Inherency 1AC (1/2)

After the Atlantis lands, there will be no program to send people into space, especially to Mars.

Wilson 7/7

Reid Wilson editor-in-chief of National Journal Hotline, and contributes analysis of the national political environment in his weekly column, On The Trail. Reid is also political contributor to Sirius-XM Radio. He has also written for The New Republic, the Arizona Capitol Times, the Seattle Post-Intelligencer and National Journal. He has appeared as a guest analyst on dozens of radio shows across the nation and on CNN, MSNBC, Fox News and C-SPAN. National Journal. Jul 7, 2011. ‘NASA Looks to Uncertain Future’ <http://proquest.umi.com/pqdweb?did=2399317511&sid=6&Fmt=3&clientId=4347&RQT=309&VName=PQD>//DoeS

By any measure, the dream of space exploration still holds a powerful grip on Americans' imaginations. Almost everyone of a certain age remembers watching Neil Armstrong take humanity's first steps on the moon in 1969. Millions of television viewers tune in to live broadcasts from astronauts in space. And even after 30 years of space shuttle missions, thousands of people signed up for lotteries to win tickets to watch the launches up close. But all of that will come to a halt later this month, after Atlantis blasts off on the shuttle program's final mission and returns a week and a half later. Following a flurry of tributes, the last of the shuttle fleet will be shipped off to museums around the country and become relics of history. Then, for the first time in half a century, the United States won't have any immediate plan--or vehicle--to send humans into space. What then? President Obama and powerful lawmakers in both parties have all vowed to begin a new chapter in human space exploration. But almost no one is clear about what the next phase should accomplish, or why. President George W. Bush's underfunded plan for space exploration after the shuttle is on life support. Obama has extended U.S. participation in the International Space Station until 2020, but critics say that the station has been a $100 billion waste of money. And although Obama has embraced Bush's goal of sending humans to Mars, neither the administration nor Congress has made more than a tiny down payment on the project. The timing couldn't be worse. Analysts estimate that the upfront cost of building a new generation of rockets and spacecraft could easily hit $50 billion, and the missions would cost countless billions more. At a time when Republicans and Democrats are fighting over whether to cut federal spending by $2 trillion or $4 trillion over the next decade, that could be a tough dream to sell. That hardly means the end of Americans in space. With tens of billions of dollars in federal contracts at stake and thousands of jobs to be divvied up among congressional districts, quiet battles over the next program are already being fought on Capitol Hill. Obama found that out the hard way. Two years ago, he appeared to have killed NASA's Constellation program, Bush's vision to develop a rocket and spacecraft that could take humans to the moon and eventually Mars. The project was $12 billion over budget and years behind schedule, and critics said that the concept was flawed. Thanks to a powerful array of aerospace companies, career NASA officials, and well-placed lawmakers, however, Congress resurrected the project this spring with a $3.8 billion earmark. Policymakers and politicians still face fundamental questions: Should the U.S. even continue sending humans into orbit, much less plan for a mission to Mars? If so, how far should the country go, and how much should it spend? Human space exploration has huge popular appeal, and NASA has masterfully exploited the drama and excitement ever since the days of John Glenn and the Mercury Seven. Yet the scientific justification has always been much shakier. Robots have already analyzed surface specimens on Mars and sent back dazzling pictures from Jupiter and Saturn. Human flight is vastly more limited and orders of magnitude more expensive. Some in NASA, along with the agency's allies in Congress, want the United States to get a new human space program up and running as soon as possible. The Obama administration wants to see private commercial enterprises take over a significant portion of the industry. Still others argue that human space travel is a waste of money and that NASA should focus solely on crewless scientific missions--satellites to study the Earth, remote-controlled explorers to visit other planets, and new space-based telescopes. DREAMERS, SCHEMERS, AND WORRIERS Those who say that sending humans into space is an essential government function generally fall into three camps: The dreamers, the pragmatists, and the nervous. All three groups have advocates on the Hill and in the industry. The dreamers may be the largest contingent. Spaceflight, after all, has produced rare shared cultural moments--men walking on the moon; the Apollo 13 crew's riveting struggle to get their damaged spacecraft back to Earth; the dramatic space acrobatics that shuttle astronauts performed as they repaired the Hubble Space Telescope. But it's hard to justify spending billions of dollars on distant dreams at a time when lawmakers want to freeze or cut almost every other part of the federal budget. Pragmatists argue that the NASA-supported space industry generates billions of dollars in economic activity and tens of thousands of jobs in states from California to Texas to Florida, home to the Kennedy Space Center. What's more, the pragmatists say, NASA has contributed immeasurably to American innovation. The race with what was then the Soviet Union for dominion over space helped propel virtually unparalleled scientific achievement; innovations created for the space program have led to better pacemakers, cordless power tools, and the technology used in wireless Bluetooth headsets. Even freshman Republicans, who came to Washington with a mandate to slash government spending, make a distinction between the wasteful outlays they seek to eliminate and meaningful government spending--including on human spaceflight--that they hope to perpetuate. "Most people think about NASA as the people who shoot rockets into the sky. They don't really think about it as what has it contributed to their everyday lives, between research [and] innovation," said Rep. Sandy Adams, a freshman Republican who represents Florida's Space Coast north of the Kennedy Space Center. "If you drive around on the Space Coast, you've got all these homes in foreclosure, people looking for jobs, an unemployment rate that is very high, a lot of apprehension in the communities." When it comes to the space business, Adams sounds less like a fiery GOP budget-cutter than a Democrat from some down-on-its-luck manufacturing district. "We're going to lose a lot of brain trust because those people will go where the jobs are, and that may not necessarily be within our country," she warns. Other supporters say that the nation's security could be at risk if the United States abandons human spaceflight at a time when China is aggressively building up its capabilities in the field. "It's obviously an expensive [card continues, no text removed]

