

CENTURY ASSOCIATION NOBELISTS



INTRODUCTION

In 1906, five years after the Nobel Prize was first awarded, an American finally won one: President Theodore Roosevelt captured the Peace Prize for brokering the treaty that ended the Russo-Japanese War. Long before that, the hyperactive T.R. had become one of us; he joined the Century in 1884.

Remarkably, Roosevelt started what became an amazing run for Centurions. Twenty-eight others have also been named Nobel laureates, each chosen—as Swedish dynamite inventor Alfred Nobel dictated in his will—as one who "during the preceding year, shall have conferred the greatest benefit to mankind." Centurions have won in all six prize categories, most recently in 2000. We celebrate them all in this booklet as well as in an exhibition in the President's Room of the club (September 15–October 22, 2014).

Like the city of New York, and the club membership, these Centurions are a diverse lot. Some came from wealthy, established families and were educated at the best schools and universities. Others emigrated here and climbed their way to the top. Each possessed not only a brilliant, original mind, but also the grit and the drive to rise above others in highly competitive fields and often to effect great change. Some were single-minded, totally focused on their work; others managed to pursue avocations. They all found fellowship here. These uncommon minds shared common ground at 7 West 43d Street.

In 2003, New York City erected a monument honoring Alfred Nobel and all American Nobel winners in the little park, named for Roosevelt, that is adjacent to the American Museum of Natural History. At the time, Parks Commissioner Adrian Benepe figured that about sixty of the (now) 340 American Nobelists either "came from New York, or spent their educational or professional career in New York." It's stunning that twenty-nine of them have been Centurions—so far. As T.R. would have said, and presumably often did within the club's walls: Bully!

— *Judith H. Dobrzynski*

THEODORE ROOSEVELT

1858–1919

Nobel Peace Prize 1906

Centurion 1884–1919

"What has especially directed the attention of the friends of peace and of the whole civilized world to the United States is President Roosevelt's happy role in bringing to an end the bloody war recently waged between two of the world's great powers, Japan and Russia."

The man identified with "Speak softly and carry a big stick," Roosevelt was the first of the Century Association's twenty-nine Nobel laureates. He was also the first statesman to win the Peace Prize, for negotiating the settlement of Japanese and Russian claims to Manchuria and Korea, essentially a dispute over Russian access to the Pacific. It was the first time—and hardly the last—that the award was controversial. The Norwegian Left called him a "military mad" imperialist, for America's takeover of the Philippines, and Swedish newspapers said Alfred Nobel would spin in his grave. They claimed T.R. only got the prize because Norway was looking for friends after the dramatic dissolution of its union with Sweden in 1905; Norway and Sweden had been ruled by a single monarch when Nobel, a Swede, wrote his will in 1895.

— Richard E. Mooney

"When they call the roll in the Senate, the senators do not know whether to answer Present or Not Guilty."

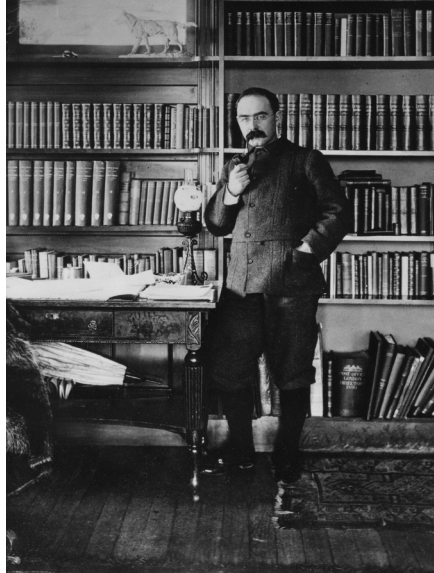
— Nobel Lecture, May 5, 1910



Rudyard Kipling, whose large body of work—short stories, poetry, and novels—chronicles the British colonial experience, was the first English author to receive the prize. *The Jungle Book* (1894) and *Just So Stories* (1902) are still read by and to the young. But his literary reputation declined as the sun began to set on the British Empire in the mid-twentieth century. Much of his writing—even the classic novel *Kim*—is seen today through the prism of colonialism's cruelty and exploitation.

Nonetheless, his oeuvre has become relevant again, in a time when U.S. soldiers are appreciated for their devoted service in far-flung outposts, quite apart from the merits or demerits of the policies that sent them there. The Duke of Wellington referred to the common soldier as the "scum of the earth," but Kipling celebrated him as the embodiment of virtue.

