Competing With The Soviets

This thesis analyzes the effect of Russian culture and Soviet ideology on Soviet science. Russian culture is shown to inhibit the ability of Soviet scientists to achieve major breakthroughs or develop radically new theories. Culture does, however, enhance the Soviet ability to thoroughly exploit and innovatively apply proven scientific theories and technologies. The Soviet inability to achieve breakthroughs compels their reliance on Western technology. Their proficiency in exploiting proven technologies enables the Soviets to compete effectively with Western military systems. Thomas Kuhn's description of the scientific process is utilized as a framework in this analysis.

Examines the major institutional and behavioural aspects influencing scientific research in the USSR, focusing upon such problems as low morale, the lack of moral responsibility felt by the scientific community, and a central governmental resistance to new ideas and technologies.

Candid Science IV: Conversations with Famous Physicists contains 36 interviews with well-known physicists, including 20 Nobel laureates, Templeton Prize winners, Wolf Prize winners, and other luminaries. Physics has been one of the determining fields of science in the past 100 years, playing a conspicuous role not only in science but also in world politics and economics. These in-depth conversations provide a glimpse into the greatest achievements of physics during the past few decades, featuring stories of the discoveries, and showing the human drama behind them. The greatest physicists are brought into close human proximity as if readers were having a conversation with them. The interviewees span a wide range of scientists, from such early giants as Eugene Wigner and Mark Oliphant to members of the youngest generation such as the 2001 Nobel laureate Wolfgang Ketterle. The list includes famous personalities of our time, such as Steven Weinberg, Leon Lederman, Norman Ramsey, Edward Teller, John Wheeler, Mildred Dresselhaus, Maurice Goldhaber, Benoît Mandelbrot, John Polkinghorne, and Freeman Dyson. Contents: Eugene P WignerSteven WeinbergYuval Ne'emanJerome I FriedmanMartinus J G VeltmanGerard 't HooftLeon M LedermanValentine L TelegdiVal L FitchMaurice GoldhaberJohn N BahcallRudolf MößbauerArno A PenziasRobert W WilsonOwen ChamberlainMarcus L E OliphantNorman F RamseyDavid E PritchardWolfgang KetterleLaszlo TiszaEdward TellerJohn A WheelerFreeman J DysonJohn C PolkinghorneBenoit B MandelbrotKenneth G WilsonMildred S DresselhausCatherine BréchignacPhilip W AndersonZhores I AlferovDaniel C TsuiAntony HewishJocelyn Bell BurnellJoseph H TaylorRussell A HulseDavid Shoenberg Readership: General readers and physicists.

Keywords: Physics; Nobel Prize; History of Physics; Famous Physicists

Reviews: "I recommend this handy volume, admirably suited for complete reading or browsing, not only to historians of physics and of science but also to practicing scientists, especially beginning ones, as well as to students, who will surely benefit from these inspiring stories by some of physics' leading luminaries." The Chemical Educator "I heartily recommend this attractive volume, suitable for either complete reading or browsing, to historians of physics and of science, to practicing scientists, and to students, who will surely benefit from these inspiring stories by some of the leading luminaries of physics." Angewandte Chemie

Do Russia and the European Union have any substantial influence over the political trajectories of post-Soviet states? Shedding new light on the interplay between domestic and external drivers of regime change, Jakob Tolstrup analyzes the impact of Russia and the EU on the democratization and autocratization processes in Belarus, Moldova, and Ukraine.

No other research organization dominates the field of science in its country to the degree that the Soviet Academy of Sciences does. The coming to power of the Bolsheviks in 1917 presented Russian science with a new governmental attitude toward the place of science in national life. The Soviet Union's first five-year plan, the period of this study, was the crucial period for the Academy. During this time the Academy was transformed. Between 1927 and 1932 important decisions were reached by Soviet leaders concerning the organization, control, and planning of science; the role of science in the national economy, the position of the individual scientist, and the nature of scientific research itself. Originally published in 1967. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These editions preserve the original texts of these important books while presenting them in durable paperback and hardcover editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905.
**U.S.-Soviet cooperation in space.**

Battles over Public Funding for the "Other Sciences" at the National Science Foundation

Candid Science IV

Soviet Space Programs: Space science, space applications, military space programs, administration, resource burden, and master log of spaceflights

Roberg examines the relationship between the political leadership of the Soviet Union and Soviet science. Previously, this relationship was typically characterized as one of Communist Party dominance over the sciences. He argues that the relationship between scientists and the leadership is better viewed as bi-directional. The author concludes that scientists had an influence on policy-makers in the areas of nuclear policy and human rights although not to the same degree as the Party had on science and scientists.