Inherency 1AC (2/2)

and difficult and dangerous enterprise, but that's what Americans do best," said Rep. John Culberson, R-Texas, the second-ranking member of the House Appropriations subcommittee that presides over NASA's budget. "We are totally committed to preserving our leadership in space, not only because it's the right thing to do and inspires our best but because we're not going to surrender ground to the Communist Chinese.... It's absolutely vital that we have an aggressive, adaptable manned spaceflight capability, because it's the high ground for the 21st century militarily, [and] it's vital to our civic economy." THE ASTRONAUT SKEPTICS For all the popular fascination with human spaceflight, the scientific support for it has been wobbly for years. The enthusiasm probably peaked in the 1960s, when Americans feared that the Soviet Union was winning the "space race" and the United States carried out President Kennedy's vow to put a man on the moon by the end of the decade. But the Soviets stopped competing not long after Sputnik, and NASA soon ran out of things for astronauts to do on the moon. The final Apollo mission flew in 1972, and NASA eventually initiated the space shuttle program. The shuttle was based on the concept that a crew vehicle should be reusable, which would reduce costs and open up a slew of new scientific and commercial opportunities in space. But the shuttles were much more expensive than simple rockets for the one really big commercial launch business--putting satellites into orbit. Although the shuttles did transport people and supplies to the International Space Station, critics complained that the station hadn't produced much in the way of scientific breakthroughs or commercial opportunities. The goal of space travel continued to drift even after Bush outlined a seemingly bold plan to build a new generation of space vehicles that would take people back to the moon and, eventually, on to Mars. Bush's plan was halfhearted at best, and his Constellation program ran into trouble immediately. Experts say that the proposal was underfunded from the start, cost billions more than NASA had predicted, and fell one year further behind schedule with each passing year. "They did with Constellation exactly what they did with the shuttle," said Alex Roland, a former NASA historian who now teaches at Duke University. "They really knew when they started on Constellation that this was going to be impossible. But they went right ahead and said, 'Oh yeah, we can do that.' "Roland said that the Constellation saga brought to mind a remark by George Keyworth, President Reagan's science adviser, during congressional testimony in 1985: "While all government agencies lie part of the time," Keyworth told lawmakers, "NASA is the only one I know of that does so routinely." Even if the cost overruns and delays hadn't occurred, NASA's critics and allies alike say, neither Bush nor Congress was ready to give the agency what it needed most: a financial commitment for anything close to the full cost of the new space program. "It takes a commitment of something on the order of $40 billion to $50 billion, up front, to build a new launch vehicle," Roland said. That's what both the Apollo and the space shuttle programs cost, in today's dollars, but that wasn't happening with Constellation. Obama soon made it clear that he wanted a shift in direction. "The challenges facing our space program are different, and our imperatives for this program are different, than in decades past," the president said in a speech at the Kennedy Space Center in April 2010. "We're no longer racing against an adversary. We're no longer competing to achieve a singular goal like reaching the moon. In fact, what was once a global competition has long since become a global collaboration." It is virtually impossible for any administration to say that it flatly opposes human spaceflight. Indeed, NASA Administrator Charles Bolden insists that his agency is still focused on the stars. "Our destinations for humans beyond Earth remain ambitious," he said in a recent speech. "They include the moon, asteroids, and Mars." For practical purposes, however, White House officials talk about very different priorities. Instead of reaching the moon or Mars, they emphasize down-to-earth objectives, such as improving climate science, sending voyagers to explore the moons of Jupiter, and looking for evidence of dark matter and dark energy. Those are all tasks that can be done without astronauts. Instead of pushing for a monster new rocket, they talk about outsourcing launch work to private companies and upstart entrepreneurs.