— Barnet Schecter



"Kipling strikes me personally as the most complete man of genius . . . that I have ever known."

— Henry James

RUDYARD KIPLING

1865–1936

Nobel Prize in Literature 1907

Centurion 1895–1936

" . . . in consideration of the power of observation, originality of imagination, virility of ideas and remarkable talent for narration which characterizes the creations of this world-famous author"



"Science has to be understood in its broadest sense, as a method for comprehending all observable reality, and not merely as an instrument for acquiring specialized knowledge."

— Quoted in A. A. Montapert, ed.,
Words to Live By (1986)

Alexis Carrel is said to have been so moved by the assassination of the president of France in 1894 with a knife that severed his abdominal veins that he set out as a surgeon to find new techniques for suturing blood vessels.

In the 1930s he and Charles Lindbergh collaborated on a device that kept organs functioning outside the body during surgery, facilitating transplants. The Lindberghs bought an island in the bay of Mont St-Michel to be near their friend's island there.

Born and educated in Lyons, France, Carrel came to America and the Rockefeller Institute for Medical Research in New York (now Rockefeller University) in 1904. He returned to France in 1939 and became director of the Carrel Foundation for the Study of Human Problems established by the Vichy government. His writings on spiritualism and eugenics, as well as his research under the Vichy regime, are still controversial.

— Larry E. Sullivan

ALEXIS CARREL

1873-1944

Nobel Prize in Physiology or Medicine 1912
Centurion 1912-1944

"... in recognition of his work on vascular suture and the transplantation of blood vessels and organs"

ELIHU ROOT

1845–1937

Nobel Peace Prize 1912 (awarded retrospectively in 1913)

Centurion 1886–1937

"... for having pursued the aim that conflicts between states must be resolved by arbitration"

In remarks prepared for his Nobel Lecture, scheduled for September 1914 but canceled after the outbreak of war, Elihu Root described his process for settling disputes: "Not by invoking an immediate millennium, but by the accumulated effects of a multitude of efforts . . . we must win our way along the road to better knowledge and kindness among the peoples of the earth."

Shuttling between his New York law firm and high office in Washington, he helped develop major institutions to administer international law and to resolve conflict. As secretary of war for Presidents McKinley and Roosevelt, he helped bring the Philippines, Cuba, and Panama under U.S. control. He later became Roosevelt's secretary of state, a U.S. Senator for one term, and the first president of the Carnegie Endowment for International Peace. After the war he helped establish the Permanent Court of International Justice at The Hague and the European counterpart of the Carnegie Endowment, all the while working as a negotiator and diplomat.

Root was president of the Century Association from 1918 to 1927.

— *Barnet Schecter*

"There is so much of good in human nature that men grow to like each other upon better acquaintance, and this points to another way in which we may strive to promote the peace of the world."

— Nobel Lecture, scheduled for September 8, 1914



WOODROW WILSON

1856–1924

Nobel Peace Prize 1919

Centurion 1904–1924

In recognition of his Fourteen Points peace program and for achieving inclusion of the Covenant of the League of Nations in the Treaty of Versailles

"The world must be made safe for democracy. Its peace must be planted upon the tested foundations of political liberty."

– War Message to Congress,
April 2, 1917

When a stroke kept him from accepting his prize in person, Woodrow Wilson sent a message expressing gratitude for the recognition of his "earnest efforts in the cause of peace [and] a very poignant humility before the vastness of the work still called for by this cause." Wilson had devoted his brilliant career as scholar, administrator, and statesman to domestic reform and international peace but was thwarted after the First World War by Senate refusal to ratify the Versailles Treaty, including his creation, the League of Nations.

As president of Princeton University (1902–1910) and governor of New Jersey (1911–1913), Wilson showed a zeal for reform that culminated in the major changes that were made during his White House years (1913–1921), particularly to the tariff, the banking system, and the regulation of monopolies and advertising. The reluctant war leader remained unbending in his vision of peace and a new world order.