When have you gone into an electronics store, picked up a desirable gadget, and found that it was labeled "Made in Russia"? Probably never. Russia, despite its epic intellectual achievements in music, literature, art, and pure science, is a negligible presence in world technology. Despite its current leaders' ambitions to create a knowledge economy, Russia is economically dependent on gas and oil. In Lonely Ideas, Loren Graham investigates Russia's long history of technological invention followed by failure to commercialize and implement. For three centuries, Graham shows, Russia has been adept at developing technical ideas but abysmal at benefiting from them. From the seventeenth-century arms industry through twentieth-century Nobel-awarded work in lasers, Russia has failed to sustain its technological inventiveness. Graham identifies a range of conditions that nurture technological innovation: a society that values inventiveness and practicality; an economic system that provides investment opportunities; a legal system that protects intellectual property; a political system that encourages innovation and success. Graham finds Russia lacking on all counts. He explains that Russia's failure to sustain technology, and its recurrent attempts to force modernization, reflect its political and social evolution and even its resistance to democratic principles. But Graham points to new connections between Western companies and Russian researchers, new research institutions, a national focus on nanotechnology, and the establishment of Skolkovo, "a new technology city." Today, he argues, Russia has the best chance in its history to break its pattern of technological failure.

Space holds a fascination for all of us. For many, it represents a final physical frontier, a place to explore the very essence of knowledge, to experiment with new technology, and to seek new levels of human adaptation and change. As the major spacefaring nation on our planet, the United States has taken special pride in our achievements in space. Discoveries in space science have already added immensely to our fund of knowledge. U.S. scientists have moved quickly to take advantage of new opportunities for learning, and the future of scientific work in space is virtually unlimited. Given the promise of space, an additional issue comes to the fore. How can the United States proceed in space in relation to the other principal spacefaring nation and superpower, the Soviet Union? What is to be gained or lost by working together in space? With regard to science in particular, can the two countries benefit from joint efforts? Can the two countries cooperate as well as compete? Since the beginning of the space age, the two countries have been examining these questions. This study was requested by Senators Matsunaga, Mathias, and Pell as a means to shed light on the subject at the time of the 10th anniversary of the major U.S.-Soviet cooperative endeavor, the Apollo-Soyuz Test Project. OTA is pleased to be able to provide this technical memorandum, outlining the principal issues of the debate, the history of cooperation, and the experience of France, another country involved in space cooperation with the U.S.S.R.

Additional OTA documents that may be of interest include Civilian Space Stations and the U.S. Future in Space, Salyut: Soviet Steps Toward Human Presence in Space, and International Cooperation and Competition in Civilian Space Activities. OTA studies in the areas of technology transfer are cited in the text.

The space race grew out of the Cold War between the United States and the Soviet Union, the most powerful nations after World War II. For a half-century, they competed for primacy in a global struggle. Space was a crucial arena for this rivalry. Before a watchful world, each side sought to demonstrate its superiority through impressive feats in rocketry and space flight. Meanwhile, secret satellites were developed to keep a war eye on the adversary. At the Cold War's end, the United States and Russia agreed to
build a space station and pursue other joint ventures in space. A contest that had begun in fear and enmity ended in partnership. Drawing on recently declassified material and featuring a wide variety of U.S. and Soviet artifacts, "Space race" examines the spectacular, publicly celebrated milestones of our first steps into space, as well as highly secret efforts to spy on adversaries from high above the Earth. In compelling photographs and terse, informed text, this book tells the story of time when the superpowers sought to make the heavens inseparable from the earth.