Plan

The United States Federal Government should substantially increase Mars exploration.

STEM 1AC (1/2)

The plan revitalizes interest in STEM jobs.

Lamb 10

Why Explore Mars Analysis by [Robert Lamb](http://news.discovery.com/contributors/robert-lamb/) Tue May 4, 2010 <http://news.discovery.com/space/why-explore-mars.html>//DoeS

In other words, to satisfy our human thirst for exploration, we'll have to push technology even further. In the same way that the 20th century space race gave us such innovations as long-distance telecommunications and water filters, the technologies we develop for Mars will affect life on Earth. "It's also a challenge that would encourage millions of young people to go into science and engineering," Zubrin says. "If they develop their minds and learn their science, they have the prospect of taking part in exploring and pioneering a new world. Society would benefit tremendously from that."

Going to Mars would spur interest in STEM.

Zubrin 98

Robert Zubrin an aerospace engineer, is president of the Mars Society and author of The Case for Mars: The Plan to Settle the Red Planet and Why We Must. Sep 30, 1998. Vol. 16, Iss. 20; pg. 1 Potomac ‘Q & A: ROBERT ZUBRIN, INDUSTRY EXECUTIVE AND PROPONENT OF PUTTING HUMANS ON MARS’ Space Business News <http://proquest.umi.com/pqdlink?did=34689651&Fmt=7&clientId=4347&RQT=309&VName=PQD>//DoeS

Q: What other benefits could be derived from sending humans to Mars? A: If there were a national commitment to send people to Mars, you would see an amazing impact on the young people of America and on the world. In short, there would be a giant well of intellectual capital that would spring from an aggressive Mars effort, and intellectual capital is the true wealth of the nation. Think back to the 1960s for a minute: Many giants of the computer revolution were coming of age then, people like Microsoft's Bill Gates, to mention just one. They were inspired by what we were doing in the space program, and by the national commitment to space that was made by our political leaders led by President John F. Kennedy. Mars easily could produce the same kind of interest in exploration. Here is something else to keep in mind: During NASA's heroic years from 1961 to 1973, when we managed to put humans on the moon and develop nearly all of our space technology, the budgets in today's dollars were $16 billion - only 20 percent more than current budgets. An Army in motion does not cost much more than an Army in the barracks - and right now NASA is an Army in the barracks. If we want a real return on our space dollars, we need to send NASA into the field with a real mission: humans to Mars.

STEM 1AC (2/2)

STEM jobs are key to competitiveness and the economy- the only problem is lack workers.