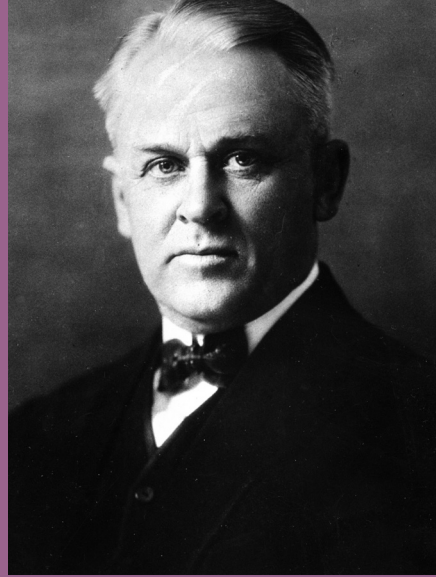
– *Barnet Schecter*



Robert Millikan made numerous momentous discoveries, chiefly in electricity, optics, and molecular physics. He won the physics prize primarily for his 1910 experiment replacing water with oil to measure the charge and value of a single electron. In his Nobel lecture he stated: "The most direct and unambiguous proof of the electron will probably be generally admitted to be found in . . . the oil-drop experiment."

Having earned his Ph.D. at Columbia University, he went to the University of Chicago in 1910 and stayed eleven years, teaching physics, preparing textbooks (he was a prolific author), and simplifying physics teaching. His lectures on the reconciliation of science and religion reflected his religious and philosophic nature. During the First World War he had a major role in developing anti-submarine and meteorological devices as vice chairman of the National Research Council. He later became chairman of the executive council of the California Institute of Technology.

— Larry E. Sullivan



"My idea of an educated person is one who can converse on one subject for more than two minutes."

— Robert A. Millikan

ROBERT A. MILLIKAN

1868–1953

Nobel Prize in Physics 1923
Centurion 1927–1933

"... for his work on the elementary charge of electricity and on the photoelectric effect"



Nicholas Murray Butler declared in his acceptance speech—by radio—"It will not do to confine to mere words our efforts for peace." In his address he outlined concrete steps to reduce military spending and expand international cooperation, steps suggested and made possible, he said, by the Kellogg-Briand Pact, which he had championed. Signed in Paris in 1928, it condemned war as an instrument of national policy. Butler was the founder of Teachers College and president of Columbia University for more than forty years. He also helped persuade Andrew Carnegie to establish the Carnegie Endowment for International Peace, serving as its president for twenty years.

An adviser to seven presidents and friend of foreign leaders, Butler embodied the "international mind" that he advocated and spoke about. His friend Theodore Roosevelt called him Nicholas "Miraculous" Butler.

He was first vice president of the Century Association from 1928 until 1947.

— *Barnet Schecter*

**"It [the Kellogg-Briand Pact]
is a program of peace for the
constructive statesmanship of
today and tomorrow."**

— Radio address,
December 12, 1931

NICHOLAS MURRAY BUTLER

1862–1947

Nobel Peace Prize 1931

Centurion 1890–1947

*Honoring his efforts to strengthen international law
and the International Court at The Hague*

THOMAS HUNT MORGAN

1866–1945

Nobel Prize in Physiology or Medicine 1933

Centurion 1911–1928

"... for his discoveries concerning the role played by the chromosome in heredity"

Thomas Hunt Morgan was born into the Kentucky planter elite, a great-grandson of the first millionaire west of the Alleghenies and of Francis Scott Key. He spent his most creative years in his famous "Fly Room" at Columbia University, researching mutations in the fruit fly (*Drosophila melanogaster*).

He demonstrated that genes are carried on chromosomes and are the mechanical basis of heredity. His discoveries formed the basis of the modern science of genetics. For that, he won the Nobel in Physiology or Medicine.

Morgan's influence in biology and genetics was widespread. His research elevated *Drosophila* to the role of model organism in contemporary genetics. Moving from Columbia, he joined the faculty of the California Institute of Technology, where he established its biology division. He also served as president of both the National Academy of Sciences and of the American Association for the Advancement of Science.

— John Noble Wilford

"Two years' work wasted . . .

I have been breeding those flies
for all that time and I've got
nothing out of it."

— Quoted in *Science*,
April 16, 1937



HAROLD C. UREY

1893–1981

Nobel Prize in Chemistry 1934

Centurion 1940–1951

"... for his discovery of heavy hydrogen"

"I looked for it [heavy hydrogen] because I thought it should exist. I didn't know it would have industrial applications or be the basis for the most powerful weapon ever known. . . . I thought maybe my discovery might have the practical value of, say, neon in neon signs."

— *New York Times* interview,
April 1961

Though a lifelong critic of military force, Harold Urey gained acclaim for a discovery in 1931 that opened the possibility of thermonuclear warfare. His research produced the heavy form (or isotope) of hydrogen called deuterium and won him the 1934 Nobel Prize in Chemistry.

