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A Race to the Stars and Beyond: How the Soviet Union's Success in the Space Race Helped Serve as a Projection of Communist Power

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Abstract
In the modern era, the notion of space travel is generally one of greater acceptance and ease than in times previously. Moreover, a greater number of nations (and now even private entities) have the technological capabilities to launch manned and unmanned missions into Earth's Orbit and beyond. 70 years ago, this ability did not exist and humanity was simply an imprisoned species on this planet. The course of humanity's then-present and the collective future was forever altered when, in 1957, the Soviet Union successfully launched the world's first satellite into space, setting off a decades-long completion with the United States to cosmically outperform the other. In the context of the Cold War, the ensuring Space Race was more than friendly completion, rather it was a race to determine who's military and civil society could produce the most powerful interstellar technologies, which in turn demonstrated the combative readiness of either side.

This paper seeks to examine the Soviet Union's success during the Space Race (and subsequently, the global Arms Race) and its place within the larger East versus West conflict which occurred in the earlier years of the Cold War. By utilizing academic literature and primary Soviet sources, this paper will analyze how the Space Race allowed the Soviet Union to promote the successes of a Communist government and how such a leadership style served as a positive determinant for advancements in space and the Soviet Union's premier place in many such

Keywords
Space Race, Space, Soviet Union, Sputnik, Arms Race

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By Jack Lashendock

Introduction

On April 30, 1945, M.V. Yegorov of Russia and M.V. Kantrina of Georgia raised the flag of the Soviet Union over the bombed out Riechstag in Berlin, the seat of the Third Reich's pseudo-Parliament and the symbolic heart of Nazi Germany.[1] Three months later, the Soviet Union held true on its promise to the Allied Powers and declared war on the Japanese Empire, following the American atomic bombing of Hiroshima on August 8, 1945. The next day, as the American military was preparing to drop a second atomic weapon on the Japanese mainland, the Red Army launched offensives against Japanese holdings in Manchuria as well as island positions in the Sea of Okhotsk.[2] Soviet intervention, coupled with a second devastating atomic bomb, forced Emperor Hirohito to surrender to the Allied Powers days later, with the formal capitulation documents signed on September 2, 1945 by representatives of the Japanese Empire.[3]

After nearly six years of intensive fighting, primarily in Europe, the Soviet Union, along with her allies had defeated Hitler's

[1] Gregor Dallas *1945: The War That Never Ended* (S.l.: Yale University Press, 2006), 4.
[2] Jeff Mankoff "The Legacy of the Soviet Offensives of August 1945." Asia Maritime Transparency Initiative. August 13, 2015. Accessed January 27, 2019.
[3] "Japan Surrenders." National Archives and Records Administration. Accessed January 27, 2019.

Nazi Germany and stood victorious at the end of the Second World War. To the Soviet Union, fascism had been defeated and the Revolution vindicated, yet victory was achieved at a heavy cost and at the expense of nearly an entire generation. Close to nine million Red Army Soldiers were killed in action or missing[4] and the lives of approximately 13.7 million Soviet civilians were ended as well.[5,6] Additionally, thousands of villages, schools, and factories were destroyed as a result of the German advances and it has been further approximated that six million homes were destroyed. The collapse of industrialism and the turmoils of society and economy led to long-term domestic consequences.

Despite these hardships, the Soviet Union endured. Emboldened by the victory in war, the Soviet Union was quick to exert its power, and would continue to do so throughout the Cold War period. The Stalinist leadership rapidly engaged Soviet expansion into Eastern Europe and by 1949, had established communist puppet governments in Albania, Bulgaria, the German Democratic Republic (GDR), Romania, Poland, Hungary, Czechoslovakia, and across the Balkan and Baltic regions. Soon, this sphere of influence strengthened into an extension of the Soviet Union with the establishment of the Warsaw Pact a decade after the end of World War II. While the Soviets were solidifying their power in Eastern Europe, they were also exerting global power. Four years to the month of the United States' detonation of a nuclear weapon in war, the Soviet Union shattered America's monopoly and successfully tested its first atomic bomb on August 29, 1949.

