largely socially determined and influenced by a number of non-quantitative factors.

The principle of cost-benefit analysis requires that all benefits of a policy must be monetized in order to be politically valid. In many cases, these benefits may be abstract or diffuse in nature and difficult to quantify in an empirical and unbiased manner. The beginnings of the Space Race illuminate how changing societal and political quantification of the same benefits can lead to vastly different outcomes in terms of cost-benefit acceptability. In 1961, when President Kennedy declared that the U.S. would launch a mission to the moon, the costs of space exploration were just as high or higher than costs in later years, but were deemed acceptable by the policy-making standards of the time, which were less rigorous quantitatively and placed high political and societal value on dominance in space.

In fact, in 1973, NASA reported that the total costs of the Apollo program had exceeded $25.4 billion at the time, or around $200 billion in today’s currency. A single launch of the Saturn V rocket that was used to transport the Apollo astronauts into space for the lunar missions was estimated to cost $2.5 billion, when adjusted for inflation. In contrast, at the time the space shuttle program was cancelled, a single flight of the Space Shuttle cost around $1.5 billion per flight, when lifetime operational costs of the program are factored in.
Given these calculations, it is evident that strict cost comparison alone was not the deciding factor in determining whether to continue or shut down the program for manned missions in space. It is in the corresponding calculation of benefit to society that the subjective nature of cost-benefit analysis is revealed. How politicians and economists decide the quantitative values of policy benefits is intrinsically a function of the political objectives of the current era. In the adversarial realm of congressional budgeting and allocation debates, those who can most effectively articulate the economic benefits of their policy objectives will be able to influence legislation, while other policies with more abstract societal benefits may be effectively stopped purely on economic grounds.

The collective priorities of the American political system and society dictate that policies focused on scientific understanding must be rooted in either political or economic gain. Without the national security imperative of Cold War geopolitics, the U.S. space program must now legitimize itself through economic routes. As the American political climate continues to be increasingly unreceptive to the costs of basic scientific research – including those of the space program – it is incumbent upon members of the scientific community to frame these knowledge objectives at least partially in quantifiable terms, regardless of whether they truly believe those principles to be the most convincing arguments for undertaking foundational research. Doing so requires an understanding of the political landscape that allows policymakers to frame exploration in ways that expand its legitimacy, salience, and credibility to both politicians and the public at large.

Political support for space policies in Russia

Russia’s national space program remains quite active, completing dozens of launches each year and offering what is currently the only option for manned spaceflight, until SpaceX in the United States begins crewed missions in mid-2019. However, the agency has significant political hurdles to contend with in order to maintain a robust presence in the future landscape of space exploration. For one, economic issues at a national level have resulted in the government cutting the funding of the agency by more than half its budget, from $64 billion to only $21 billion. Additionally, the agency has suffered financial woes of its own resulting from technical failures and lower-than-expected sales and has failed to meet profit targets in recent years, further drawing the ire of government officials. Additionally, since the end of the Soviet Union, there has been a decrease in funding for high technology and science research in the country, with national spending hovering around one percent of the GDP since 1997, and many top Russian scientists and engineers have been incentivized to find work outside the country.

Recently, however, there have been signs that this trend is beginning to switch course. In 2018, the government increased the science and technology budget by 25%, and new university investments (such as at the Skolkovo Institute for Science and Technology) have begun to attract scientists interested in working at the top of their field in Russia. For Roscosmos to continue to be a strong space agency in the future, these trends must continue, as domestic talent and government support are critical to its mission.

IV. ENABLING COLLABORATION IN COMMERCIAL ENTERPRISE

Private scientific and technical institutions play an increasingly important role in advancing and sustaining the agenda of space exploration, and can be even further leveraged in situations where the political will to undertake national space endeavors is lacking. Many of the day-to-day activities in space, as well as the production of critical components, is undertaken by commercial companies, with large scale, basic research still being directed by federal agencies. Whereas the federal agencies may be better suited to continue undertaking large programs such as deep space research and coordinating the Deep Space Gateway, engaging commercial enterprises for other types of tasks and providing Russian and American companies with avenues to engage represents enormous collaborative opportunity even when political will for collaboration at a governmental level does not exist.

Commercial space enterprise in the United States

Since the cancellation of the Space Shuttle program in 2011, the American federal government has redefined and narrowed its role in space sciences and exploration. With his signing of the NASA Authorization Act of 2010, President Obama limited the federal budget for the space program, effectively ending plans that had been in the works for the agency to develop a successor to the space shuttle, as well as additional plans for human space flight missions. President Obama’s budget for the agency also called for $6 billion over five years that would be used for commercial contractors to develop spacecraft with the oversight of NASA – a drastic shift in strategy for the space agency. Where NASA had previously been solely responsible for most elements of space technology, its role has now been shifted to a federal partner to many commercial agencies it provides oversight and guidance for.

With this shift towards a more commercial business model, companies including SpaceX and Orbital Sciences have stepped in to fill many of the roles once undertaken by NASA. Currently, SpaceX and Orbital ATK contract with NASA to complete cargo launches, and a variety of companies have indicated interest in developing technologies for low earth orbit, as well as select companies (SpaceX and Boeing) who intend to do more complex crewed missions by the end of 2019.

Ultimately, the objective of the majority of commercial companies is to turn a profit, and this objective, combined with the lack of a unifying mission statement amongst the companies, may potentially influence the types of activities these companies pursue. Given the lack of direct profitability inherent in basic research activities, without incentives to undertake these investigations, commercial activity may be directed towards more immediately profitable endeavors such as cargo and satellite missions and asteroid min-
ing. As NASA continues to provide these companies’ largest
and most profitable contracts however, the agency’s role in
determining the direction of space technological progress is
not entirely cut out of the picture.

As detailed in the Table 1 provided by NASA below, the
federal agency still retains a significant amount of influence
over the direction and capabilities of space exploration, both
through the development objectives the agency sets and in
the funding it provides to commercial contractors. By uti-
lizing these pathways, both the industry players and NASA
can influence and define the knowledge and technology
objectives through a technocratic approach. As these com-
mercial companies become larger and more prominent, the
conversation around goal-setting may shift towards being
more heavily influenced by commercial objectives. By using
these methods of coordination early in the development of
the industry, NASA and other political advocates for space
exploration can attempt to influence and establish the ideo-
logical foundations upon which a privatized space industry
will be built.

Commercial space enterprise in Russia

In the United States, the principle “the State is the cus-
tomer, business is the performer” is the model of large scale
space programs, whereas in Russia the reverse axiom is true:
“business is the customer, the State is the performer”. The
current version of the Russian governmental space program
has not yet been able to monetize its scientific and technical
potential, a model which was inherited from the USSR. There
are some positive examples of commercial income: sales of
RD-180 and RD-181 engines for example, contracts for Pro-
tons and Soyuz, and delivery of foreign crews to the ISS, but
revenues do not exceed 10% of budget expenditures.

Russia already has examples of successful commercial
activity in space based on the domestic industrial poten-
tial, including Gazprom Space Systems. In 1992, the compa-

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Commercial space enterprise in Russia
ny was founded by former employees of RSC Energia, and specializes on manned astronautics, although it also deals with satellites. When the founders decided to enter the difficult telecommunications market, RAO Gazprom supported the initiators with guarantees for bank loans. These loans helped to build satellites for them at Russian state-owned enterprises, launch them on Russian missiles and start commercial activities. Moreover, the satellites were built using the most modern technology available.

A second category of commercial customer, who possibly can compete on the international market of rocket launchers, is also being developed. S7 Space Transport Systems is developing the capabilities of creating a new competitive Soyuz-5SL rocket, and is ready to invest its funds in it. With the expansion of the commercial space sector in Russia into launch capabilities, Roscosmos will have the option of using service and operations contracts to support their missions.

V. CONCLUSION AND RECOMMENDATIONS

The partnership between the U.S. and Russian national space programs is at a critical juncture. The emergence of commercial enterprises, the shifting of national objectives in both the United States and Russia, and heightened political tensions between the two countries provide existential challenges to the national space programs themselves and to the future of collaboration between the two agencies.

To continue a productive legacy of cooperation, the United States and Russia therefore need to strengthen both the foundations of their national space programs domestically as well as commit to strategies that will ensure future collaboration internationally. Based on the dimensions of influence explored in previous sections of this paper, increasing legitimacy, salience, and credibility for national space programs and for collaboration between them can take a three-tiered approach: with appeals to cultural values, political actors, and scientific and technical institutions. Three overarching recommendations for supporting the future of collaborative national space efforts are detailed in this section.

Recommendation 1: Strengthen public support for a national space agency by appeal to cultural values through participatory and dialogue-based science communication.

At a foundational level, advocates of space exploration need to appeal to cultural values and help define and shape the sociotechnical imaginaries that underpin national space exploration programs in the larger societal understanding. Without widespread public support and prioritization of space research as a valid national objective, garnering the salience and legitimacy needed to make a national space program a publically supported objective will prove difficult for proponents of a national space program and continued international collaboration between the U.S. and Russia. NASA, Roscosmos, and others who support a continued national space program can reinforce a culture that accepts and prioritizes funding for space programs by framing the national discourse about space through politics, the education system, artistic interpretation, and public relations in order to once again make space exploration integral to the American and Russian national identities.

In Russia particularly – where there is currently a lack of direct communication with the wider public about the goals and benefits of current space exploration – launching a large-scale communications campaign based on the dialogue and participation-based models of science communication can help engage the public as stakeholders in a continued national space program.

Recommendation 2: encourage political will for large-scale space programs at a national level by using appropriate science communication techniques and framing benefits in a social context.

Expanding the cultural acceptance of a national space program helps make way for increased political acceptance. Given that cost-benefit analysis is still very much a part of the American political decision-making process, it is the obligation of space policy proponents in the United States to frame societal gains from space exploration in a way that quantifies their diffuse benefits and allows them to match or outweigh the costs. For example, spin-off technologies from space research continue to have wide-reaching economic and societal impacts; NASA has catalogued over 2000 inventions originating in space research that continue to impact life on earth, from precision GPS devices to enriched baby formula. Emphasizing these external tangible benefits of space research – as well as quantifying the intangible benefits – can help to rebalance cost-benefit analysis in a way that prioritizes basic research in the traditionally adversarial realm of federal budgeting.