Normal hydrogen has a nucleus of one positively charged proton. Urey believed a form of hydrogen must exist containing a neutron in its nucleus as well. In experiments at Columbia University, passing light through water, he and his colleagues detected slight differences between water made of ordinary hydrogen and heavier forms.

Heavy hydrogen is used as fuel in hydrogen bombs. Combined with oxygen as heavy water, it is essential to some nuclear reactors. Glenn Seaborg, another Nobel laureate, said Urey's wartime research in isotope separation had been vital in making the atomic bomb.

Following the war Urey taught at the University of Chicago and the University of California–San Diego.

— *John Noble Wilford*



Herbert Spencer Gasser, born in Wisconsin and trained at Johns Hopkins University, shared the Nobel Prize in 1944 with Joseph Erlanger, his collaborator and onetime fellow professor at Washington University in St. Louis. Their research in neurophysiology led to advances in knowledge of the mechanism of pain and of reflex action; their publication *Electrical Signs of Nervous Activity* (1937) remains a classic in the field.

From Washington University, Gasser moved to Cornell University Medical College in New York City as a professor of physiology and head of its medical department. He served as director of the Rockefeller Institute (now Rockefeller University) for eighteen years starting in 1935, succeeding Centurion Simon Flexner.

He died in New York City in 1963. His Century memorial remarked that he was a "lonely worker" who "had studied so deeply in every related field that there was no experiment in his neurological research that he was unable to perform alone."

— Ellen M. Iseman



"His inquiring mind explored the humanistic realm as well: indeed it was said of him that 'he did not recognize a distinction between humanist and scientist.'"

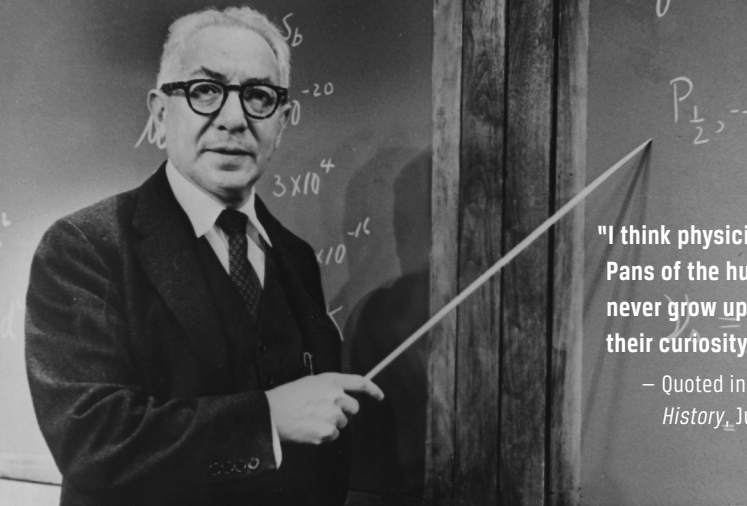
— Roger Burlingame,
memorial to Gasser in the
Century Yearbook (1964)

HERBERT SPENCER GASSER

1888–1963

Nobel Prize in Physiology or Medicine 1944 with Joseph Erlanger
Centurion 1937–1963

"... for their discoveries relating to the highly differentiated functions of single nerve fibres"



"I think physicists are the Peter Pans of the human race. They never grow up, and they keep their curiosity."

— Quoted in *Environmental History*, July 2007

I. I. Rabi won the physics prize for a method of measuring the magnetic properties of atoms, molecules, and atomic nuclei, thus attaining the precision necessary for the atomic clock, the laser, and magnetic resonance imaging (MRI). He conducted his Nobel research at Columbia University, where he also identified a method for calculating the spin of the core of the atom, which led to measurements for missile and satellite guidance systems.

Rabi had strong intellectual influence on generations of physicists and moral influence over controlling the power of the atom.

Raised in an immigrant family in New York, he published his first scientific paper, on the design of a radio condenser, as an elementary schoolboy. Rabi called it "a miracle how a sickly child from a Lower East Side poverty-stricken family moved in one generation to where I did. Had we stayed in Europe, I probably would have become a tailor."