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[5] G. F. Krivosheev, *Soviet Casualties and Combat Losses in the Twentieth Century*. (London: Greenhill Press, 1997), 85-97.

[6] N. A. Aralovec, *Ljudskie Poteri SSSR v Period Vtoroj Mirovoj Vojny: Sbornik Statej = Human Losses of the USSR during the War of 1941-1945* (S.-Peterburg: Izd. BLIC, 1995), 124-131.

While the Soviet Union's expansion of communism into Eastern Europe and acquisition of the atomic bomb all highlight increasing Soviet exertion of power, the most extreme projection of Red power occurred not on Earth, but in space. For nearly thirty years, the Soviet Union and the United States worked tirelessly to out-do one another and were at constant blows to become the first to achieve numerous spacefaring milestones. A facet of the larger Cold War, this specific contest was known as the Space Race and captured the collective imaginations of Soviet and American civilians, scientists, politicians, and national security experts. Throughout the first half of the Cold War, the Soviet Union used the Space Race as an apparatus to contend with the West and sought to further project Soviet power via air and space superiority.

"Poyekhali!"

On April 12, 1961, the Soviet Union's *Vostok* single man spacecraft successfully launched from Baikonur Space Centre[7] with Cosmonaut Yuri A. Gagarin on board. Just shy of two hours later–one hour and forty-eight minutes later to be exact–Gagarin safety parachuted into the Saratov Region of modern day Russia[8] having just made history as the first human in space and the first human to orbit the Earth. This profound milestone in space flight was yet another in a long line of successes for the Soviet Union and its space program that preceded even the the Revolution of 1917.[9]

[7] G. V. Petrovič, *The Soviet Encyclopedia of Space Flight (*Moscow: Mir Publ., 1969), 494-495.
[8] G. V. Petrovič, 494
[9] Asif A. Siddiqi, *The Red Rockets' Glare: Spaceflight and the Soviet Imagination, 1857-1957* (New York: Cambridge University Press, 2010)

To many in the Soviet Union, the Bolsheviks included, a man by the name of Konstantin E. Tsiolkovskii was the founder of the *modern* Soviet space program. In 1903, he first published his mathematical findings that with the aid of a liquid propellant, a rocket could be launched into space,[10] and continued to publish his work over the course of the next decade. Tsiolkovskii's work and research was conducted during the Imperial rule of Russia, before the Russian Revolution of 1917 even took place, yet following the Bolshevik assumption of power, he was elevated to the status of a national hero to the Soviet Union.[11] It is with Tsiolkovskii that state involvement in the field of cosmonautics began; the Soviet leadership portrayed Tsiolkovskii as having been failed by the imperial state and lifted into a position of fame by the Bolsheviks, who were extremely supportive of his work and theories. These comments allowed the Soviets to fully own the space program and assert that "…the state [played] a crucial role in both the imperial and Bolshevik eras, either in impeding… or advancing… the cause of cosmonautics."[12] By controlling the narrative, particularly the genesis narrative of the Soviet space program, the government was able to inspire citizens to take interest in rocket science via amateur and professional societies including the state sponsored Reactive Scientific-Research Institute.[13] Undoubtedly, Tsiolkovskii's work and quasi-cult of personality in the 1920s (and to some extent the 1930s) was a direct catalyst for the careers of many scientists in the 1950s when the Space Race with the United States official began.[14]

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[10] Asif A. Siddiqi, *The Red Rockets' Glare: Spaceflight and the Soviet Imagination, 1857-1957* (New York: Cambridge University Press, 2010), 17.
[11] Ibid., 17.
[12] Ibid., 17.
[13] Ibid., 3.
[14] Ibid., 45.