In Russia, Roscosmos currently faces challenges stemming from a decreased budget, lack of academic and institutional support for the next generation of Russian scientists and engineers, and an unclear ideological vision for the future of the agency. By investing in science and technology programs, providing increased government support to both basic and applied research for space technologies, and articulating a unified vision for the future of Russian space exploration, Russia can position itself well to continue its status for a leader in space exploration in the future.

Recommendation 3: provide avenues for commercial firms to engage and collaborate, but recognize the importance of international governmental treaties.

On a national level, NASA and Roscosmos must engage commercial firms as the space industry grows to promote advances in space technology in a profitable and politically viable way. In order to be effective and promote strategic development, emerging regulations and guidelines should incorporate industry input and two-way, technocratic communication between government and industry players. NASA and Roscosmos also should ensure that they are appropriately engaging industry contracts in areas that the firms themselves may not take on for reasons of profitability, such as deep space exploration and areas of basic research that will not provide immediate economic returns.

Despite the profit benefits of engaging commercial firms, the increased technical capabilities of commercial partners does represent a potential threat for continued interna-
tional collaboration between Russia and the United States. Whereas previously, each country had to rely on bilateral cooperation to fulfill their own technical objectives, commercial partners now mean that there are increased domestic options for collaboration, and the likelihood for international cooperation between the two countries may decrease. As space collaboration represents a positive avenue for peaceful scientific and political cooperation between the two countries, each country should commit to continuing this partnership by signing formalized agreements that further international cooperation in substantive efforts, through projects like the Deep Space Gateway.
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FUELING GROWTH IN EMERGING ECONOMIES: LNG AND THE GLOBAL GAS MARKET

IX. Energy Geopolitics Working Group

Aysylu Askarova and David Fukuyama

Abstract

Liquefied natural gas (LNG) exports from the United States and Russia have increased significantly in recent years, and are projected to increase further with the construction of new import terminals across Europe and Asia. This research seeks to explore LNG demand scenarios and policy goals by which cooperation between the United States and Russia becomes possible. We see areas of cooperation between the US and Russia through growing a robust global gas market, largely driven by increasing demand in Asian countries. This work will first examine how the rapid expansion of American LNG export capacity will affect Russia’s market share of the European and Asian gas markets, whose demands have risen significantly over the past few years. It will also examine liquefaction capabilities of the United States and Russia, planned import terminals in Europe and Asia, as well as costs associated with LNG production and transportation for each country. We will discuss three different best-worst-intermediate cases in terms of gas market growth within the Asian market that we believe are possible over the next decade. Based on these constraints, short-term economic and regulatory scenarios will be evaluated with respect to impact on US-Russia relations. Infrastructure development is a key factor in establishing gas markets, and as gas networks in Southeast Asia have not been thoroughly developed, we see potential benefits for both exporters and importers of LNG from development of regasification terminals and denser gas pipeline networks. We further propose an aggregator to optimize LNG export swaps, with the goal of reducing inefficiencies and promoting cooperation between participants.

INTRODUCTION

Liquefied natural gas (LNG) is a product that allows natural gas to be transported without the need for pipelines. To form LNG, natural gas is cooled down through a cycle of compression, condensation, expansion and evaporation, through which it is transformed into an odourless, colourless, non-toxic and non-corrosive liquid form mainly composed of methane (85 to 95%) . The primary benefit of LNG is that large volumes can be stored and transported in LNG tanker ships over long distances, without the need for pipelines.

As a result of increased production and subsequent export of oil and natural gas from the United States following the shale boom, LNG exports and the geopolitical implications surrounding it have become of interest to both Americans and Russians. While growing competition from LNG producers may threaten Russia’s dominance over European gas markets, LNG provides Russia with the opportunity to extend its reach of natural gas exports, as this technology allows for transport to and from locations that are difficult to reach via pipeline. Similarly, LNG exports from the United States will enable American companies to tap into the European and Asian natural gas markets, whose demands have risen significantly in recent years. We will evaluate possible short-term economic and regulatory scenarios and assess their impact on US-Russia relations.

The increased number of companies exporting LNG has been a positive internal development for Russia, as it has allowed for an increase in its market share in Europe and Asia, while preventing the formation of a monopoly by any one of the many Russian oil and gas companies. However, due to sanctions imposed by the US, Russia may see an oversupply of gas, and find it difficult to sell to Europe. Sanctions imposed by Asian countries are either lighter or nonexistent, so the Russian LNG sector may find it economically beneficial to pivot to Asia.

Our working methodology is based on the establishment of the comprehensive background on the current state of Russia’s gas exports to Europe and Asia and the impacts increases in LNG exports will have. We further investigate the liquefaction capabilities of the US and Russia, as well as the planned import terminals in Europe and Asia. Furthermore, the costs associated with LNG production and transportation will be investigated. Certain importing regions have favorable conditions for LNG, while other regions are better
served by pipeline gas. Based on the export capabilities of the US and Russia, we will investigate different demand scenarios for Association of Southeast Asian Nations (ASEAN) countries, and make recommendations for infrastructure development.

RUSSIAN GAS SECTOR

The Russian gas sector is largely government controlled, represented by its largest state-owned company, Gazprom. Current sanctions have made the Russian oil field unattractive to foreign investors, but the Russian gas sector remains attractive, as natural gas is a majority pipeline market and will hold its considerable share despite the growing importance of LNG. Russian LNG has a lower governmental influence compared with the rest of the gas sector, as Novatek is not state owned, and Sakhalin Energy is largely owned by Shell, Mitsubishi and Mitsui, but not Gazprom. European dependence on Russian gas is still significant and its demand is expected to grow to a greater extent than the oil demand, though there are some countries, particularly the Baltic states, Denmark, and Poland that are interested in decoupling themselves from Russian geopolitical influence by replacing Russian gas with gas from other exporters. While Russian gas remains the least expensive energy source, gas importers such as Lithuania have secured higher-priced gas contracts from suppliers outside of Russia to lessen its geopolitical influence. With the introduction of LNG, Russian gas strategy now requires a careful balance of exerting geopolitical influence while maintaining trade partners. The main principles of Russian export strategy are based on protection of positions in existing markets, addition of new markets and blocking competitor entry into the existing market.

Meanwhile, the Russian energy sector faces six major challenges. First, there is an ongoing issue of transitioning from the traditional gas fields to the Yamal territory, while reconfiguring the gas transportation system to optimize the transportation of new gas. The second challenge is diversifying export markets and modes of supply by “turning to the East” and utilizing LNG. Third is the reduction of dependence on transit through third-party countries for deliveries to Europe, as 90% of gas since the beginning of 1990 has passed through Ukraine. Fourth is the adaptation to fundamental regulatory changes in Europe, including destruction of a vertically integrated value chain, pressure on traditional long-term contracts and the principle of pricing based on oil indexation. The fifth challenge is dealing with emerging competitors along the southern corridor, including LNG from the US, Qatar, and Australia. The final challenge is the attitude towards gas as a transitional, or bridge fuel during the transition to renewable energy. There is a need for gas system reform, but the existing uncertainties and pending issues make it difficult for the government to make a balanced decision. The question remains, whether or not Russia should focus more on the Asian market, as Europe theoretically may turn to other suppliers such as the US. The decisions and outcomes regarding the Nord Stream 1, 2, and Turkish pipelines will predetermine the new system of gas transportation and production within the next decade. The development of new fields in East Siberia, the Far East, Sakhalin, as well as Yamal LNG, Baltic LNG and Arctic LNG (Fig.1) will potentially lead to the diversification towards the Asian market.

Russian LNG projects are presented by two on-going projects (Fig.1), and several others under consideration.

1) Yamal LNG with a resource base on the South Tambey field on the Yamal Peninsula, with reserves of 927 bcm according to PRMS classification (as of December 31, 2013). The project is valued at USD 26.9 bn. Shareholders are presented in Fig. 2.

2) Sakhalin-2 is an LNG plant with a designed capacity of 9.6m tonnes based on the resources of Lunskoye field on Sakhalin Island. Sakhalin Energy Shareholders are also presented in Fig. 2.

3) Arctic LNG (under consideration) has a total capacity of 18m tonnes in three phases. The project will use the resource base of the Utrennee field with proved reserves of 388.5 bcm (under SEC classification as of December 31, 2016) located on the Gydan Peninsula neighbouring Yamal. The license for this field is held by Arctic LNG-2, a Novatek subsidiary. Potential shareholders are Total, CNPC, and Saudi Aramco.

4) Shtokman LNG (under consideration) entails the construction of an LNG plant with a capacity of 7.5m tonnes based on the Shtokman field on the Barents Sea shelf with total reserves of 38 trillion cubic metres of gas. Planned Shareholders (Shtokman Development AG as project operator) are given in Fig. 3.

5) Far Eastern LNG (under consideration) has an initial capacity of 5m tonnes and a potential capacity of 10m tonnes. It will use the resource base of Sakhalin-1, which includes the Chayvo, Odoptu and Arkutun-Dagi fields with reserves of 307m tonnes of oil and 485 bcm of gas. Planned Sharehold-
ers (developed by consortium of Exxon Neftegas Limited) are given in Fig. 3.

6) Pechora LNG (frozen project) with a capacity of 4m tonnes is based on the Kumzhinskoye and Korovinskooye fields in Nenets Autonomous Okrug with total reserves of 165 bcm of gas classified as №№№1+№2. The project’s operator is a joint venture established in 2015 between Rosneft and Alltech Group.

7) Baltic LNG (under consideration) has a 10m tonne capacity (and potential capacity of 15m tonnes) at the port of Ust-Luga in the Leningrad Region. Gazprom and Shell established a joint venture in June 2017 to operate the project.

8) Low-capacity LNG (feasibility under exploration) has annual capacity of 1m tonnes, according to the International Gas Union’s classification. Consumers of LNG produced at low-capacity plants, including ship operators, small power generating companies and land transport companies, use LNG mostly in its liquid rather than regasified state.

Russian firms are presented mainly with short-term and medium-term contracts covering small volumes. Although the Russian gas industry is the first to be affected from sanctions (Novatek came under US financial sanctions in 2014), Yamal LNG began liquefied natural gas production in 2017, with a total production capacity of 16.5 million tonnes (Fig. 1). Russian Yamal LNG has signed contracts with Spain (Gas Natural Fenosa), France (Total holding a 19% stake in Yamal LNG, and Engie), China (PetroChina), and various other smaller contracts with other countries (Fig. 4). This chart demonstrates the contracts in force in 2015 with end-dates up to 2037. The data available to the public is either old (until 2015), or not available. However, this graph demonstrates the common trend, where Russian LNG is heading towards Asia with its long/mid-term contracts.