Office of the Chief Economist July

David Langdon, George McKittrick, David Beede, Beethika Khan, and Mark Doms, Office of the Chief Economist July 2011 <http://www.esa.doc.gov/sites/default/files/reports/documents/stemfinalyjuly14\_1.pdf>//DoeS

***S***cience, technology, engineering and mathematics (STEM) workers drive our nation’s innovation and competitiveness by generating new ideas, new companies and new industries. However, U.S. businesses frequently voice concerns over the supply and availability of STEM workers. Over the past 10 years, growth in STEM jobs was three times as fast as growth in non-STEM jobs. STEM workers are also less likely to experience joblessness than their non-STEM counterparts. Science, technology, engineering and mathematics workers play a key role in the sustained growth and stability of the U.S. economy, and are a critical component to helping the U.S. win the future. In 2010, there were 7.6 million STEM workers in the United States, representing about 1 in 18 workers. STEM occupations are projected to grow by 17.0 percent from 2008 to 2018, compared to 9.8 percent growth for non-STEM occupations. STEM workers command higher wages, earning 26 percent more than their non- STEM counterparts. More than two-thirds of STEM workers have at least a college degree, compared to less than one-third of non-STEM workers. STEM degree holders enjoy higher earnings, regardless of whether they work in STEM or non-STEM occupations.

Continued economic decline will result in global war.

Walter Russell Mead, [Henry A. Kissinger](http://en.wikipedia.org/wiki/Henry_A._Kissinger%22%20%5Ct%20%22_blank) senior fellow for [U.S. foreign policy](http://en.wikipedia.org/wiki/U.S._foreign_policy%22%20%5Ct%20%22_blank) at the Council on Foreign Relations. The New Republic, “Only Makes You Stronger,” February 42009.  http://www.tnr.com/politics/story.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8&p=2 AD 6/30/09)

Frequently, the crisis has weakened the power of the merchants, industrialists, financiers, and professionals who want to develop a liberal capitalist society integrated into the world. Crisis can also strengthen the hand of religious extremists, populist radicals, or authoritarian traditionalists who are determined to resist liberal capitalist society for a variety of reasons. Meanwhile, the companies and banks based in these societies are often less established and more vulnerable to the consequences of a financial crisis than more established firms in wealthier societies. As a result, developing countries and countries where capitalism has relatively recent and shallow roots tend to suffer greater economic and political damage when crisis strikes--as, inevitably, it does. And, consequently, financial crises often reinforce rather than challenge the global distribution of power and wealth**.** This may be happening yet again. None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads--but it has other, less reassuring messages as well.If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system under the Anglophone powers, so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises. Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power**.** If the current crisis turns into a **depression, what** rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born? The United States may not, yet, decline, but**,** if we can't get the world economy back on track, we may still have to fight.

Cooperation 1AC (1/4)

The combination of the ESA and NASA’s rovers solve the aff.

**2R-iSAG 10**

John A. Grant (Smithsonian Institution; co-chair), Frances Westall (CNRS, Orle´ ans; co-chair), David W. Beaty ( Mars Program Ofﬁce, JPL/Caltech), Sherry L. Cady (Portland State University), Michael H. Carr (U.S. Geological Survey, retired), Vale´ rie Ciarletti (LATMOS-IPSl, Velizy), Angioletta Coradini (INAF, Rome), Anders Elfving (ESA), Daniel P. Glavin (Goddard Space Flight Center), Fred Goesmann ( Max Planck Institute for Solar System Research, Lindau), Joel A. Hurowitz ( JPL/ Caltech), Gian Gabriele Ori (IRSPS, Pescara), Roger J. Phillips (Southwest Research Institute), Christopher G. Salvo ( Mars Program Ofﬁce, JPL/ Caltech), Mark A. Sephton (Imperial College, London), Marguerite L. Syvertson ( JPL/Caltech), Jorge L. Vago (ESA). Final Report of the MEPAG 2-Rover International Science Analysis Group (2R-iSAG) June 24, 2010 ASTROBIOLOGY Volume 10, Number 7, 2010 “Two Rovers to the Same Site on Mars, 2018: Possibilities for Cooperative Science” <http://www.liebertonline.com/doi/abs/10.1089/ast.2010.0526>//DoeS