Following the death of Lenin, leadership of the Soviet Union fell to a new man, Josef Stalin, and in all aspects of life and economics, much was changed. Even in the beginning of his tenure, Stalin was obsessed with the notion that the Soviet Union must catch up to the West technologically, militarily, and industrially. Beginning in 1928, Stalin announced the first Five Year Plan to rapidly industrialize the Soviet Union (ideally in only four years) and make it a challenger against the Western democratic nations. Coined as Stalinism, the Five Year Plan attempted to reform Soviet heavy industry in the production of materials such as steel and cement and to install Western-trained, yet native, Soviet specialists to oversee the engineering, scientific, and technological advancement of the state. This push to advance Soviet science, industrialize the nation, and produce raw material transformed the Soviet Union from a predominantly agricultural state into a nation capable of contending (and leading) the Space Race.

Yet, as good as Stalinism was for the industrialization—after all, it allowed for the research and design of prototype rockets—the darker aspects of Stalin's policies, such as the Great Terror, were hindrances on the Soviet success in the skies. In both the 'private' sector of science and within the Red Army, top officials were targeted and branded enemies of the state; learned men who had worked for years in service of the state were relabeled as saboteurs. Generally "historians [blame] the Stalinist Terror for interrupting the Soviet rocketry program in its tracks. Had it not been for the Terror… Korolev [a leading Soviet rocket scientist] and his associates might well have achieved the technical capabilities so drastically demonstrated by the German V-2."[15] The final step of Stalin's long term plans was to see to the full transfer of labor from foreign specialists to Red specialists. Because of this, professions in engineering and other specialized labor

[15]Asif A. Siddiqi, *The Red Rockets' Glare: Spaceflight and the Soviet Imagination, 1857-1957* (New York: Cambridge University Press, 2010), 193.

became attractive options for those beginning to enter the workforce as they were sure ways to achieve greatness for the Soviet Union. Yet as the 1930s marched on, Stalin appeared to grow more suspicious of the specialists, thinking them Western spies, saboteurs, enemies to the people, or some combination thereof.

Soviet Success in Space

Over the course of the late 1950s, 1960s, and early 1970s, the Soviet Union saw unprecedented success in the field of space flight– both from a technological and cultural standpoint. As a collective Soviet Union, it took years to achieve these goals, and to the state politicians and politically minded civilians, each success which triumphed over the West showed the power of the Soviet Union and reaffirmed the principles of Leninism. Each early flight was a message not only to the West, but also to the peoples of the Soviet Union and her communist allies.

Sputnik I (1957)

Throughout the course of history, there have only been a handful of events that highlight the forward drive of humanity. In the modern era, perhaps the singular event which defined the 20th century was the successful launch the Soviet satellite *Sputnik*–the first artificial satellite of the Earth. The small spherical object with four trailing radio antennae was the catalyst for the Space Race and the beginning of the Space Age of Mankind. In addition to proving the might and technical genius of the Soviet Union, *Sputnik*'s mission was to record and gather scientific information on "[atmospheric] temperatures, cosmic rays,

and micrometeoroids."[16] At long last, mankind had successfully proven the ability to master flight both in space and in Earth's atmosphere.

From a scientific and engineering standpoint, there was much cause for celebration with the launch of *Sputnik*, yet for statesmen and politicians in the West, the orbiting Soviet satellite was the cause of great consternation.[17] From Russian to English, *Sputnik* translates to "friendly traveler"[18] and the Soviets intended for the satellite to be received as peaceful; yet the technological advancements raised concerns in the realm of security. Put into the general Cold War context, many believed that the Soviet's artificial moon was an existential threat to national security and worried about what it meant for America.[19] Without going into the complex science, the rocket used to launch *Sputnik* was a modified R-7 Semyorka rocket – the world's first Intercontinental Ballistic Missile (ICBM),[20] which the Soviet adapted from captured German designs following the Second World War.[21] By launching *Sputnik* into space, the Soviets demonstrated to the world that they had superiority in offensive technology (should they choose to use it) and as such, were able to project their power on the awe-inspired world. Additionally, tests in the months leading up to the launch of *Sputnik* demonstrated the Soviet capabilities to strike predefined targets with their R-7 ICBM. At the time of launch, both the American and Soviet militaries sought to demonstrate success in their