Sanctions have made international investment difficult: Gazprom was largely unable to attract international investments from China and Japan, and the third production line of Sakhalin 2 was impeded due to sanctions, as the Yuzhno-Kirinskooye field is under US financial sanctions. Projects in India, Venezuela, Indonesia, which were in cooperation with ExxonMobil, were also frozen. Despite sanctions and frozen projects, Rosneft Far East LNG is still considering continuing this project with ExxonMobil. Similarly, Gazprom has signed an agreement to begin a Baltic LNG project with Shell.

The projects mentioned above remained only on paper due to a few reasons. The primary reason was due to the preservation of restrictions on LNG exports, which was partially liberalized in 2013. Only state-owned companies operating on the shelf, as well as companies that, by January 1, 2013 had a plan to construct an LNG plant or shipment of produced gas for liquefaction were granted export licenses. The second reason was due to sanctions, which led to the inhibition of several LNG projects. In 2015, the Bureau of Industry and Security of the Ministry of Trade of the United States imposed a ban on the supply of equipment for the Yuzhno-Kirinskooye field of the Sakhalin-3 project, which was supposed to be a resource base either for the third stage of the Sakhalin-2 LNG plant or for the Vladiyostok LNG project. It was impossible to start the development of this field without the use of un-
The overstocking of the global liquefied gas market is superimposed on these problems: according to the International Energy Agency, by 2022 global LNG production will grow to 650 billion cubic meters (bcm) per year compared to 452 bcm in 2016, while demand will reach only 460 bcm. Such an imbalance will make it difficult for producers to maintain profitability in the face of falling prices: for 2014–2016 the average annual spot prices for LNG in Asia (TR NE LNG Spot) fell from $13.9 to $5.7 per million British thermal units (mmBtu), while spot prices for natural gas on the British NBP hub and in the American Henry Hub, to which the value of contracts in Europe and the United States is attached, respectively, fell from $8.4 to $4.7 and from $4.3 to $2.6 per mmBtu. However, these risks have not deterred Russian companies from starting new projects. In particular, Novatek has planned the construction of an LNG plant with a capacity of 18 million tons on the Gydan Peninsula adjacent to Yamal (Arctic LNG-2), while Gazprom is planning to build the third phase of the Sakhalin-2 LNG plant and potentially the Baltic LNG and Vladivostok LNG projects, even if they translate the latter into the medium-tonnage category. The projects of Rosneft, including the Far Eastern LNG, which the company has not yet officially refused, remain in force.

While many have predicted difficult times for the Russian gas market, the opposite has been true. Export volumes are growing, and Russia has declared itself a potential leader in constructing LNG infrastructure. A “gas bubble” was expected as a result of a slowdown in gas demand and emergence of LNG, but experts claim that the Russian gas market is a tense seller’s market absorbed by consumers simply due to its cheap extraction cost.

The following are some predictions for the Russian gas sector:
- supply will increase, while gas demand will remain uncertain
- price volatility will increase, and periods of shortage will be replaced by periods of excess
- there will be a need for flexibility and adaptability of export strategy
- contracts and methods of financing projects will have to be modified
- cost reduction and maintenance of competitive prices is a necessity (9-10 dollars). According to the estimated breakdown costs of projects for Far East LNG gas input would take approximately 27% of total cost, 68% for liquefaction 2% for transportation, and 3% for re-gasification
- consumers need to be offered complex flexible solutions (creating a market in emerging markets and portfolios)
- environmental requirements are increasing in all regions of the world, so green gas (hydrogen, biomethane) is becoming a more attractive niche

UNITED STATES GAS SECTOR

Energy strategy in the US pertaining to oil and gas is quite different from other countries, due to mineral rights belonging to individual land owners rather than to the government. As a result, there are no state-owned oil companies, and much of the energy policy over the past several decades has been focused on securing supply. However, energy policy thinking has changed as oil and gas production from unconventional sources, the US is in a unique position to become a net exporter. Climate change is a growing issue of concern in the US as it is in Europe, and as the country begins to transition to renewable energy sources, the importance of natural gas as a transition fuel will grow greater. Due to the current unreliable nature of renewable energy, a reliable, transitional fuel is required until renewable reliability and energy storage issues are resolved. Natural gas can fill the role of a transitional fuel due to its ability to provide a constant power baseload with low startup times and relatively low greenhouse gas emissions. Due to the fact that the natural gas is the lightest hydrocarbon with no soot, dust or fume emission, switching from coal to gas can provide fast and low-cost carbon emission reductions. Carbon dioxide (CO2) emissions from natural gas power generation is 30% less than oil, and electricity that is produced from LNG results approximately in 45% fewer emissions than coal.

Since there is no state-owned oil company in the US, much of what can be done from a policy standpoint is relat-
ed to easing regulations for LNG terminal construction and allowing trade to non-free trade agreement countries. As LNG exporters in the US are not vertically integrated in the same way as Russian oil and gas producers, the strategies of these companies are much different. US LNG exporters are not harmed as much by lower gas prices in the US, instead benefiting from a lower cost while exporting to markets willing to pay a higher price. The overall energy strategy of the United States has historically been focused more on preventing domestic supply shocks than reaching geopolitical goals through energy exports. Hence, concerns of the US policymakers have been related to export effects on domestic gas prices, environmental impact, broader economic impacts, and foreign policy consequences. A major concern was the impact of LNG exports on domestic gas prices, which was estimated to be an increase of roughly 10%. A recent pivot in energy policy has been marked by the Trump administration expressing interest in “energy dominance,” through increased exports to Europe and Asia, which would require a significant increase in export infrastructure. However, since all LNG export terminals in the US are privately funded, investment is largely dictated by market forces.

LNG exports in the United States began in 2016, following the construction of Cheniere Energy’s Sabine Pass facility in Louisiana. The United States is a net exporter of LNG, importing 78 bcf, and exporting 708 bcf in 2017. LNG exports from the United States primarily travel to East Asia (40.8%), and Latin America (33.8%) (Fig. 6). The total exports from February 2016 through July 2018 were 1.5 Tcf. Despite trading uncertainty with the US, China decided against tariffs on LNG, improving the atmosphere for US export terminal investments. As of August 2018, a bulk of the LNG shipments from Sabine Pass and Cove Point have been sent to Mexico and South Korea (Fig. 6), while European LNG shipments have been limited to the UK, Netherlands, Portugal and Spain.

Price at export point cannot thoroughly explain why US exports to Europe have not increased significantly. The price paid at export point for both Europe and Asia range from $4-6/mcf. There has not been significant variation between prices for European and Asian countries, although the volumes of LNG exported to Asia are significantly higher (Fig. 6). Russian pipeline gas still appears cheaper on the European market, though with some geopolitical strings attached. The marginal cost to Europe from West-Siberia-Europe is roughly $3.5 USD/mcf, and US LNG-Europe is $4.5/mcf, where 46% of the cost is taken by production and upstream taxes, 38% by liquefaction, 9% by transportation, and 5% by regasification.

Based on this analysis, it appears that the US and Russia may be heading towards competitive issues in Asia rather than in Europe. The Asian market imports a significantly higher volume of LNG from the US than Europe, and the European market is already heavily supplied by Russian gas. Unlike Russia, US LNG exporters are independent of the gas producers. The two current major US exporters are Cheniere, and Dominion Energy. Cheniere became a major player in the US LNG market after construction of the Sabine Pass facility in 2016. This facility can accommodate up to six liquefaction trains capable of processing 3.5 Bcf/d of natural gas, a production capacity of 22.5 mtpa. Cheniere plans to open its second facility in Corpus Christi, TX in 2019, with an expected aggregate nominal production capacity of up to 22.5 mtpa, similar to Sabine Pass. Dominion Energy began deliveries in April 2018 from their Cove Point NG export plant in Maryland. Cove Point LNG’s capacity has been contracted to GAIL (India) Ltd and ST Cove Point, which is a joint venture between
Sumitomo Corp and Tokyo Gas Co Ltd (Japan). A source of export data has been purchase agreements that are publicly available through the US Department of Energy. The export data (Fig. 6) indicates the beginning of expansion of US LNG exports into Europe, as smaller contracts are starting to be signed with natural gas companies from France, Spain, Portugal, and the Netherlands. Meanwhile, the bulk of the exports from the US still travels to South America and Asia.

Several new export terminals are expected to begin shipments over the next few years. Kinder Morgan has two LNG facilities: Gulf LNG and Southern LNG. Gulf LNG has an expected production capacity of 5 mtpa, with a second phase of the project expected to add an additional 5 mtpa with an additional liquefaction train. Gulf LNG is located in Houston, TX. Southern LNG, a subsidiary of Kinder Morgan, is constructing an Elba Island LNG facility, which is planned to have a total capacity of 2.5 mtpa. Sempra is a smaller LNG importer that began construction on a liquefaction export facility in Houston, TX, with expected operation in 2019. Sempra’s authorized export capacity is 14.95 mtpa from three trains, with two additional trains expected. Applications for several other export facilities have been approved in the US, totaling 293 mtpa for free trade agreement (FTA) countries, and 272 mtpa for non-FTA countries. Such capacity would dramatically increase the US status as an LNG exporter.

**LNG MARKET STATUS**

US LNG exports could facilitate the transition away from oil-priced indexation of gas supply contracts, decrease prices significantly in regions and countries that import LNG from the US, provide economic benefits for gas-importing countries, and displace a portion of oil consumption through increased gas-fired power generation. However, some gas-exporting competitors may therefore suffer a decline in trade revenues. Consumption growth and lower domestic production in the EU has opened up the potential for Russian gas, with gas prices recovering against the backdrop of the rising demand after the impact of low US prices due to shale gas. The next few years will likely see a rise of the “Big Four” in the LNG market: Russia, Qatar, USA, and Australia, each competing for first place.

Asia remains the growth engine of LNG demand with some small regional changes. Fig. 8 below clearly demonstrates the trend for OECD regions in 2017. Japan, South Korea, and Taiwan are traditional LNG importers, but there has been a lack of new infrastructure construction in these countries. In the medium-term, this region is likely to still act as the main player. According to projections by the Rapidan Energy Group, emerging markets such as China, India, Pakistan, and Thailand will account for more than 50% of growth in imports by 2022. It should be further noted that China has emerged as the second-largest importer in 2017.