— John Noble Wilford

ISIDOR ISAAC RABI

1898-1988

Nobel Prize in Physics 1944

Centurion 1974-1988

"... for his resonance method for recording the magnetic properties of atomic nuclei"

JOHN R. MOTT

1865–1955

Nobel Peace Prize 1946 with Emily Greene Balch
Centurion 1919–1935

Honored for creating "worldwide organizations which have united millions of young people in work for the Christian ideals of peace and tolerance between nations"

The Christian ecumenical movement in America was at its height in 1946 when its great lay leader, John R. Mott, and Emily Greene Balch, an American Quaker activist, won the Nobel Peace Prize.

Inspired by the newly formed YMCA and YWCA in the late nineteenth century, ecumenism was defined by good health, positive values, and Christian ideals beyond church denominations. At colleges, YMCA/YWCA chapters expanded these virtues into an international movement for world peace through missionary and volunteer work. John Mott helped make it happen.

He grew up thinking he would inherit his father's lumber business, but envisioned a higher calling when, as a student at Cornell University, an evangelist at a YMCA conference inspired him to embrace missionary work. For sixty years, he traveled the world as the voice of world peace, never wavering in his belief in humanity's potential for goodness.

— David W. Mallison

"Of front line importance among the most contagious and enduring traits of the leaders of nations and of all callings is that of spotless character."

— Nobel Lecture,
December 13, 1946



JOHN H. NORTHROP

1891–1987

Nobel Prize in Chemistry 1946 with Wendell Meredith Stanley and James B. Sumner
Centurion 1938–1987

"... for their preparation of enzymes and virus proteins in a pure form"

"It seems to me that these results [from his decades of enzyme research] are perhaps the most convincing evidence that the enzymatic activity is actually a property of the protein molecule."

— Nobel Lecture,
December 12, 1946

Born into a family of accomplishment and wealth, John Northrop grew up in Yonkers, was schooled locally, and received his Ph.D. in biochemistry from Columbia University. His scientific career began during World War I with the U.S. Army Chemical Warfare Service. He was associated with the Rockefeller Institute labs in Princeton (which became Rockefeller University in New York) and later the University of California.

Northrop's investigations of the human body's reactions to war gases, and internal protections from it, focused at first on acetone, which at that time was being explored with urgency. By 1929 at Rockefeller, he had isolated the gastric enzyme pepsin, hitherto known as a mysterious chemical agent.

For his path-breaking work, Northrop was awarded the Nobel in Chemistry in 1946, shared with Rockefeller colleague Wendell Meredith Stanley and Cornell University's James B. Sumner. A Centurion for nearly fifty years, he was proposed for membership by Francis Peyton Rous, later a Nobel winner himself.

— David W. Mallison





"The pleasure of having apparatus of one's own design functioning down to the last screw hole is, I am certain, much greater than opening a crate."

— Kusch on designing his own instruments

Brilliant as a child—an immigrant from Germany—Polykarp Kusch received his Ph.D. in molecular spectroscopy from the University of Illinois in 1936. At that time, with the ominous situation in Europe creating pressure for research in the emerging field of radar, Columbia University hired him to teach and research magnetic resonance in collaboration with fellow Centurion and Nobel laureate I. I. Rabi. At Columbia, Bell Labs, and Westinghouse, he isolated with Willis E. Lamb "the perfect moment" of atomic particles' magnetic interaction with each other, opening the door to quantum physics and to a shared Nobel for these two extraordinary physicists.

Championed for his inspirational teaching, Kusch became dean of faculties at Columbia in 1969 and provost in 1970—and briefly a Centurion. In later years he was increasingly concerned with problems of education, especially educating the young to understand a civilization strongly affected by the knowledge of science.

— David W. Mallison

POLYKARP KUSCH

1911-1993

Nobel Prize in Physics 1955 with Willis E. Lamb
Centurion 1971-1972

"... for his precision determination of the magnetic moment of the electron"

ANDRÉ F. COURNAND

1895–1988

Nobel Prize in Physiology or Medicine 1956 with Werner Forssmann and

Dickinson W. Richards

Centurion 1963–1988

"... for their discoveries concerning heart catheterization and pathological changes in the circulatory system"

"As progress is made, more results will pour in. Let us, then, beware of the danger of seeking security for our concepts in the accumulation of facts. As the poet has said: 'Knowledge is proud that it has learned so much, Wisdom is humble that it knows no more.'"