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[16] Eugene E. Emme, A History of Space Flight *(*New York: Holt, Rinehart and Winston, 1965), 100.
[17] Mark Shanahan, *Eisenhower at the Dawn of the Space Age: Sputnik, Rockets, and Helping Hands* (Lanham: Lexington Books, 2017), 65.
[18] Eugene E. Emme, 100, 208.
[19] Homer H. Hickman, *Rocket Boys: A Memoir (*New York: Delacorte Press, 1998), 17-18.
[20] James O'berg, "A Tale of Two Rockets ... With a Happy Ending." NBCNews.com. May 14, 2007.
[21] Asif A. Saddiqi 196.

ability to hit civilian and political targets within each other's countries. To achieve these ends, the Americans relied on their Jupiter Medium Range Ballistic Missiles stationed in Turkey and Italy.[22] The United State's ability to strike targets in the Soviet Union from the contiguous mainland did not come until the development of the *Atlas* rocket program in the mid-to-late 50s. Two years following *Sputnik*'s launch, an American *Atlas D* rocket was successfully launched as the United State's first operational long range intercontinental ballistic missile (ICBM); the full squadron would not be fully operational until 1960.[23] This rocket, like the Soviet R-7, had a dual purpose; it served as an offense (read: defensive) weapon and when modified, served as the first stage of the US *Mercury* manned space program, as well as a delivery rocket for satellite payloads.[24] Much like the Americans' nuclear superiority following WWII, the Soviets and their R-7 rocket possessed long range missile superiority over the Western democracy— an early victory for Leninism in the Cold War.

Lunik II (1959)

Two years following the launch of *Sputnik*, the Soviet Union achieved yet another milestone in the field of spaceflight with the launch of *Lunik II* in September of 1959. While the mission ended with *Lunik II*'s hard impact on the moon (and most likely it's complete destruction), the Soviet craft became the first man-made object on the lunar surface[25] as well as the first man made object on any celestial

[22] Mike Gruntman, *Blazing the Trail : The Early History of Spacecraft and Rocketry* (Reston: American Institute of Aeronautics and Astronautics, Inc., 2003), 209.
[23] Dennis R. Jenkins and Roger D. Launius, *To Reach the High Frontier: A History of U. S. Launch Vehicles* (Lexington: University Press of Kentucky, 2002), 80-81.
[24] Ibid., 86.
[25] Eugene E. Emme 143.

body.[26] Moreover, this projection of power was only capitalized further by Soviet Premier Nikita Khrushchev when he left Moscow for Washington, D.C. There he presented President Eisenhower with a medallion which bore of the coat of arms of the Soviet Union, which, if *Lunik II* had survived landing, would have been placed on the lunar surface.[27] To add insult to injury, the Americans attempted to land on the moon with the *Pioneer IV*, which missed the moon by approximately 37,000 miles.[28]

From a security standpoint, it once again demonstrated the power of the Soviet Union during the Arms Race (which coincided with the Space Race), this time on the moon. There was a general concern that the USSR was closer to (assuming they had the desire) to militarizing the moon.

Vostok I (1961)

Only four years after the first human satellite was launched, the Soviet Union achieved even greater heights. Atop a modified R-7 rocket, the same rocket family which launched the *Sputnik* and *Lunik* program, sat Russian cosmonaut Yuri Gagarin preparing to make history as the first human in space. There was much unknown about the implications of this flight, including whether or not Gagarin would be able to maintain consciousness for the whole flight (or even his sanity).

After liftoff, Gagarin spent less than two hours in space, alive and well, sealed inside his spacesuit and craft. This project produced a plethora of propaganda opportunities for the Soviet Union and gave the country another massive advancement in the Space Race. Gagarin's mission also demonstrated the superiority of Soviet technology and the

[26] G. V. Petrovič, 231.
[27] Eugene E. Emme, 143-144.
[28] Ibid., 142.

ability of a human (with the right protections and training) to venture into space and come back alive.

Before he boarded the *Vostok* craft, Gagarin "dedicated the flight to 'the people of a communist society,'"[29] and upon his return to Earth, he made a Hero of the Soviet Union. The Americans would not achieve manned spaceflight until the following month, once more in the shadows of the Soviet Union.