Generally speaking, it is nearly impossible to predict the future of gas markets. The change of state policy in China was not expected to occur quickly, and many new Asian LNG importers were not expected. Sudden jumps in demand and the difficulty of predicting behavior of China, India, Japan and North Korea introduce new uncertainties. There are similar complications from a geopolitical point of view relating to the Middle East, sanctions imposed on Russia and Iran, liberalization of the EU market, Japan, China, and admission of foreign investors.

The Russian gas model must eventually be changed, and a method of adapting to changing market environments should be implemented. Companies are constantly looking for ways to reduce risks, where support from the state might be a solution, as the duration and volumes of LNG supply contracts are declining. The reluctance of buyers to sign long-term contracts raises concerns about future shipments, thus conventional financing systems are largely unfeasible. Market participants such as Total, BP, and others are more likely to become portfolio players to optimize risk, that allows maintenance of stability. Sellers, exporters and equipment manufacturers are increasingly investing in the infrastructure of the countries of importers to create the system themselves.

**LNG BUNKERING**

Using LNG as fuel for ships, otherwise known as LNG bunkering, holds the opportunity to reduce the significant amount of emissions produced by the maritime transport industry. LNG is competitive with both high-sulfur fuel and low-sulfur gas on an energy-equivalent basis, and by comparison reduces the NOx emissions by 90%, SOx and particulate matter by 95-100%, and carbon dioxide by up to 25%. Although maritime carbon dioxide emissions account for 2.6% of global carbon emissions, such reductions would be significant, with carbon dioxide emis-
sions from the maritime transport industry projected to reach as high as 17% of global emissions by 2050.

Despite these marked benefits over standard maritime fuels, there are several drawbacks related to LNG bunkering, mostly related to market uncertainties. These uncertainties are related to the availability of LNG bunkering fuel, fuel price volatility, and regulatory uncertainty. Availability of LNG bunkering fuel is highly dependent on the growth of the global gas market, and as more import terminals are built, LNG as a bunkering fuel will become easier to integrate. At the same time, growth of the bunkering market would encourage ASEAN countries to grow their domestic gas markets and improve existing drilling and extraction technologies in order to support LNG bunkering facilities.

LIBERALIZATION OF GAS MARKETS

Liberalization in Russia mainly targets the Gazprom monopoly, as 84% of Russian natural gas use belongs to Gazprom, which is an owner of gas pipeline and storage systems, and controls most of the gas distribution systems. Globally, liberalization of the gas market includes many different actions such as separation of company roles, that did not occur in Russia. The appearance of Novatek in the LNG sector indicated the removal of the export monopoly held by Gazprom that led to the development of competition in the LNG sector. While gas consumption limits are set by Gazprom and tariffs are set by the Federal Tariff Service, competitive balancing has not been present in the natural gas market. Domestic prices of natural gas, as well as the prices of other types of fuel in Russia are lower than the prices of gas in foreign markets. On the one hand, it grants an advantage to internal and foreign markets, but on the other hand it is not conducive to the efficient use of natural gas. Most of the new fields are unconventional and require significant investments, as well as gas transmission and distribution networks. All these factors lead to increased costs and higher tariffs. There is a need to reform the gas pricing and distribution system in the Russian gas industry.

Most developed countries have been regulated by the state for the decades, thus the experience of deregulating the gas industry is of considerable interest to Russia. However, the US example of the deregulation of the gas industry demonstrates the greatest progress. The liberalization of the US natural gas market started in 1978 and led to the most competitive natural gas market both in production and transportation of gas. The success of the US natural gas market liberalization is due to a number of circumstances. First, in the US, there are numerous, evenly distributed natural gas deposits owned by roughly 8000 companies. Second, in the US there is a very dense and extensive network of inter- and intra-state gas pipelines with a length of about 480 thousand km, owned by several dozen companies. The gas pipeline system has a large number of hubs, which are the sites where gas is traded at market prices. Third, US law prohibits a single company from owning both producing and transporting assets, and also prohibits companies owning gas pipelines to trade in natural gas. Moreover, the United States have deeply rooted market institutions that ensure the formation and operation of competitive markets.

Due to the shale boom in the US, expansion of LNG, increased energy efficiency in EU and other factors, markets may be facing an oversupply of LNG. Despite expert claims that the cheap price of Russian gas would be still competitive, Russia must adjust to the liberalization of European gas market. LNG holds the unique ability of diversifying supply and liberalizing gas markets in Europe and Asia, something that could potentially lessen accusations of using energy as a geopolitical tool. The European Union as a whole receives 39% of its gas supply from Russia, with many Eastern European countries being completely supplied by Russian gas. A source of friction between several European countries and Russia has been accusations of using natural gas supplies as a geopolitical tool. A diverse supply of natural gas for Europeans will likely prevent these tensions that may arise from a single supply of gas. An investigation into the benefits of gas market liberalization will allow realization of the benefits of such a system.

Lithuania liberalized their gas market in 2015, with Latvia following suit shortly after, in August of 2017. The objectives of liberalization for both countries were to diversify the supply of natural gas as a part of a long-term goal to diversify energy sources and achieve long-term energy supply security. Although geographically similar, the energy space for each country is fairly different: Latvia has a significant natural gas storage, and hydropower capacity, while Lithuania does not. Prior to market liberalization, Lithuania paid 408 euros/mcm for natural gas, while the Dutch hub Title Transfer Facility price was nearly half of that, at 247 euros/mcm. This price differential has caused some trust issues between the Baltic states and Russia. The opening of the Klaipeda LNG floating storage and regasification unit (FSRU) terminal in Lithuania granted Lithuania greater supply security, and as a secondary result, allowed Latvians to negotiate lower prices for pipeline gas. However, security of supply requires diversification away from the cheapest supply of gas, and results in higher prices paid for gas. States interested in diversification must balance their desire for supply security with the higher cost.

SCENARIOS

In order to effectively assess policy goals, it is important to understand the potential scenarios that will be affected by such policies. Japan and South Korea consume the bulk of the current LNG demand as the mature Asian energy markets, which are likely to see stable growth over the next few decades. However, since much of the growth in the Asian markets is driven by economic growth and policy changes in China, India, and Southeast Asia, we will discuss potential scenarios for LNG markets in these regions. Asian economic growth over the next decade is almost all but guaranteed. The IMF predicts a growth rate of 5.6% in 2018, followed by a 5.4% growth rate in 2019. However, this growth will not come freely: much depends on market liberalization, access to energy, and avoiding trade wars, all of which will allow for
strong economic growth.

Several demand forecasts for the Asian markets have been proposed by the International Energy Agency (IEA), the US Energy Information Administration (EIA), and the International Monetary Fund (IMF). The IEA forecasts gas demand in ASEAN countries to exceed production after 2025 (Fig. 9). The maturing gas fields in the area will likely require significant work to maintain stable production, and the increasing energy demand will create the need for gas imports.

The three general scenarios are classified as best, worst, and intermediate cases, based on the benefit to both the importing countries as well as the US and Russian LNG exporters. The best-case scenario for all involved parties would be strong Asian economic growth with similarly high energy demand. This case would require heavy investment in energy infrastructure, with LNG holding the capability of providing a significant fraction of the overall energy in the region. The intermediate, and most likely case is that of stable economic growth in Asian countries, along with higher growth rates in the ASEAN countries following IEA forecasts. The worst-case scenario involves slowing ASEAN economies, with gas demand falling below production. In order for LNG exporters to achieve their strategic goals, it will be imperative for them to assist in development of gas networks and infrastructure. Without significant investment, LNG export goals will be much more difficult to achieve.

BEST CASE: HIGH GROWTH

The best-case scenario represents a growth rate of natural gas demand 10% higher than the IEA forecast, with demand outpacing production by 2020. Such a growth rate would require significant investment in order to maintain consistent power generation without blackouts. This scenario would involve natural gas demand of 78 bcm over production, or roughly 58 mtpa of LNG through 2040. Permanent, large-scale import terminals of 5 mtpa regasification capacity and sufficient storage and send-off capacity to account for demand fluctuations should be constructed in key ASEAN nations. This will enable these countries to sustain an energy mix that is both environmentally conscious and sufficient for future growth.

This favorable case scenario requires significant investment from both LNG consumers and producers. Without the construction of several new regasification terminals in Southeast Asia, it will be very difficult to deliver LNG to the emerging markets that will need it. Similarly, the supply requirement is one that also cannot be ignored. The US currently has the capacity to export 29 mtpa, with an additional 61.8 mtpa under construction and 51.6 mtpa approved for construction. Current Russian operational capacity is 27 mtpa, that could potentially reach up to 76 mtpa. In order to keep up with demand through 2040, export facilities as well as technological improvements in natural gas extraction will be a necessity.

WORST CASE: SLOWING GROWTH

The worst-case for the global gas market involves slowing economic growth, which would cause significant disruption in the LNG markets. Slowing growth would likely cause a “gas bubble,” which would include a gas oversupply, causing prices to sharply decrease, similar to the oil price shock in 2014. In 2014, the oil markets went through a downturn after oil prices dropped from over $100 to under $40 per barrel, resulting in halted investment in new projects, significant layoffs throughout the industry, and slashed research funding. A similar shock in gas prices would likely make LNG exports unfeasible for many exporters, and prevent future investment in export infrastructure.

This worst-case scenario for LNG exporters would be an environment of low economic growth in Asia, along with low levels of infrastructure development. Protectionist trade measures could enable this type of environment, and have the ability to stymie growth in the region. Infrastructure development is critical for developing a gas market, as without proper gas pipeline networks, regasified LNG cannot be delivered to areas that need it. This scenario would be troublesome for LNG exporters, as export terminals require a long
approval and construction process, and weakening demand would likely prevent any future investment. Such a scenario would make import terminal construction unfeasible, but if gas production remains above consumption, the region could consider becoming an export hub for gas trade and LNG bunkering for trade through nearby high-growth countries such as China and India.

Sanctions against Russian LNG may also alter the landscape of LNG markets. At first glance, it may seem that US would be the major beneficiary, as sanctions would complicate Russia’s ability to protect its positions and compete for new markets. Sanctions thus far have not significantly reduced Russian oil and gas output, but as Russia is a major gas exporter, sanctions may have a negative impact on the future of the global gas market. Horizontal drilling and other frontier technologies typically provided by the US may be limited due to sanctions, and China would be keen to fill the technology gap with competitive prices. Further sanctions run the risk of limited impact on Russian finances, while creating a greater separation between the two countries and harming the global gas market. Hence, sanctions leveled against Russia should be weighed carefully.