— Nobel Lecture,
December 11, 1956

André Cournand, born in Paris, graduated from the Sorbonne in 1914. He served in the French army throughout World War I, ultimately as a battalion surgeon, and was awarded the Croix de Guerre with three bronze stars. In 1930, he completed his medical training in Paris, then began his research on pulmonary and circulatory physiology under the guidance of Dickinson Richards at Bellevue Hospital in New York. "For us in 1943, the cardiac catheter was only the key in the lock," Cournand recalled. "To guide our hand in turning this key, we had all the knowledge accumulated through the years by physiologists in their studies of animals. . . . Basically our difficulties were then, as they are still, of measuring flow and pressure and volume" of blood in the heart.

After a quarter-century of collaboration, Cournand and Richards received the Nobel Prize in 1956 for their discoveries.

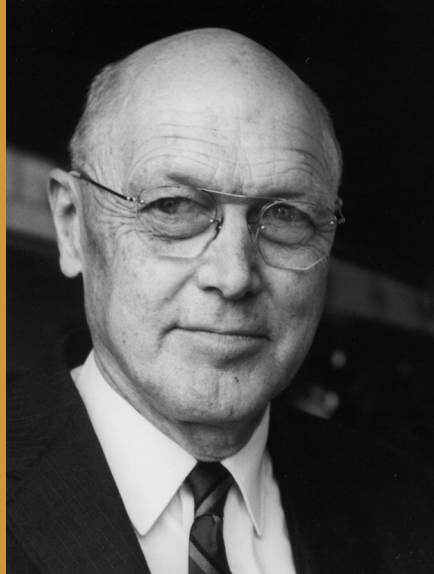
— *Barnet Schecter*



Dickinson Richards graduated from Yale University in 1917 and served as an artillery officer in France during World War I. After the war he completed his medical training at Columbia University and joined the staff of Presbyterian Hospital, where he started his research on pulmonary and circulatory physiology.

In 1931 he began more than a quarter-century of collaboration at New York's Bellevue Hospital with André F. Cournand, with whom he shared the 1956 prize. After nearly a decade of work they developed a new technique for catheterization of the heart, which enabled them to do pioneering studies of traumatic shock (especially relevant during World War II), congenital and chronic heart diseases, heart failure and cardiac drug treatment, as well as pulmonary diseases. With a humility and collaborative spirit characteristic of both men, Richards insisted that their findings had been "for the most part preliminary, revealing new problems more often than solving old ones," and stimulating "excellent new work" by scientists across the globe.

— *Barnet Schecter*



"Man's survival will depend on . . . the ability of the leaders and their followers to change character, into more merciful beings."

— Correspondence with Cournand shortly before his death

DICKINSON W. RICHARDS

1895–1973

Nobel Prize in Physiology or Medicine 1956 with André F. Cournand and Werner Forssmann
Centurion 1934–1973

" . . . for their discoveries concerning heart catheterization and pathological changes in the circulatory system"

JOSHUA LEDERBERG

1925–2008

Nobel Prize in Physiology or Medicine 1958

Centurion 1989–1990

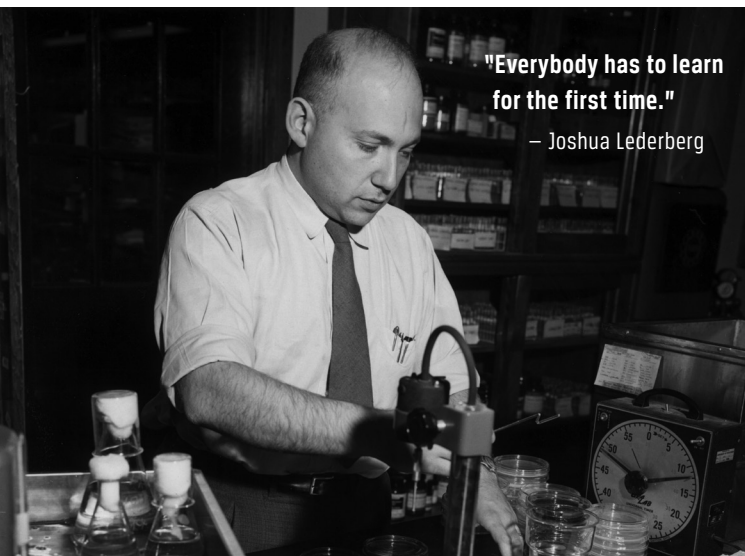
"... for his discoveries concerning genetic recombination and the organization of the genetic material of bacteria"

Joshua Lederberg was only 33, teaching genetics at the University of Wisconsin, when he won his Nobel Prize. His lifelong research focused on genetic structure and function in microorganisms, and his discovery that bacteria can mate and exchange genes paved the way for important advances in genetic engineering. He also conducted research in artificial intelligence and participated in NASA programs seeking life on Mars; there's a huge crater on Mars measuring more than 50 miles wide named in his honor. He was also a consultant on health-related matters for government and the international community, with long service on the Advisory Health Research Council of the World Health Organization.