Vostok VI (1963)

This milestone was more of a cultural advancement than it was one of technological greatness. For nearly six years, the *Vostok* rocket of the Soviet Union had functioned well, and prior to this flight, had taken five cosmonauts into space. On June 16, 1963, Valentina V. Tereshkova became not only the first civilian to fly in space[30], but more importantly the first women in space. Because of this, she "…be[came] the heroine of the Soviet people, the figurehead of women's movements all over the world and the diplomatic representative abroad…"[31] This milestone would not be achieved by the United States until twenty years later when Sally Ride became the first American women in space on board the space shuttle *Challenger*. While in orbit, Tereshkova was not alone; Valery F. Bykovsky of *Vostok V* was also in orbit around the earth. On this mission, the Soviet Space program used the opportunity to study the effects of space travel on both men and women and whether or not these effects differed by gender as well as on untrained cosmonauts (as in, those not in the Soviet Air-force, who would be accustomed to high levels of G-force during their flights).[32]

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[29] Peter Bond, *Heroes in Space: From Gagarin to Challenger* (New York: Basil Blackwell Inc, 1987), 14.

[30] G. V. Petrovič, 496.

[31] Peter Bond, 22.

[32] Peter Bond, 22-23.

Voskhod II (1965)

This mission, once again, highlighted the advanced state of the Soviet Union space program in regards to the American program and the boundless possibilities of human genius. Five days before the launch of *Gemini III* (the United States's second manned flight program), the Soviet Union launched the historic *Voskhod II* mission on March 18, 1965.[33] Each cosmonaut of the two man crew was outfitted in pressure suits in preparation for what would happen on the mission–the First Extravehicular Activity (EVA), more commonly known as the world's first space-walk, conducted by cosmonaut Alexi Leonov. For approximately twelve minutes, Leonov floated (and somersaulted) in space, with nothing but a pressurized suit keeping him safe, tethered to the craft on a five meter cord.[34] Once his spacewalk finished, Leonov attempted to reenter the *Voskhod* II. However, his stiff suit had increased in size due to the pressure changes and the ballooning effect made it difficult. "When asked later how it felt to float in space he [Leonov] replied: 'Its not like floating in water. In water you feel support, the slipping through a medium. In space you don't have that sensation. You're simply flying beside your craft (at 18,000 mph!)…'"[35]

The Americans would not achieve a similar feat until about three months later when Edward White spent nearly twenty-one minutes in space.[36]

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The above highlighted expeditions are the most important milestones in not only the history of the Soviet Union but also of humanity. In addition to these, the Soviet Union conducted many other

[33]Peter Bond, 71.
[34] G. V. Petrovič, 494.
[35] Peter Bond, 78.
[36] Eugene E. Emme, 215.

groundbreaking launches, achieving near impossible milestones for the time and further showing the superiority of Communist ideals and inducts over the capitalist and democratic West. Noteworthy missions include:

- *Sputnik II (1957)*: Launched the first organism into space which was more complex than a microbe. Onboard was Laika, a mutt who unfortunately did not survive the journey.[37]
- *Lunik I/Mechta (1959):* The first "artificial planet" to orbit the sun and the first man-made object to achieve escape velocity (second terminal velocity) from Earth.[38]
- *Lunik III (1959):* Passed the backside of the moon and transmitted the first pictures of its far side humanity had seen.[39]
- *Lunik IX (1966):* First probe to soft land on another surface other than Earth (which was the moon) and transmit pictures back. Additionally, the landing proved that spacecraft would not get stuck in the surface dust, paving the way for future manned lunar landings.[40]
- *Lunik X (1966)*: The first artificial satellite of the moon and recorded a vast amount of data which included information "…on near-Moon space and on the composition of lunar surface rocks…"[41]Additionally, the probe broadcasted the *Internationale* to the 23rd Congress of the Communist Party.
- *Venera VII (1970)*: First probe to land on Venus. After approximately an hour, the systems on board failed due to the planet's extreme ground temperatures. However, the probe

[37] Peter Bond, 4.
[38] G. V. Petrovič, 231.
[39] Ibid., 231-232.
[40] Ibid., 233.
[41] Ibid., 237.

was able to transmit information back to Earth that advanced human knowledge of Venus.[42]

- *Salyut I (1971):* A decade after Gagarin's historic spaceflight, the Soviet Union launched the first space station into low-earth orbit, which was successfully visited by the crew of *Soyuz XI* in 1971 for twenty-four days.[43]

"Sons of October—Pioneers of the Universe!"