INTERMEDIATE CASE: MODERATE GROWTH

An intermediate, realistic case would include consistent demand from Japan and South Korea, as well as growing demand from China, India, and ASEAN countries. This demand growth of 16 bcm, or 12.5 mtpa over production would still require increased investment in export terminals in major gas producing countries such as the US and Russia, as well as a denser gas network in Asian countries. In this scenario, key ASEAN nations should follow the Lithuania model, and consider FSRU terminals, with sufficient storage to accommodate fluctuating demand, and pipeline investment to efficiently distribute gas. Cooperation in this case would include multi-way infrastructure development funded by both private companies and investment funds from the US and Russia, as creating a denser gas network in Asia would increase the tendency to use natural gas as an energy source. Such cooperation has the ability to make relationships between involved countries stronger, non-political, and for countries to make price-driven decisions.

Since this intermediate case involves consumption slowly overtaking production, it may not be feasible to fund the same large-scale LNG regasification terminals that were present in the best-case scenario. FSRU terminals would be optimal in this scenario, as they require significantly less investment, but still allow each state to be a player in the global gas market.

CHINA AND INDIA

Any analysis performed on demand in the Asian region would be naive to ignore China and India, which are likely to have a huge impact on LNG demand. Changes in the Chinese economy will have a significant impact on the energy requirements and the fuel mix over the next several decades. A significant factor in the energy demand will depend on China’s ability and the speed at which it can change to a service-oriented economy rather than a manufacturing-based economy. Additionally, China’s climate policy has had a significant effect on the natural gas consumption in the state, with a 15% increase from 2016 to 2017. In 2017, China imported 39.4 bcm of natural gas by pipeline, and 52.6 bcm as LNG. The IEA forecasts Chinese gas demand to grow 60% from 2017-2023, for a total gas consumption of 147 bcm.

India’s energy demand is likely to follow a trajectory similar to that of China, with significant per person energy using increasing through 2040. As the energy demands of its population increase, new sources of energy will become necessary for growth to occur. The BP Energy Outlook forecasts India as overtaking China as the largest energy growth market by 2020, with an increase of natural gas consumption from 42.2 bcm in 2016 to 118 bcm by 2040.

Depending on the demand growth and the decisions made for the role of LNG in the energy mix of China and India, this demand could potentially put a strain on the ability to fill contracts in ASEAN countries. In order to effectively grow the global gas market, exporting countries should take special care to ensure a consistent supply of LNG to smaller countries that may be more susceptible to market forces.

POLICIES

While the US and Russia have competing interests in LNG trade, there are several policy goals that are shared between the two countries. Both countries have an interest in a robust global gas market with a strong demand for LNG. Achieving this demand environment requires not only economic growth in the consuming countries, but also significant investment in the supply infrastructure from the producing countries. A well-supplied market with a relatively stable price will make LNG an attractive fuel source for emerging economies. The US should consider removing the requirement for US companies to request permission from the Department of Energy to sell to foreign buyers. This would help streamline the process of contracting supply for foreign countries interested in using natural gas as an energy source, and would help remove uncertainties that would prevent investment in LNG import infrastructure.

Although LNG demand has increased and has the potential to fill the growing energy demand gap in Southeast Asia, particular policies must be enacted by both producing and consuming countries. The policies in this section reflect those that would benefit LNG-importing countries while growing the global gas market, as proposed by Koyama et al. Broadly speaking, the LNG industry and governments of exporting countries should accept the responsibility of creating a more competitive environment for LNG, as the adoption of LNG in Asian countries would mainly depend on the competitiveness of LNG with other energy resources alongside proper infrastructure investments. It is difficult to reflect the favorable features of LNG simply through market mechanisms, therefore the expansion of LNG should utilize government involvement through policy support and sup-
To promote LNG expansion in the Asia, a realistic evaluation of the environmental benefits should be considered in comparison with cheaper coal and renewable energy sources. LNG produces fewer carbon emissions while providing a stable baseload, which is optimal for emerging economies that are unable to support less reliable power sources. Despite carbon emission agreements having a limited effect on Southeast Asia, the global use of LNG is expected to grow in response to environmental issues and stricter laws, and therefore mechanisms to evaluate the environmental impact of natural gas should be introduced.

Cost reduction is a key parameter in promoting LNG use in emerging economies. The Australian model of modularization in liquefaction plants would help emerging economies to achieve cost reduction goals. Another method of cost reduction with minimal financial risk is in floating storage and regasification units that have lower overhead costs and decreased construction time frames compared with conventional terminals. FSRU terminals are more suited to countries with lower LNG demands, and in many cases would be optimal for smaller Southeast Asian nations. Development of new technologies and process improvements would lead to lower production and importation costs, and therefore funding should be provided to research institutions dedicated to improving these processes. New players entering the LNG business could see benefits from joint usage of supply chains of other countries and companies. Wide-area infrastructure development and usage across national boundaries may be very beneficial for countries such as Thailand and Myanmar. Risk sharing and partial reallocation from producers to consumers, as well as the establishment of common degree of government party involvement at some level should be introduced as well.

For exporters to attract potential LNG importers, they must adopt effective cost reduction steps, remove the destination clause, implement stable and reliable pricing, develop a well-functioning market, and optimize infrastructure for LNG supply. Importers in turn should consider all the actions mentioned for the exporting countries, but also consider investment in upstream projects. Government representatives from the US and Russia should focus on the development of the well-functioning market, as well as logistics and infrastructure investments through public finance. Governments of consuming countries should attempt to create a reliable price benchmark, and should also work towards liberalization of their domestic markets. Stronger environmental pressure should push lawmakers towards low-carbon policies and encouragement of natural gas use. Optimization of supply infrastructure and public investment support are also essential for the governments consuming countries. Increased use of LNG would bring a multitude of benefits to East Asia such as abundant resource potential, fewer geopolitical risks, and lower emissions among all fossil fuels. With these issues in mind, government policies should encourage the use of LNG both from Russia and US, and reduce the elements that hinder the increase of LNG consumption. Joint efforts and policy actions are essential for producing and consuming countries.

**POTENTIAL FOR US-RUSSIA COOPERATION**

Direct cooperation between the US and Russia is fairly limited in the LNG markets, but the overall growth of LNG imports, and liberalization of the global gas market will likely help ease some concerns that the West has over the Nord Stream 2 pipeline. European and Asian gas consumers will be the clear beneficiaries of the growth of LNG, and cooperation between the US and Russia in growing a robust global gas market will be vital to ensure market stability. Both countries would stand to gain a significant economic benefit from the construction of new import terminals in Europe and Asia. This can be achieved through promoting pricing transparency, decoupling oil-indexed pricing, and by targeting market inefficiencies. Special attention from both countries should be paid to tax benefits that promote LNG infrastructure development. Funding a denser energy network will help both countries to access markets that were previously unavailable, promote natural gas as an electricity source, and create more trading partners.

Another possible avenue for cooperation could be in the optimization of the world’s energy infrastructure. An LNG aggregator is a solution that could be used to swap orders from exporting countries, such that it would be economically attractive for all involved parties. For example, Russia has a small contract to European country X, while the US has an obligation to export some amount of its LNG to Asian country Y. If Russian delivery to Asian country Y becomes somehow unfeasible due to impassible Arctic ice or other issues,
an aggregator would estimate the cost of the delivery of their product for both countries to both destinations, and offer a solution where the US could send LNG to country X and Russia to country Y. In this case, the customer would receive the LNG on time, with the price agreed with its initial contractor. The revenue gained through these operations would be split dependent on the agreed upon conditions.

Since an aggregator would gain efficiency with a greater number of participants, the number of countries-contractors and countries-customers should not be limited, and sanctions should ideally not be applied within this aggregator. In other words, it would be some neutral instrument that would serve for optimization of LNG export swaps (Fig. 10). Each party could register in the system, which would import data regarding the contracts, customers, subcontractors, and other relevant information. The aggregator would utilize a dataframe with features from trading data, LNG shipping routes and associated shipping costs, and priorities of various countries and companies that would be continuously used to train the model. This would help to avoid energy shortages, bring profits to the LNG exporting companies, reduce unnecessary shipping inefficiencies and subsequent emissions, accelerate investments to the countries with poor LNG infrastructure, and enhance collaboration between all the countries interested in the optimisation of LNG logistics.

Technology sharing and many other forms of cooperation between Russia and the US are limited while sanctions remain in place. However, things can change very quickly: another oil price crash may hurt Russia financially, as Russian government revenues depend highly on oil and gas revenues. Current sanctions target undeveloped frontier and shale resources in Russia, and in order to effectively produce from these oil and gas formations that are under sanctions, Russia will likely require US technology. If Russia is interested in these prospects, they may need to make concessions to be able to use US technology, or look for alternatives. With this in mind, it is important for the US to make it clear that technology sharing and cooperation is a real option, and that there are some off-ramps for sanctions, in the case that the Russian oil and gas sector declines. Sanctions currently appear to have had a minimal effect recently, but the cumulative effect will likely appear within the next decade, with new reservoir development and reaching external markets becoming more difficult. If communication can be maintained at some level while sanctions are in place, the incentive for collaboration in the future may be one of many deciding factors for potential cooperation in the future.

**CONCLUSION**

LNG exports from the US and Russia have significantly increased with improved export technology and the growing need for gas in emerging markets. While this has increased the competitiveness of gas markets, the increased global use of LNG and the development of a more robust global gas market has the potential to improve both the competitiveness of energy markets, as well as to reduce the carbon output from emerging economies.

Promoting policies that will promote natural gas use in emerging markets and a more robust global gas market is an effective method of achieving energy policy goals for both the US and Russia. Both countries should work to promote the best-case scenario of Asian growth, as these objectives will achieve Russia’s export goals, and will help the US to achieve liquidity and create competitive terms of trade that will prevent regional monopolies from forming. Cooperation in the form of an aggregator for LNG export optimisation provides the opportunity to enhance cooperation between all the participants of the global LNG market. Such an aggregator could enhance social ties and development of social capital, which remain vital in maintaining a healthy market. Developing trust between both companies and governments will promote a price-driven market that will create stronger non-political bonds, and may lubricate cooperation in the future.

Encouraging natural gas use will also help to mitigate atmospheric carbon output from emerging economies, as natural gas power plants emit a significantly lower amount of carbon dioxide into the atmosphere than coal-burning power plants. LNG exports and the growth of the global gas market offer a unique opportunity to benefit both exporting and importing countries, and at the same time offer the potential to be a clean, primary source of energy for emerging economies.