Lederberg received his Ph.D. from Yale University, then taught at Wisconsin and Stanford University before becoming president of Rockefeller University (1978–1990).

In 2005, three years before his death, he added yet another dimension to his inquisitive life: The focus of my research has shifted, he said, to "What is the fastest rate possible for the growth of a bacterial cell (and why?)."

– Larry E. Sullivan



**"Everybody has to learn
for the first time."**

– Joshua Lederberg

Going from cosmic rays to dusty excavations of archaeology may seem a stretch. But Willard Libby made that leap in 1949, and it won him the 1960 Nobel Prize in Chemistry.

At the University of Chicago, Libby developed a method for using radioactive carbon-14, produced by cosmic rays, to determine ages in the distant past. It revolutionized the practices of archaeology, geology, and other sciences. The older the objects of formerly living material—bones or wood fragments in tombs, for example—the less radioactivity. A piece of wood 5,600 years old would be one-half as radioactive as a present-day living organism.

Nominating Libby for the prize, one scientist wrote: "Seldom has a discovery in chemistry had such an impact on the thinking in so many fields of human endeavor."

Among early findings was that the Ice Age in North America ended 10,000 years ago, not the previously estimated 25,000 years.

— John Noble Wilford



"We hope that this honor you have done us will bring the time of further realization of these benefits closer and will help all mankind to live better and be happier through the atom and isotopes."

— Nobel Banquet Speech,
December 10, 1960

WILLARD F. LIBBY

1908–1980

Nobel Prize in Chemistry 1960
Centurion 1975–1980

"... for his method to use carbon-14 for age determination in archaeology, geology, geophysics, and other branches of science"

JAMES D. WATSON

1928-

Nobel Prize in Physiology or Medicine 1962 with Francis Crick and Maurice Wilkins
Centurion since 1991

"... for their discoveries concerning the molecular structure of nucleic acids and its significance for information transfer in living material"

"I think the reason people are dealing with science less well now than 50 years ago is that it has become so complicated."

— *New York Times* interview October 25, 2005

James Watson's boyhood interest in bird-watching matured into serious desire to learn genetics. A Quiz Kid on the radio in the 1940s, he earned a Ph.D. in zoology from Indiana University, became an accomplished biologist in the 1950s, and shared a Nobel in medicine for the historic discovery of the structure of DNA in 1953. He was 25.

Watson spent two decades at Harvard University, followed by years transforming the Cold Spring Harbor Laboratory on Long Island into a world-class research center, and finally took on the Human Genome Project at the National Institutes of Health.

His best-seller, *The Double Helix* (1968), tells the DNA story. His autobiography, *Avoid Boring People* (2007), illuminates many accomplishments and his impatience with lesser lights.

Still active at the Cold Spring Lab, Watson (at right, below) remains a dedicated bird-watcher.

— *Richard E. Mooney*



Francis Peyton Rous earned a B.A. in 1899 and a medical degree in 1904, both at Johns Hopkins University in his native Baltimore. Working on cancer research at the Rockefeller Institute in New York (now Rockefeller University), Rous determined in 1911 that malignant tumors in fowl could be caused and transmitted by a virus, a discovery that changed the course of oncological research. At the time, however, the importance of this finding was not so apparent, and he did not receive Nobel recognition until 1966.

Rous also helped devise a system for preserving blood for emergency use that was used in the world's first blood bank during World War I. He was editor of the Rockefeller Institute's *Journal of Experimental Medicine* and continued to write throughout his career, conducting experiments until the age of 90. His work was cut short, ironically, by his death from a malignant tumor.

– Ellen M. Iseman



Among his influences, Rous credited the Swedish naturalist Linnaeus, who "opened a wide door for me into natural history, including that of the human body, and finally led me to observe intently, and study by experiment, the unnatural phenomena of the disease called cancer. With good reason am I here today as apprenticed to Linnaeus in youth."