With each success of the Soviet space program and each cosmic milestone passed by a rocket bearing the hammer and sickle insignia of the Soviet Union, the world took note. Soviet propagandists were quick and mindful to capitalize on the success of their country, as well as their political system. The advances made by the *Sputnik, Vostok, Lunik,* and *Venera* programs were not just limited to the scientific knowledge; just as each mission was designed to advance humanity's knowledge of space, so too were they designed to highlight the superiority of the Soviet Union in the fields of spaceflight, engineering, and politics. From a hunk of metal orbiting the earth, to live animals, to human spaceflight and spacewalks, the Soviet Union achieved what humans had, years ago, only dreamed about in science fiction.

The biggest propaganda moment for the Soviet Union followed the launch of *Sputnik I* (and to a similar extent, *Sputnik II*). Before the launch, the project had been developed with a certain level of secrecy not present in other Soviet ICBM projects.[44] It was unknown how much the launch of *Sputnik* would captivate the public–many who worked on the project thought that it would only intrigue those in the

[42] F. W. Taylor, *The Scientific Exploration of Venus (*Cambridge: Cambridge University Press, 2014), 289.
[43] Peter Bond, 298.
[44] Asif A. Saddiqi, 341.

Soviet Union and did not think it would enthrall the Western media and public as it did. Posters within the Soviet Union highlighted the success of the launch and how it emphasized the values of the communist nation. Between 1957 and 1963, posters were created encouraging Soviet citizens to recognize their role in the conquering of space and to continue to work for it in the further. They bore slogans such as: "Soviet man - be proud, you opened the road to stars from Earth!"[45]; "Our triumph in space is the hymn to Soviet country!"[46]; "Conquer space!"[47] and "Glory to the Soviet people—the pioneer of space!"[48]. (See Appendix I for a visual of these propaganda efforts.) A handful of posters even praise the success of the October Revolution, presumably because it allowed for the creation such a successful nation, while others praise Lenin more than quarter century after his death.[49]

Even *Sputnik* itself was a form of propaganda; the satellite was intentionally polished to be as reflective as possible so that those on Earth could and people could listen for its radio signal as it passed overhead. Similarly, during the manned flights of the *Vostok* program, the Soviet Union had ready-made cultural ambassadors in their dedicated cosmonauts, including Gagarin and Tereshkova who traveled the world sharing their experiences in space and promoting the successes (and benefits) of a communist society, workforce, and government. Following the successful launches of *Vostok I and II*, Khrushchev was anxious to achieve more in the field of spaceflight. He "wanted more propaganda victories showing the superiority of the socialist system over the capitalist Americans"[50] and before even the launch of Gagarin's *Vostok I*, knew that such a program would not only

[45] Laura Stampler, "These Soviet Space-Race Propaganda Posters Retain Their Delusional Intensity 50 Years Later." Business Insider. April 26, 2012.
[46] Ibid.
[47] Ibid.
[48] Ibid.
[49] Ibid.
[50] Peter Bond, 19-20.

improve his political capital but also "[proclaim] to the world the superiority of Soviet technology, as well as the communist system in general."[51]

The success of the Soviet space program was an awesome accomplishment for those in the Soviet Union–a fact the elite propagandists sold to the public. There were no direct benefits to the Soviet people from the space program. However, as Donald Cox states, it did not trouble the Soviet people; they were satisfied to the success of the communist experiment:

Although the *Sputniks* and *Luniks* did not themselves provide better cars, refrigerators, color TV sets, and homes for the peasants and laborers of the Soviet Union and her satellite states, they did evoke added inspiration for the earthbound followers of the communist way of life helping to take their minds off shortages of consumer goods. The people were spurred on to work just a little harder for the glorious motherland and to outstrip the west in the less dramatic and more basic things of life, like coal and steel production.[52]

The cosmic tensions of the United States and the USSR (borne from the Space Race) had an additional and more threatening aspect on the Earth in the form of nuclear weapons. Certainly in the United States, and no doubt amongst the Soviet populations as well, the fear of nuclear attack was an ever present possibility with which both peoples lived. Throughout the late 1950s, 60s, and early 70s, the Space Race between the two superpowers was jointly tied to the arms race of the same era which saw the United States and the Soviet Union work to outspend, out research, and above all, out gun the other. Framed in the context of global nuclear war, the Space Race's importance was twofold: first, advancements in rocket technology for space travel was

[51]Peter Bond, 64.

[52] Donald W. Cox, *The Space Race: From Sputnik to Apollo… and Beyond* (Philadelphia: Clinton Company, 1962), 118.

intertwined with continuously escalating tensions between the two superpowers; second, as new milestones and horizons were attained, it further extended the potential staging grounds where the nuclear forces of either the US or USSR could be strategically placed. In both situations, the Space Race, and all that went into it, was a part of the much larger mutually assured destruction and détente policies which dominated the period. On both sides of the Iron Curtain, these space powers sought to achieve more than just a foothold in the cosmos, rather communist and democratic leaders strived to a create for their countries and peoples a foothold, or advantage in a new theatre of human existence.

Conclusion– A Winner Determined

Just before 23:00 on the evening of July 20, 1969, in Washington D.C, the *Eagle* landed on the lunar surface. Six hours later, Neil Armstrong made history by taking the first human steps on a celestial body and effectively winning the Space Race for the United States. Over the next three years, ten more humans set foot on the moon–none of whom were Soviet (or for that matter, any other nationality) as the United States is, to date, the only nation to have sent manned expeditions. While this paper sought to examine the use of the Space Race to project Soviet ideals and power, it is appropriate to state that given the numerous successes of the Soviet space program, they should be deemed the true winner of the Space Race. In the annals of history, their lack of a successful manned lunar program has earned them an devastating second place in the global race for the more superior space program, forever trailing the United States.

Six years after the first moon landing by *Apollo 11*, the Soviet Union and the United States ceremonially ended the Space Race during the *Apollo–Soyuz Test Project.* At approximately 15:17 EST (22:17 Moscow time), American astronaut Thomas Stafford and Cosmonaut Aleksey Leonov opened the door connecting the conjoined Soviet and

American spacecraft— a hybrid craft consisting of an Apollo capsule docked with a Soyuz capsule. The two exchanged flags and medallions, and in a moment of Cold War history, the two men, political enemies and scientific rivals, shook one another's hand.[53] For the next forty-seven hours, the two crafts remained secured to each other and paved the way for other Russian-American ventures such as the Mir-Shuttle Space Station and the International Space Station, the latter of which remains in operation today. The flight, not only succeeded in the scientific and technological objectives it set out to achieve, was also a political and diplomatic success. From initial planning to post recovery, the Soviet Union and American adversaries worked closely with each other to ensure the success of the mission for the men of both nationalities

Beyond the external motivation provided by the United States, the Soviet space program was largely encouraged by Khrushchev. He was able to recognize the benefits space could provide for the greater good of humanity and sought to oversee a space program that could constantly advance that greater good. More than that, Khrushchev was motivated by the power each Soviet advancement demonstrated; in his mind, communist ideals, workers, and political system had outpaced the West scientifically and technologically. With the launch of *Sputnik* in 1957, "…the Soviet leadership had [unwittingly] stung the pride of the richest and most technologically advanced nation in the world [the United States]…"[54] and in the ensuing race bested that nation in more milestones and achievement on behalf of the Soviet people, communism, and humanity as a whole.

[53] *Apollo-Soyuz*. (Washington: National Aeronautics and Space Administration, 1977), 8.
[54] Peter Bond, 25.

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