As presently planned and envisioned, the ExoMars and MAX-C rovers would have complementary scientiﬁc objec-

tives and payloads. Initiated in 2002 and currently approved for launch in 2018, ESA’s ExoMars has the following scientiﬁc objectives: (1) to search for signs of past and present life and (2) to characterize the subsurface in terms of its physical structure, the presence of water/ice, and its geochemistry. The payload selected to achieve these goals is centered on the ability to obtain samples from the subsurface with a 2 m drill. The payload comprises panoramic and high-resolution cameras and a close-up imager (microscope) as well as a ground-penetrating radar to characterize the surface and subsurface environment and to choose relevant sites for drilling. Infrared spectroscopy would provide downhole mineralogy, while the mineralogy of the drilled materials would be obtained by IR/Raman spectroscopy and X-ray diffraction. Laser desorption–gas chromatography–mass spectrometry and pyrolysis gas chromatography–mass spectrometry would determine the composition of organic molecules, including any chiral preference in molecular structure. A life marker chip is designed to detect and identify markers of fossil or extant life. The currently proposed objectives of MAX-C are to cache suitable samples from well-characterized sites that might contain evidence of past life and prebiotic chemistry in preparation for a possible future Mars Sample Return ( MSR) mission. The emphasis is on detailed site evaluation to determine the potential for past habitability and preservation of physical and chemical biosignatures. The strawman payload (which has not been selected) is therefore likely to include instrumentation for surface characterization, for example: an abrading tool; a 5 cm drill; a panoramic camera and near-IR spectrometer; a set of arm- mounted instruments capable of interrogating the abraded surfaces by creating co-registered 2-D maps of visual texture, major element geochemistry, mineralogy, and organic geochemistry; and a rock core acquisition, encapsulation, and caching system. The value of collaborative activity can only be judged with respect to a stated scientiﬁc objective. To this end, the pre- viously stated objectives of ExoMars and MAX-C as inde- pendent entities have been analyzed for signiﬁcant common aspects. We conclude that these two rovers have two crucial shared objectives that could, in fact, form the basis of highly signiﬁcant collaborative exploration activity. We therefore propose the following set of shared scientiﬁc objectives for a 2018 dual rover mission that consists of both a shared component and an independent component. (1) At a site interpreted to contain evidence of past environments with high habitability potential and high preservation potential for physical and chemical bio-signatures, (a) evaluate the paleoenvironmental conditions, (b) assess the potential for preservation of biotic/ prebiotic signatures, (c) search for possible evidence of past life and prebiotic chemistry. (2) Collect, document, and package in a suitable manner a set of samples sufﬁcient to achieve the scientiﬁc objectives of a possible future sample return mission. Achieving these shared objectives would result in greater science return than would be likely with two independent rovers.

Cooperation 1AC (2/4)

The plan opens up US & European cooperation with Russia.

Barrie 7

Douglas Barrie 6/18/2007 ‘Aviation Week & Space Technology’ Vol. 166, Issue 23 p74

Supporters of the dedicated orbiter argued that it would allow ESA to opt for a standalone mission architecture, rather than piggyback on NASA for a communications relay. This would also have further increased the cost of ExoMars, which, says Gardini, would have been a "problem." He adds that the orbiter concept, however, has not been completely abandoned. "An action was passed to still study an orbiter," he notes. This would be a parallel study to the baseline work. The Enhanced Baseline foresees using NASA's Mars Reconnaissance Orbiter and Mars Scout 2011 to act as data relays. "Cooperation may be a challenge, but it's also an opportunity," says Gardini. "ExoMars is an opportunity to cooperate with the U.S. and Russia." It would provide valuable experience as well for the follow-on Mars Sample Return mission, which, he suggests, will inevitably be collaborative. Discussions with NASA over the use of MRO and Scout 2011 have been underway for some time. A formal memorandum of understanding has yet to be negotiated, but Gardini does not see this as a stumbling block.

Scientific cooperation pulls relations back from the brink with Russia.