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INTRODUCTION: THEORY AND ACADEMIC CONCEPTIONS OF CULTURE AS A TOOL OF INTERNATIONAL EXCHANGE AND FACILITATOR OF PEACE-BUILDING

Culture has always played a role in the formation of states, as well as in the formation, destruction, and rebuilding of state-to-state relations. However, in today’s context, culture is often overlooked. This is understandable, given the plethora of pressing problems such as nuclear security, economic strife, and climate change, to name a few. Yet in such a context of heightened uncertainty and anxiety, culture has an even more crucial role to play in country-to-country dialogue. Indeed, culture should be viewed as a vital tool of international exchange and a facilitator of peace-building in uncertain times. We aim to stress the significance of culture in the international arena, building on previous academic theories in order to further suggest that the current context calls for even more attention on cultural diplomacy than ever before. The 2013 UNESCO report on the role of culture in peace and reconciliation lists a series of developments that contribute to a sense of fear regarding today’s global context. “If asked what the greatest challenges the world faces today are, people may be inclined to refer to globalization, the economic crisis, the rapid pace of change that is setting back countries, societies and communities, as well as the rising level of the oceans, all of which remind us of the threats of unsustainable development, the persistence of poverty, the widening inequalities and the lack of future perspectives for entire social categories, especially youth” (UNESCO).

It is significant to note that the majority of pressure points—economic declines, entrenched poverty, rapid technological developments, and climate change—are especially worrisome for youth and younger generations. This finding is problematic for obvious reasons; these issues will disproportionately affect young people and future generations, people who are currently restricted in their ability to contribute in the traditional spheres of government and policy. However, a review of the theory regarding culture as a tool for international collaboration suggests hope for a broader engagement of younger generations in these global problems, as they are uniquely situated to participate in cross-cultural exchange and therefore help influence a trend towards cooperation rather than conflict.

BRIDGING CULTURES: HIP HOP AS A COMMUNICATION CHANNEL BETWEEN THE US AND RUSSIA

X. Culture, Creative Spaces, and the Arts Working Group

Rossella Cerulli, Saveleva Mila, Brenda Gonzalez, and Mariia Spirina

Abstract

The US and Russia have long had a contentious relationship. However, even during the tensest political escalation during the Cold War, there was one avenue of communication that remained open: cultural exchanges. In this study, we delve into the history of cultural exchanges between the US and Russia, focusing on the musical aspect. We give background of Western artists performing in the Soviet Union and how that affected many Soviet citizens’ perspective of the Western world. Given these historical precedents, we believe that similar tactics of using music as a channel for citizen-to-citizen communication can be used between the US and Russia today. This project will analyze one current group at the forefront of such communication, project Block2block, which uses contemporary breakdance and hip hop to enhance US-Russia cross-cultural understanding. Project Block2block focuses on bringing American hip hop artists to different Russian cities to offer free performances; this research will propose and assess the merits of establishing a counterpart program in the US. A small step of bringing Russian performers to small American cities and creating cultural bridges between Russia and the US in this capacity where there have been none before, has the potential to have a much larger impact upon bilateral relations between the two overall.
Our project seeks to promote these kinds of cultural exchanges via art and creative practices. More specifically, we aim to investigate several components of hip-hop culture, such as breakdance and rap. By exploring these practices, we will consider the avenues for cross-cultural exchange that already exist. Our focal point is the U.S.-Russia collaborative project, ‘Block2block.’ This organization brings American hip-hop artists to Russian cities and villages, where they give concerts and workshops and actively work to promote a stronger sense of community between the US and Russia.

We build our argument through three interconnected sections. In section one, “Social Constructivism and Intercultural Communication outlining the theory of cultural dimensions,” we build on a theoretical background of social constructivism and intercultural communication that helps in understanding the processes of building relationships between countries via cultural venues. In section two “Historical Survey,” we briefly explore the historical perspective of exchange practices between Russian and American cultures to show how they shaped or influenced perceptions of each other. In section three “Hip Hop/ Rap/ Linguistics: A case study of Block2block,” we look at the contemporary intercultural project Block2block in order to reveal the exchange possibilities that this project offers and brings to target groups of the two countries. Finally, in section four “Proposal for Using Block2block to Amplify U.S-Russia Cultural Exchange,” we discuss how Block2block has the potential to amplify US-Russia cultural exchange and make a lasting impact in US-Russia relations.

SECTION 1. SOCIAL CONSTRUCTIVISM AND INTERCULTURAL COMMUNICATION OUTLINING THE THEORY OF CULTURAL DIMENSIONS

The theory of cultural collaboration in international relations overlaps with the field of social constructivism. In the field of international relations, social constructivism is an approach used by academics and policy-makers in order to explain states’ and leaders’ behaviors and actions. The theory generally posits that meaningful behavior of an individual or state is only possible when placed in an “intersubjective social context.” In the fields of psychology and sociology, social constructivism has been the leading paradigm in explanations of learning since the 1970s. Psychologists such as Lev Vygotsky argue that productive and meaningful development, learning, or activity always occurs within the social environment. According to this theory, it is only in this fundamentally social framework where relations between individuals and between states can meaningfully develop, since they are based on a set of norms, practices, and identities. Most notably, constructivism takes at face value the need to understand an actor’s culture in order to understand its motivations, fears, and consequential policies or actions. In other words, culture is the starting point for all international relations per the constructivist approach. For our purposes, the social constructivist notion of ‘other-defining identity’ is particularly important. This concept goes a step further than the classical constructivist international relations approach to inter-state relationships, as it places additional emphasis on the role of cultural comparison between states. In the US-Russia case, historians and political scientists use this theory to provide evidence for the long history of conflict between the two nations, pointing to cultural juxtapositions that set the states at odds with one another. Social constructivism claims that “international influences by the Other create the meaningful context in which the national Self evolves and shapes foreign policy.” In our case, this “Other” is for the US, Russia, and for Russia, the US. Therefore, the above statement indicates that Russia’s actions and cultural developments provide a sounding board from which the US acts and develops, and vice versa. More generally, cultural comparison between the two nations has developed over time in this way, leading to an entrenched comparative relationship.

Historical examples demonstrate the role of cultural juxtaposition in leading, alternatively, to attempted closeness and failed cooperation. For example, in the late 19th-century, racial tensions within the United States were refracted onto Russia. In contrast to the previous period’s warming relations and increasing US-Russia contact, after the Bolshevik Revolution, the US government suspended all official diplomatic activities with Russia, a freeze that would remain until 1933. In order to understand what prompted such a dramatic policy change, we must consider the underlying cultural forces that had been developing for years, shaping the US’ view of Russia and of itself. At the turn of the 20th century the established antipodal relationship between the U.S. and Russia gained new significance, since Americans turned to atrocities committed against Jews under tsarism in order to maintain their self-identity despite equally horrific injustices committed internally against blacks under the Jim Crow laws. The Bolshevik Revolution in 1917 solidified the conception of Russia as diametrically opposed to American culture, as the threat of communism caused the first outright propagandizing of America’s self-definition as antithetical to Russia. President Woodrow Wilson stated that the Bolshevik Revolution was more than a political development, but that it entailed “the negation of everything that is American.” In this statement, and in the historical cooling of US-Russia relations during this period, we see how cultural and societal developments in both nations had a significant impact on leaders’ perception of the opposite state. Thus, we should think of Social Constructivist’s “Other” as Russia for the United States, and the United States for Russia.

The role of culture in forming the foundation for successful international relations cannot be overlooked. As scholars Dana Pantea and Alina Stoica point out, culture is the best route to “helping us better understand the Other, value different aspects of life, points of commonality, understand motivations that lie at the basis of differences.” However, when presented with “otherness,” or a culture unfamiliar,
the first reaction individuals all too often make is one of confusion and even hostility. This can be summarized as the “fear reflex,” or a natural human instinct to avoid attempting to understand what is perceived to be alien, or contradictory to our constructed sense of self-identity. The dangerous link between this type of stereotyping of the Other and an increased likelihood of conflict—resulting in either physical violence or a withdrawal from communication and attempted understanding—suggests that culture can play an important role even in international relations. Pantea and Stoica continue, learning about another nation’s “stories, metaphors, rituals” is crucial in countering such misperceptions, “because when cultural identities are not properly understood, stereotyping emerges giving way to negative perceptions and finally to conflict.” From the international relations perspective, this scholarship has potentially profound implications; by sharing the stories, rituals, and traditions that make up our culture with other nations, we can psychologically reduce the potential for conflict. In sum, the greater cultural understanding between two nations, the less likely those nations are to clash on the global scale.

Academics have also posited the strategic importance of culture on its own merit. For example, the European Union’s Commission has openly discussed how “the use of Europe’s substantial soft culture will make Europe a stronger actor,” and how “culture [itself] can shape the EU’s action through the promotion of our values and cultural heritage, as a vehicle to promote mutual understanding, respect for human rights and freedom of expression.” At the state-to-state level, culture plays a vital role in the exercise of soft power as a strategic and powerful force in international relations.

Within the frame of social constructivism, special attention is given to the term and concept of “intercultural communication”. Intercultural communication is a discipline that studies communication across different cultures and social groups, or how culture affects communication. The term has been widely used in linguistics and cultural studies. It first was introduced in practical training for American diplomats in 1946 in order to help them build relations with other countries. The term is connected with anthropologist Edward T. Hall, who used this concept in his work “The Silent Language” and he dedicated his research to understanding cultural differences. Hall classified all cultures as “high-context” and “low-context” cultures; by “context” he refers to all hidden information that is implied, but not directly expressed in the communication. In his classification, American culture is one of “low-context,” implying that most of information is expressed verbally. For Americans, speech is very important and much attention is given to the words and ways of saying them and representatives of this culture tend to express their thoughts directly. On the other hand, Russian culture is classified as “high-context,” implying that much information can be meant, but not expressed directly. Speech in Russia can contain many meaningful pauses, combined with excessive usage of non-verbal means.

In accordance with constructivist theory that cultures are a critical fabric of international relations, the fact that the U.S. and Russia even linguistically have been categorized as opposite types of cultures justifies the topicality of this research and highlights the importance of studying culture as a tool for building international relations and improving and bridging international communication.