Soviet Robots in the Solar System provides a history of the Soviet robotic lunar and planetary exploration program from its inception, with the attempted launch of a lunar impactor on September 23, 1958, to the last launch in the Russian national scientific space program in the 20th Century, Mars 96, on November 16, 1996. This title makes a unique contribution to understanding the scientific and engineering accomplishments of the Soviet Union’s robotic space exploration enterprise from its infancy to its demise with the collapse of the Soviet Union. The authors provide a comprehensive account of Soviet robotic exploration of the Solar System for both popular space enthusiasts and professionals in the field. Technical details and science results are provided and put into an historical and political perspective in a single volume for the first time. The book is divided into two parts. Part I describes the key players and the key institutions that build and operate the hardware, the rockets that provide access to space, and the spacecraft that carry out the enterprise. Part II is about putting these pieces together to enable space flight and mission campaigns. Part II is written in chronological order beginning with the first launches to the Moon. Each chapter covers a particular period when specific mission campaigns were undertaken during celestially-determined launch windows. Each chapter begins with a short overview of the flight missions that occurred during the time period and the political and historical context for the flight mission campaigns, including what the Americans were doing at the time. The bulk of each chapter is devoted to the scientific and engineering details of that flight campaign. The spacecraft and payloads are examined with as much technical detail as is available today, the progress is described, and a synopsis of the scientific result is given.

Soviet Scientists and the State
Soviet Fiction Since Stalin
Recent Trends in Soviet Scientific and Technical Education
Oral Histories of the Cold War Generation
Soviet-American Competition and the National Images of Mass Publics
How Not to Network a Nation
Affect, Beliefs and International Affairs
The Uneasy History of the Soviet Internet
Mission Technologies and Discoveries
The Current Digest of the Soviet Press
The Scientific-Technological Revolution and Soviet Foreign Policy
Conversations with Famous Physicists
The Soviet Academy of Sciences and the Communist Party, 1927-1932

""The Scientific-Technological Revolution"" and Soviet Foreign Policy explains the effects of the worldwide scientific-technological revolution (STR) on Soviet foreign policy under ""the collective leadership"" of Leonid Brezhnev. Organized into five chapters, this book carefully examines Soviet views of the relationship of STR with political, economic, and military dimensions of ""peaceful coexistence"" and ""detente."" This text also evaluates the impact of scientific discoveries, technological innovations, foreign economic relations, strategic arms development, and instability in Third World countries. Some of the functions performed by Soviet perspectives on scientific-technical change and international politics are also reported. This political history of US and Soviet/Russian space policies offers an up-to-date analysis of their development and interaction from the start of the Space Age to the present. The author shows how the two countries' programmes intertwined with other broa

How the NSF became an important yet controversial patron for the social sciences, influencing debates over their scientific status and social relevance. In the early Cold War years, the U.S. government established the National Science Foundation (NSF), a civilian agency that soon became widely known for its dedication to supporting first-rate science. The agency's 1950 enabling legislation made no mention of the social sciences, although it included a vague reference to ""other sciences."" Nevertheless, as Mark Solovey shows in this book, the NSF also soon became a major--albeit controversial--source of public funding for them.

Soviet Scientists and the State examines the constraints place upon the natural scientist in the Soviet Union. The book brings into sharp relief the social and economic consequences arising
from the highly centralized character of Communist Party rule. Because conditions regarded as essential for effective scientific research conflict with the form of political control prevailing in the Soviet Union, the Soviet scientists' working environment provides a fruitful context for assessing the methods adopted by the Communist Party. This study is an excellent base from which to explore some important sources of change in contemporary Soviet politics. The book is also a survey of the present state of natural science in the U.S.S.R. Topics of concern range from the scientists' background and social characteristics, institutions, status, and leadership to their social relations and effectiveness. The relationship of the Communist Party to the scientists is examined in detail.