Sher 4

Gerson S. Sher PhD in Politics from Princeton, President U.S. Civilian Research and Development Foundation (CRDF) ‘U.S.-Russian Scientific Cooperation in Changing Times’ Problems of Post-Communism, vol. 51, no. 4, July/August 2004, pp. 25–33. <http://ry2ue4ek7d.search.serialssolutions.com/?ctx\_ver=Z39.88-2004&ctx\_enc=info%3Aofi%2Fenc%3AUTF-8&rfr\_id=info:sid/summon.serialssolutions.com&rft\_val\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=US-Russian+scientific+cooperation+in+changing+times&rft.jtitle=PROBLEMS+OF+POST-COMMUNISM&rft.au=Sher%2C+GS&rft.date=2004-07-01&rft.pub=M+E+SHARPE+INC&rft.issn=1075-8216&rft.volume=51&rft.issue=4&rft.spage=25&rft.epage=33&rft.externalDBID=n%2Fa&rft.externalDocID=000223133400003>//DoeS

To draw attention to these historical issues surrounding Russian science is not, however, to say that the issues are unique or that the situation is immutable. The tension between open scientific communication and national security is an issue all too familiar in the United States and other countries. The link between science and democratic values is not, as Loren Graham has persuasively argued, inevitable.24 But there is a range of policy choices that countries can and do make in addressing these issues internally; there are also choices to make in how we go about managing our scientific relations with other countries. Inaction is also a choice we can make, and its consequences can have long-term effects. If those effects are, as might be predicted in the case of a country with strong innate historical tendencies toward secrecy, to acquiesce in again isolating a major part of the world scientific community, then we must ask whether we are on the right course. As a result, it seems unwise for a great power like the United States to phase out major programs of scientific cooperation with Russia based on short-term con- siderations. Although national policymakers may have already committed the country, on an official level, to this course of action, now may be the historical moment when a new basis for cooperation is both needed and possible, one based on the partnerships, both non-profit and for-profit, that have grown during the past ten years. This is not to argue for the “privatization” of scientific cooperation with Russia or any other country, for the federal government has an important leadership role in international scientific cooperation, although it often falls short of its potential. It would seem that, amid the myriad goals that have accumulated in recent history around U.S.-Russian scientific cooperation, it is time to heed Eugene Rabinowitch’s call to think about “first things first.” In Russia’s case, the first things are also the obvious ones: maintaining open scientific communication and integrating Russian science into the world scientific community in such a way that neither can again compartmentalize itself at will. This goal will continue to take deliberate commitment and effort on the part of many actors. Communication and integration will not emerge spontaneously. The problem will not solve itself. The efforts of the past ten years, perhaps not replicable on the same scale in the next ten years, provide many worthy examples of the directions this effort can take.

Cooperation 1AC (3/4)

**Three impacts:**

**1. US Russian War-**

Lack of US-Russian relations could lead to nuclear miscalculation

Lain Mcwhirter, Sunday Herald (UK), 8.30.08

http://www.sundayherald.com/oped/opinion/display.var.2436840.0.0.php

Russian and American politicians have become so intoxicated by their own rhetoric that they have all but ceased to think. The naval build up in the Black Sea is a case in point. Neither side is serious about going to war, but these things can develop a momentum of their own. Accidents can happen, and if Russia honours its threat to arm its ships with nuclear missiles, then the consequences could be truly disastrous. Imagine if an American warship said to be carrying humanitarian supplies were to dock in the Georgian port of Poti and be attacked by trigger-happy Russian soldiers. Couldn't happen? Well, they said that about South Ossetia.

Extinction

Bostrom Professor of philosophy at Yale, 2002

(Nick, Professor of Philosophy at Yale. “Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” 2002, www.transhumanist.com/volume9/risks.html)

A much greater existential risk emerged with the build-up of nuclear arsenals in the US and the USSR. An all-out nuclear war was a possibility with both a substantial probability and with consequences that might have been persistent enough to qualify as global and terminal. There was a real worry among those best acquainted with the information available at the time that a nuclear Armageddon would occur and that it might annihilate our species or permanently destroy human civilization.[4] Russia and the US retain large nuclear arsenals that could be used in a future confrontation, either accidentally or deliberately. There is also a risk that other states may one day build up large nuclear arsenals. Note however that a smaller nuclear exchange, between India and Pakistan for instance, is not an existential risk, since it would not destroy or thwart humankind’s potential permanently.