Alongside the theory of “high- and low-context” cultures proposed by Hall, a widely applied cross-cultural communication “theory of cultural dimensions” has been developed by social psychologist Geert Hofstede. This theory is aimed at measuring how a common culture affects the values of the members of its society and the way these values define behaviour of community members. Hofstede developed the theory using data from a worldwide survey among IBM employees (1967 - 1973) and proposed four dimensions for measuring culture. These four dimensions are “four anthropological problem areas that different national societies handle differently: ways of coping with inequality, ways of coping with uncertainty, the relationship of the individual with her or his primary group, and the emotional implications of having been born as a girl or as a boy.” The theory has since been updated, and as of 2010 six culture dimensions have been identified, including:

- Power distance index (“the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally”)
- Individualism vs. Collectivism (“degree to which people in a society are integrated into groups”)
- Uncertainty avoidance (“a society’s tolerance for ambiguity”)
- Masculinity vs. femininity (where masculinity is described as “a preference in society for achievement, heroism, assertiveness and material rewards for success” and femininity is “a preference for cooperation, modesty, caring for the weak and quality of life”)
- Long-term orientation vs. short-term orientation (dimension describes attitude towards traditions and the past and future)
- Indulgence vs. restraint (“a society that allows relatively free gratification of basic and natural human desires related to enjoying life and having fun”).

This theory has been applied in various fields and is widely used in international business and management. It has faced numerous criticisms, but these dimensions build a solid base for describing and measuring culture, which can be applied to international relations as well.

Looking at the cultural dimensions theory in the context of cultural exchanges, each listed dimension identifies “anthropological problem areas” as common both for the U.S. and Russia, meaning that it can apply to our understanding of both cultures. Since American and Russian cultural distinctions lie at the center of misunderstandings at the inter-
national level – at least from the constructivist standpoint – looking at the diffusion and practice of rap and hip hop culture in each respective country serves as an ideal forum through which to assess each country and identify common areas and ways to bridge gaps in those misunderstandings.

In the context of art, in particular in hip-hop and breakdance, cultural dimensions are expressed distinctively. For example, the practice of hip-hop or rap battles depict power distance and masculinity often in very heightened ways. The battle discourse present in many rap songs is mainly intended to connote a certain respect and status, while at the same time working as a creative outlet for a unique verbal craft. It is extremely competitive, especially pertaining to speech, because the end goal is to humiliate one’s opponent in order to increase one’s own status while decreasing your opponent’s. It is important to keep in mind the fierce competitive aspect that surrounds not only rap but also hip hop. Artists do not just want to be good at it; they want to be the best.

SECTION TWO: HISTORICAL SURVEY

In order to understand the nuances that such a project will entail, we must briefly delve into the history of US-Russia cultural exchanges, especially pertaining to the Cold War. Under Stalin, the Soviet Union was practically impenetrable to foreign influences, every aspect of Soviet life was tightly controlled. So much so, that most Soviet citizens thought they truly were better than their Western counterparts. Information about the West was tightly controlled and there was no free press and very few foreign visitors allowed into the Soviet Union. When we think about the cultural exchanges that existed in that time, our minds tend to jump to the arts, and we would not be wrong. Soviet circuses, ballets, operas and symphonies toured throughout the US and were the cause of great sensaion, despite such impenetrable government policies. It was through these exchanges that Soviets and Americans established true contact, because at the base of all cultural exchanges is one intrinsic and very important aspect: people (Richmond).

Musical exchanges between the US and the Soviet Union can be deemed as one of the most visible acts of cultural diplomacy. Music was, and still is, a highly valued art form in both Russia and the US. In Soviet times, in an effort to build up Soviet-American cultural relations and counter the black market distribution of music, an important breakthrough was made in 1958 with the implementation of the Lacy-Zarubin Agreement (Fossler-Lussier).

The Lacy-Zarubin Agreement is known officially as The Soviet American executive agreement on cultural, educational, and scientific exchanges. Even though this agreement was initially focused on bringing film to the forefront, it subsequently allowed music exchange as well and was the first exchange agreement between the two superpowers after the second World War. The Kremlin wanted to extend its cultural ties with the US with the aim of facilitating future economic and political agreements. After Stalin’s death in 1953, the Soviet Union found it of utmost importance to reiterate to the West that the Soviet Union was willing to co-exist with them and that whatever problems they had with each other could ultimately be solved (Kozovoi). From this moment on, it is reasonable to argue that the role of culture has been at the forefront of US-Soviet, and now currently US-Russian, relations.

Of all the forms of cultural exchanges, this project focuses on hip hop and breakdance and its introduction and evolution in Russia. Hip hop, similar to rock and roll was not only a style of music, it was a lifestyle. From its conception about thirty-five years ago, hip hop was started as a movement and quickly developed into a cultural and artistic phenomenon that has influenced youth culture around the world. Hip hop was born in the US and was intrinsically tied to black culture. It is clear that hip hop was not just a fad and has been culturally cemented in the US and increasingly across the world. While appealing to many, Russians may connect deeper than other cultures to hip hop. Hip hop came about as a representation of working-class black people; it was a way for a group that felt marginalized in society to have a voice and create their own identity. This translates well to Russians, who also view it as a way for many to have a voice, a voice that will stand tall against the elite and bring about a new sense of identity and belonging. Hip hop culture has four recognizable elements: disc jockeying, breakdancing, graffiti art, and rapping (Aldridge). This project will focus mainly on breakdancing as a case study to create a cultural bridge between the US and Russia.

We chose hip hop because it not only encompasses a style of music, but also a lifestyle. Hip hop is intrinsically linked to American culture and it provides a firm stepping stone for cultural exchange. We wanted to choose something both modern and also popular and easily accessible. Hip hop is widely popular in Russia and streaming services make music videos and songs easily available. Hip hop is respected as an art form all over the world and stands on its own without needing the backing or support of the government.

SECTION THREE: HIP HOP/ RAP/ LINGUISTICS: A CASE STUDY OF BLOCK2BLOCK

What exactly is Hip Hop? The most common and immediate answer would be rap music lyrics mainly rapped over sampled beats. Webster’s dictionary defines it as a subculture, especially of inner-city youths who are typically devotees of rap music. Rap, meanwhile, was developed in the 1970’s in South Bronx in New York City and it quickly rose to become a national and global phenomenon. Eventually, various different regions adapted the genre into versions that characterized their particular situations and circumstances. Rap is known for its soulful and passionate fans and its quotable lyrics, which are recited in nightclubs, political rallies,
and even everyday conversations. It can be heard as a ring-tone, in movies, in cafes; it is literally all around us. It is important to note this, because it highlights how it encompasses many different aspects of life. Hip hop has also become intrinsically attached to youth culture. Rap is an art form created by minorities, primarily blacks and Latinos, that exemplifies the theoretical observation that what is socially marginalized can then become culturally centered. Rap is mainly identified as a music genre, while hip hop is labeled as a culture. Hip hop can be defined as a style of dancing, dressing, hairstyling, body movement and speech (Chang).

For so-called hip hop heads, hip hop is much more than music; it is an identity, a way of life. Intertwined with its history and the culture it created, hip hop provides a fascinating insight into race, gender, region, nation, and politics in America. Academics have recently begun to take on hip hop in a sociological viewpoint and as a cultural study and have seen how closely tied it is with youth culture. Colleges and universities around the world are also beginning to offer courses based on hip hop and its influence around the world (Chang). Meanwhile, Russian cities as far and diverse as Vladivostok, Yakutia, Novosibirsk, just to name a few, are brimming with young hip hop fans.

In analyzing hip hop as a tool of building intercultural communication, the importance of language in hip hop is highlighted. “In hip hop the WORD is the message. Language is a system of sounds and symbols and communication in any language is based on how to use that system. If you know the system, you have power over ideas and imagination. You can build, change, plan, play and destroy. Many words and expressions in hip hop represent regions, neighborhoods and cities”. The semantics of hip hop contain concepts crucial for society and represents the system of values shared by the community that produces the piece of music.

The number of research papers dedicated to the role of language in hip hop culture discuss the terms “Hip Hop Language” as well as “Hip Hop National Language”. These authors discuss how performers build their hip hop identity in terms of language and how local hip hop scenes use language to express local identities. “Hip Hop Nation Language is the primary means by which the members of the Hip Hop Nation (HHN) express their unique and diverse cultures.” It should be noted that the word “language” does not only imply grammar or vocabulary, but also relates to discourse and culture-specific communicative acts. The language concept includes all communication: appearance, garment, and gestures. Therefore, hip hop can also be studied from a sociolinguistic point of view. Due to the increasing popularity of hip hop culture, it shall be taken into the account that hip hop language can be a powerful tool for influencing communities. This is something that Block2block (the group dedicated to bringing hip hop artists to Russia) has been emphasizing in their productions.

The media of breakdance is particularly promising as a tool of soft power and for facilitating cultural exchange between contemporary Russia and the US. Russian non-governmental organizations and individuals are making exciting and innovative progress in this field by reaching out to the younger generation and getting them involved in different projects. One individual of note is Lev Shishov, a Russian alumni of the FLEX program, who is currently involved in a US-Russia hip hop project. Lev’s organization – Block2block – brings American hip-hop artists, rappers, and break-dancers to Russian villages for performances, concerts, and educational workshops. This is a US-sponsored cultural exchange project, but has potential to grow into much more. Block2block’s mission fits well into the paradigm of using contemporary hip hop to enhance US-Russia cross-cultural understanding, and is one such channel that can both bring cultural understanding and social awareness to both countries. Furthermore, the group’s philosophy emphasizes expansion of access and representation to groups who have previously been marginalized or lacking in high-level representation on the global stage.

In conversations with him, Lev spoke extensively about the nature of hip-hop subculture as an area where nationalism, racism, and other negative stereotypes do not exert influence. Block2block is dedicated to bringing American hip hop artists to different Russian cities in an effort to bridge the cultural divide. Hip hop is something equally popular amongst Russian and Americans, especially the younger generation. By having greater visibility in Russia, American audiences not only expand their audience and influence, but also help build a stronger and better relationship between Russia and the US. This conception of hip-hop subculture also offers a fruitful avenue for international exchange. It is important to steer clear of politics and find an artistic common ground in which Americans and Russians can bond; Block2block seems to offer the perfect common ground.

A specific focus area will be to facilitate a possible exchange of Russian break-dancers and hip-hop artists to the US, since currently the organization has only been able to bring American artists to Russia. We propose to focus especially on smaller cities and university towns, where the roots of hip-hop subculture are already present. We aim to bring a higher level of awareness and promotion to the cultural presence of US hip-hop artists touring Russian villages. We want to present hip-hop as folk culture, highlighting the performance aspect of it in hopes of boosting interest from various groups of people in both Russia and the United States.