Achievements of United States and Soviet Science

Soviet Laws on Selecting Labor by Competitive Methods

Russian Culture and Soviet Science

A Bibliography

Soviet Robots in the Solar System

Managing International Rivalry on High Technology Frontiers

An Examination of the Social and Political Aspects of Science in the USSR

Soviet Union

The Social Context Of Soviet Science

Stalin and the Soviet Science Wars

Science, Politics and Literature

False Science

A deeply researched comparative history of the American, British, French, and Soviet efforts to control and exploit German science and technology amid fierce internal and external competition, Taking Nazi Technology is the first history to capture the whole picture of this crucial period at the dawn of the Cold War.

Competing with the Soviets

Science, Technology, and the State in Cold War America

JHU Press

How, despite thirty years of effort, Soviet attempts to build a national computer network were undone by socialists who seemed to behave like capitalists.

Between 1945 and 1953, while the Soviet Union confronted postwar reconstruction and Cold War crises, its unchallenged leader Joseph Stalin carved out time to study scientific disputes and dictate academic solutions. He spearheaded a discussion of "scientific" Marxist-Leninist philosophy, edited reports on genetics and physiology, adjudicated controversies about modern physics, and wrote essays on linguistics and political economy. Historians have been tempted to dismiss all this as the megalomaniacal ravings of a dying dictator. But in Stalin and the Soviet Science Wars, Ethan Pollock draws on thousands of previously unexplored archival documents to demonstrate that Stalin was in fact determined to show how scientific truth and Party doctrine reinforced one another. Socialism was supposed to be scientific, and science ideologically correct, and Stalin ostensibly embodied the perfect symbiosis between power and knowledge. Focusing on six major postwar debates in the Soviet scientific community, this elegantly written book shows that Stalin's forays into scholarship can be understood only within the context of international tensions, institutional conflicts, and the growing uncertainty about the proper relationship between scientific knowledge and Party-dictated truths. The nature of Stalin's interventions makes clear that more was at stake than high politics: these science wars were about asserting that the Party was rational and modern, and about codifying the Soviet worldview in a battle for the hearts and minds of people around the globe during the early Cold War. Ultimately, however, the effort to develop a scientific basis for Soviet ideology undermined the system's legitimacy.

Arranged chronologically and thematically, the book highlights how ideas about the appropriate relationships among science, scientists, and the state changed over time.

Social Science for What?

Soviet Scientists Remember

Hearing Before the Subcommittee on Europe and the Middle East of the Committee on Foreign Affairs, House of Representatives, Ninety-ninth Congress, Second Session, July 31, 1986

Russia Vs. the EU

A History Of U.S.-Soviet/Russian Competition and Cooperation In Space

Can Russia Compete?

To Examine U.S.-Soviet Science and Technology Exchanges

Taking Nazi Technology

The Struggle for Influence

Soviet space programs, 1976-80 (with supplementary data through 1983)

Lonely Ideas

The International Law of Outer Space

Competing with the Soviets

No one with an interest in Soviet writing of the last thirty years will want to ignore this book.

Maria Rogacheva's Soviet Scientists Remember gives voice to one of the most prominent and educated groups in the late USSR; scientists. Lifting the veil of secrecy that covered scientists during the Cold War, this book brings together six first-person accounts of residents of the formerly closed scientific town of Chernogolovka. In their interviews, scientists talk about growing up in Stalin's Russia and surviving the Great Patriotic War, their
decision to join the scientific intelligentsia, and the outstanding opportunities that were available to them in the heyday of the Cold War. They reflect on their daily lives in a privileged scientific community and their relationship with the Soviet state and the Communist Party. Soviet Scientists Remember sheds light on how ordinary people experienced the transformation of Soviet society after Stalin’s death, as well as its tumultuous transition to the post-Soviet era in the 1990s.

Allied Exploitation of German Science after the Second World War
Science Policy in the Soviet Union
The U.S.-U.S.S.R. Competition to Reach the Moon
United States-Soviet Scientific Exchanges
Soviet Science under Control
The Soviet Academy of Sciences
Science and Technology as an Instrument of Soviet Policy
Space Race
Science, Technology, and the State in Cold War America