2. Middle East War

U.S.-Russian relations key to solving middle east war

Paul Salem, Director, Carnegie Middle East Center, World Bulletin, 9.15.08

http://www.worldbulletin.net/author\_article\_detail.php?id=1828

The war in Georgia has reinforced Russia's reentry into Middle Eastern politics. The key question relating to the impact of Russia's new role relates to the future dynamics of Russian-American relations. If with a new US administration, Russian-American relations take a turn for the worse and the two powers revert to cold war confrontation in central Europe, central Asia, the Middle East and elsewhere, the region will suffer from another layer of tensions and escalations. If however, a new administration in Washington reads the warnings present in the Georgia confrontation and succeeds in building a new partnership with a stronger Russia, then Russian influence in the Middle East can contribute to resolving open wounds, such as those in Afghanistan and Iraq; finding a soft landing for the Iranian nuclear crisis; shepherding forward the Syrian-Israeli peace talks, and help creating the conditions for stability in the Middle East.

Cooperation 1AC (4/4)

Middle East War

Frida Ghitis, contributing editor, World Politics Review, 8.20.08

http://www.worldpoliticsreview.com/article.aspx?id=2583

Israel, however, faces other threats besides Iran. And there, too, Russia could create problems. Russia is now said to be considering providing more advanced weapons to another one of Washington's and Israel's enemies, Syria. One possibility is offering Syria its S-300 air defense system and its nuclear-capable Iskander missile. This scenario looks very much like the Cold War theater in which Washington supported Israel and Moscow armed, trained and advised Israel's enemies. This is a nightmare scenario for Israel, and one that could effectively destroy the prospects for peace in the Middle East.

Middle Eastern war will draw in Russia against the US escalating to global nuclear war.

John Steinbach, Hiroshima/Nagasaki Peace Committee, March 2002, <http://www.wagingpeace.org/articles/2002/03/00_steinbach_israeli-wmd.htm>

Meanwhile, the existence of an arsenal of mass destruction in such an unstable region in turn has serious implications for future arms control and disarmament negotiations, and even the threat of nuclear war. Seymour Hersh warns, "Should war break out in the Middle East again,... or should any Arab nation fire missiles against Israel, as the Iraqis did, a nuclear escalation, once unthinkable except as a last resort, would now be a strong probability." and Ezar Weissman, Israel's current President said "The nuclear issue is gaining momentum (and the) next war will not be conventional." Russia and before it the Soviet Union has long been a major (if not the major) target of Israeli nukes. It is widely reported that the principal purpose of Jonathan Pollard's spying for Israel was to furnish satellite images of Soviet targets and other super sensitive data relating to U.S. nuclear targeting strategy. (Since launching its own satellite in 1988, Israel no longer needs U.S. spy secrets.) Israeli nukes aimed at the Russian heartland seriously complicate disarmament and arms control negotiations and, at the very least, the unilateral possession of nuclear weapons by Israel is enormously destabilizing, and dramatically lowers the threshold for their actual use, if not for all out nuclear war. In the words of Mark Gaffney, "... if the familar pattern(Israel refining its weapons of mass destruction with U.S. complicity) is not reversed soon - for whatever reason - the deepening Middle East conflict could trigger a world conflagration.