SECTION IV: PROPOSAL FOR USING BLOCK2BLOCK TO AMPLIFY U.S.-RUSSIA CULTURAL EXCHANGE

In order to maximize the concrete impact of our research, we propose to use our project as a launching pad for bettering US-Russia relations. We seek to use Block2block’s project as a stepping stone to bringing a positive Russian influence to different American cities and increasing the presence of Russian culture in the US. Firstly, we propose
showcasing the videos of American performers in Russian cities to bring awareness to the importance of cultural exchange. While in Russia, we met with various government officials and high-level educators and all had a similar opinion about the current standing of US-Russia relations. While not at their worst, relations between our two countries do not seem to be improving and the reliance on cultural exchanges is vital, albeit hard to rely on. Because US-Russian relations are at such a precarious moment, we must be extra careful to present what would be best in terms of cultural exchange for both countries. We want our project to present a united front. Drawing on the theory we outlined in section one, we know our vision of bridging the cultural gap through music has been tested and successful in the past.

Secondly, we want to survey people’s opinions of Block2block in the hope of better understanding what people think of their project. We can achieve this by showcasing Block2block’s performances on different social media platforms. Block2block already has an active website, Facebook and Instagram, but we can help widen their reach by appealing to an American audience and helping overcome the language barrier. We want to encourage people to comment (in both Russian and English) on the videos and share their views on the project.

Thirdly, we seek to help establish an open channel of communication between Russians and Americans and we believe hip-hop is a plausible link to that. In our highly politicized societies, people crave an escape, and bonding over hip-hop might be the perfect escape. We know how challenging our task is, especially with the political tensions currently present between Russia and the US, but cultural exchange has always stood firm as a last resort. Even in the most trying of times during the Cold War, cultural exchange between our two countries has never been fully lost, and we remain confident that it never will be.

Cultural exchange between Russia and the US is something that is of utmost importance to cultivate and maintain. Current political tensions have seen a rise in anti-US and anti-Russia propaganda, respectively. Cross-cultural exchanges are central, not only to expanding global understanding, but also as a pillar of track-two, or public, diplomacy. Drawing on previous experiences, we know that cultural exchanges have an appeal to the general populations and draw much attention from the youth of the countries. In terms of looking toward the future and the relationship between Russia and the US, we should be looking to start a dialogue between the younger generations and garner an interest between each other. We want to focus on the younger generations because not only are they the future leaders of our country, but also their opinions of the other country are less likely to be jaded by any historical happenings.

**ADDED HISTORICAL CONTEXT**

In order to understand the nuances that such a project will entail, we must briefly delve into the history of US-Russia cultural exchanges, especially pertaining to the Cold War. The Cold War can be defined as the state of political hostility that was noticeably present between the US and Russia from 1945 until the dissolution of the Soviet Union in 1991. After being steadfast allies in the fight to defeat Hitler and Nazism, the US and the Soviet Union pushed their political differences to the forefront and as one bloody World War ended, a hard-lined ideological war began. World War II ended and left behind two newfound superpowers, the US and the Soviet Union, with strikingly different political and economic systems. The Cold War is characteristic for its lack of direct confrontation; instead it focused on a battle of ideologies and a series of proxy wars.

Under Stalin the Soviet Union was practically impervious to foreign influences, every aspect of Soviet life was tightly controlled. So much so, that most Soviet citizens thought they truly were better than their Western counterparts. Information about the West was tightly controlled and there was no free press and very few foreign visitors allowed into the Soviet Union. When we think about the cultural exchanges that existed in that time, our minds tend to jump to the arts and we would not be wrong. Soviet circuses, ballets, operas and symphonies toured throughout the US and were cause of great sensation. Thanks to various US-Soviet agreements, thousands of Soviets and Americans visited both the US and the Soviet Union as scholars, students, writers, engineers, government leaders, musicians and athletes. It was through these exchanges that Soviets and Americans established true contact, because at the base of all cultural exchanges people remain the one intrinsic and very important component (Richmond). Throughout the Cold War, the US’s main objective for these exchanges was to broaden relations between the US and the Soviet Union through people and institutions in the hopes that this would lead to joint activities and the development of steady cooperation, along with an end to Soviet isolationism and an improvement in Americans’ understanding of the Soviet Union through its people. This rings as true now as it did back then.

Of all the forms of cultural exchanges, this project focuses on hip hop and breakdance and its introduction and evolution in Russia. The predecessors of hip hop and breakdance, are namely ballet and rock and roll. Even during the height of the Cold War cultural exchanges, especially in these two creative forms, were happening between the US and the Soviet Union. For example, in 1962 the New York City Ballet toured the Soviet Union, sponsored by the US State Department. The tour overlapped with the Cuban Missile Crisis, yet the tour was still highly successful with every performance being filled, proving that a shared love of the arts could permeate boundaries built by differing ideologies (Croft). During glasnost, many popular Western rock musicians – including British singer Elton John and American star Billy Joel – toured the Soviet Union on concert tours. The connection between shared music as a form of culture and social issues is apparent from these historical analogs, as Elton John especially
helped raise awareness about the marginalization of LGBTQ people in Russia. We believe that the same goal of bridging cultural divides and raising awareness about social issues via music and dance can be pursued today through hip hop.

Musical exchanges between the US and the Soviet Union can be deemed as one of the most visible acts of cultural diplomacy. Music was and still is a highly valued art form in both Russia and the US. It is unique in that its lack of specific verbal content gives it a more freeing presence than, for example, literature. From afar, music stood on its own, away from the political scope in a way literature never could. Countless authors and works of literature were banned in the Soviet Union, mostly for political reasons. Meanwhile, Western music, while heavily censored, was allowed to prevail, to a certain extent, in the Soviet Union. On the contrary, official US-Soviet musical exchanges were far from illicit. The US brought performers that had been approved by the Soviet government. Soviet citizens were aware of American music and took a liking to jazz and rock and roll. At first, the Soviet government did not approve of rock and roll’s popularity, and it was criminalized. This, however, did not deter the Soviet people and soon enough bootleg recordings of popular Western artists began popping up in illicit markets. In an effort to build up Soviet-American cultural relations and counter the black market distribution of music, an important breakthrough was made in 1958 with the implementation of the Lacy-Zarubin Agreement (Fossler-Lussier).

The Beatles, one of the most recognizable bands to date had a tremendous influence on Soviet youth. The Soviet Union condemned much of Western youth culture, including rock music. But when Gorbachev endorsed rock music in the late 1980’s, including the Beatles, the official anti-rock policy of the Soviet Union ended (Richmond). Leslie Woodhead, in his book on How the Beatles Rocked the Kremlin (also a documentary), delineates how The Beatles inspired countless Soviet youths and how their impact was much greater than many official institutions. Russian rockstar Sasha Lipnitsky has even gone so far as to state that “The Beatles brought us the idea of democracy. For many of us, it was the first hole in the iron curtain”.

It is not enough that music and culture exist; equally as important are the messengers and transmitters of cultural channels from one side to the other. For instance, Woodhead, before being assigned to film and document The Beatles and the anti-Stalinist underground culture prevalent in the late 1980’s and 1990’s, worked as a communications monitor in West Berlin focusing on the communication of Soviet pilots flying in and out of East Berlin. He often recorded, many times clandestinely, scenes from behind the Iron Curtain. After the fall of the Soviet Union, he has made many trips to Russia in his journey to uncover the depths of rock and roll’s influence there and its role in bridging the cultural divide. According to him, “There was not a band anywhere in the Soviet Union that did not start life as a Beatles tribute band.” A Beatles-inspired band called Time Machine became huge-ly popular and remains iconic to this day. As to be expected, as soon as the rock and roll wave hit the Soviet Union, sides were quickly formed. The hard-lined communist party was mostly against rock and roll, although they did occasionally grant recording permission to a few artists, but such leniency was mostly short-lived. At one point, a news run bulletin portrayed shots of The Beatles interlaced with images from the Klu Klux Klan and images of poverty from the American South. It made no difference that The Beatles were not American, the Soviet propaganda machine was just out to prove a point. However, the Kremlin’s propaganda was falling on deaf ears (Vulliamy). Much like hip-hop in the 1990’s, rock music gave young people hope and they associated it with freedom and having their own voice. As with hip hop, the more rock was condemned, the more popular it became. When hip hop began in the US, it was associated by many with violence, but it gave many people a voice and youths clung to it.

Much like rock and roll shook the Soviet Union, hip hop took the US and the world by storm. Hip hop, similar to rock and roll, was not only a style of music, it was a lifestyle. From its conception about thirty-five years ago, hip hop was started as a movement and quickly developed into a cultural and artistic phenomenon that has influenced youth culture around the world. Hip hop was born in the US and was intrinsically tied to black culture. It is clear that hip hop was not just a fad and has been culturally cemented in the US and increasingly across the world. While appealing to many, Russians may connect deeper than other cultures to hip hop. Hip hop came about as a representation of working-class black people; it was a way for a group that felt marginalized in society to have a voice and create their own identity. Hip hop culture has four recognizable elements: disc jockeying, breakdancing, graffiti art, and rapping (Aldridge). This project will focus mainly on breakdancing as a case study to create a cultural bridge between the US and Russia largely due to the minimal language attached to it.
BIBLIOGRAPHY


ABOUT THE STANFORD US-RUSSIA FORUM

SURF is a platform for American and Russian university students to work together on some of the most important issues that our nations face today. Participants team up in small working groups to collaborate on research themes such as international relations and security, technology and the sciences, business and entrepreneurship, the arts, healthcare, and regional and humanitarian issues. These delegates travel to Russia for a week-long conference in the fall to launch their research and deliverable projects under the guidance of subject experts. They continue to collaborate with their working group peers over the academic year while based at their home universities. The capstone of the program is a week-long research symposium at both Washington DC and Stanford University in the spring. The working group format fosters critical thinking and consensus-building, as it leverages a cooperation-based approach to produce innovative research and viable solutions.

SURF welcomes applications from graduate, professional, and undergraduate students in all academic disciplines and majors, regardless of prior exposure to Russia or the United States. Our alumni have gone on to work in national governments, major consulting firms and banks, policy centers and think tanks, and in prominent tech companies. Others have built careers in medicine, law, entrepreneurship, and have entered PhD and professional programs at some of the world’s most prestigious universities.

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FRONT PHOTO: Saint Basil's Cathedral, Red Square in Moscow, Russia
REAR PHOTO: Memorial Court, Stanford University