Colonization 1AC

Plan’s the key internal to Mars colonization

Zubrin 10 Robert, president, Mars Society; president, Pioneer Astronautics; former member, Scenario Development Team, Lockheed Martin; former senior engineer, Martin Marietta Astrophysics company; PhD, Nuclear Engineering, UWashington; MA, Aeronautics and Astronautics, UWashington; BA, mathematics, URochester; “Human Mars Exploration: The Time is Now” *Journal of Cosmology*; October-November, 2010; <http://journalofcosmology.com/Mars111.html> |Cramer

Reason # 3: For the Future: Mars is not just a scientific curiosity, it is a world with a surface area equal to all the continents of Earth combined, possessing all the elements that are needed to support not only life, but technological civilization. As hostile as it may seem, the only thing standing between Mars and habitability is the need to develop a certain amount of Red Planet know-how. This can and will be done by those who go there first to explore. Mars is the New World. Someday millions of people will live there. What language will they speak? What values and traditions will they cherish, to spread from there as humanity continues to move out into the solar system and beyond? When they look back on our time, will any of our other actions compare in value to what we do today to bring their society into being? Today, we have the opportunity to be the founders, the parents and shapers of a new and dynamic branch of the human family, and by so doing, put our stamp upon the future. It is a privilege not to be disdained lightly.

Rover exploration is key determining the sustainability of life on Mars.

**2R-iSAG 10**

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Ancient Life. As discussed above, both rovers are being designed independently (and at different times) but have a common objective in the search for possible ancient life on Mars. However, the two rovers have rather different strategies for pursuing this objective. Achieving this objective requires that the rovers be sent to a site that has ancient rocks that may have preserved the evidence of ancient life. There are three specific derived sub-objectives within this overall objective that are common to the scientific planning of both rover activities (below). These sub-objectives should be incorporated into a common overall objective statement (see Section 3.1.3). The paleoenvironmental conditions, as reconstructed from the rocks at the site, should be interpreted from the sedimentary structures, geochemical parameters, and mineralogical evidence that relates to potential habitability. This would require interrogation of rocks of different character and of known relationship to each other, which implies access to outcrops. Once a field-based model for the ancient environmental conditions exists, it would serve as the context for deciding how and where to collect samples and for the interpretation of any samples that might be returned to Earth for more detailed investigation. The potential for preservation of different kinds of biosignatures throughout the post-depositional geological history of a set of rocks should be evaluated. Traces of biological activity can be preserved in rocks as specific properties, such as the isotopic ratios of different elements, the presence of biominerals and biologically produced textures (at different scales), and inorganic and organic geochemical signatures, all of which could be altered by one or more post-depositional geological processes. This cannot be done in general for Mars but must be done at every site for which the search for life is to be attempted. Search for the evidence of past life within the rocks investigated at the landing site that are interpreted to represent an ancient environment with high potential for ancient habitability as well as high potential for the preservation of a life-related signal (if present). Since it is possible that Mars may never have had life, it is also important to investigate possible traces of prebiotic chemistry since this might help us to understand why life never arose on Mars, if that is the situation.

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We have the technology for the aff

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Some have said that a human mission to Mars is a venture for the far future, a task for “the next generation.” Such a point of view has no basis in fact (Zubrin 1997). On the contrary, the United States has in hand, today, all the technologies required for undertaking an aggressive, continuing program of human Mars exploration, with the first piloted mission reaching the Red Planet Mars within a decade. We do not need to build giant spaceships embodying futuristic technologies in order to go to Mars. We can reach the Red Planet with relatively small spacecraft launched directly to Mars by boosters embodying the same technology that carried astronauts to the Moon more than a quarter-century ago. The key to success comes from following a travel light and live off the land strategy that has well-served explorers over the centuries humanity has wandered and searched the globe. A plan that approaches human missions to the Red Planet in this way is known as the “Mars Direct” approach. Here’s how it would work.

We have the tech and solve in 10 years

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In conclusion, the point needs to be made again. We are ready to go to Mars. Despite whatever issues that remain, the fundamental fact is that we are much better prepared today to send humans to Mars than we were to send people to the Moon in 1961, when John F. Kennedy initiated the Apollo program. Exploring Mars requires no miraculous new technologies, no orbiting spaceports, and no gigantic interplanetary space cruisers (Zubrin 1997). We can establish our first outpost on Mars within a decade. We and not some future generation can have the eternal honor of being the first pioneers of this new world for humanity. All that's needed is present-day technology, some 19th century industrial chemistry, some political vision, and a little bit of moxie.