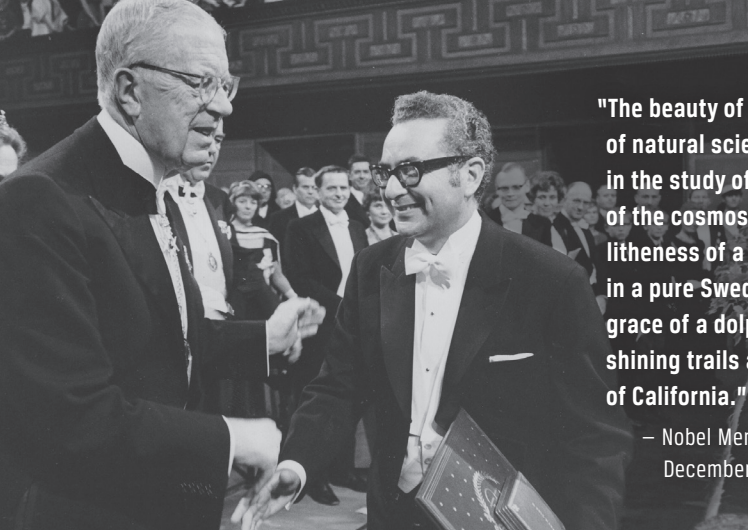
– Nobel Banquet Speech,
December 10, 1966

FRANCIS PEYTON ROUS

1879–1970

Nobel Prize in Physiology or Medicine 1966 with Charles Brenton Huggins
Centurion 1921–1970

"... for his discovery of tumor-inducing viruses"



"The beauty of the basic laws of natural science, as revealed in the study of particles and of the cosmos, is allied to the litheness of a merganser diving in a pure Swedish lake, or the grace of a dolphin leaving shining trails at night in the Gulf of California."

– Nobel Memorial Lecture,
December 10, 1969

The Manhattan-born son of immigrant parents, Murray Gell-Mann entered Yale University at age 15, exited the Massachusetts Institute of Technology seven years later with a Ph.D., and at 23 published the first of many distinguished papers. His Nobel citation said, "the methods you introduced are among the most powerful tools for further research in particle physics."

Biographer George Johnson called him "brilliant, complicated, always fascinating and often exasperating" in *Strange Beauty: Murray Gell-Mann and the Revolution in Twentieth Century Physics* (1999). Gell-Mann (at right, above) has his say in *The Quark and the Jaguar* (1994). His other interests include historical linguistics, archaeology, natural history, and the psychology of creative thinking. He lives in New Mexico, where he co-founded and teaches at the Santa Fe Institute for theoretical research. He is on the board of the Wildlife Conservation Society and the faculty of the California Institute of Technology. He once concluded: "Being awarded a Nobel increases the number of stories made up about you."

– Richard E. Mooney

MURRAY GELL-MANN

1929–

Nobel Prize in Physics 1969
Centurion since 1984

"... for his contributions and discoveries concerning the classification of elementary particles and their interactions"

GERALD M. EDELMAN

1919–2014

Nobel Prize in Physiology or Medicine 1972 with Rodney R. Porter
Centurion 1978–2014

"... for their discoveries concerning the chemical structure of antibodies"

Once described as having the brain of an empiricist and the heart of a romantic, Gerald Edelman addressed big questions: "I'm excited by dark and romantic and open issues of science." He began the work for which he won the prize as a graduate student at Rockefeller University in the late 1950s. His research on the molecular structure of antibodies showed how the body makes selections in response to various influences. This ground-breaking work opened up the enormous field of research in immunology. (The 1972 prize also went to Rodney R. Porter, working separately on similar issues.)

Having addressed the biggest issue in immunology, Edelman switched focus in the 1970s to the human brain and the philosophy of the mind. He authored three books about the mind, all geared toward a general audience.

A gifted conversationalist with a quick wit, *The New Yorker* said he was "as much Henny Youngman as Einstein."

— David G. Offensend

"Consciousness may be seen as the haughty and restless second cousin of morphology (brain structure). Memory is its mistress, perception its somewhat abused wife, logic its housekeeper, and language its poorly paid secretary."

— *The Remembered Present*
(1990)





"America's goal is the building of a structure of peace, a peace in which all nations have a stake and therefore to which all nations have a commitment. We are seeking a stable world, not as an end in itself but as a bridge to the realization of man's noble aspirations of tranquility and community."

– Acceptance Speech (in absentia), December 10, 1973

Born in Fürth, Bavaria, Henry Kissinger moved to the United States in 1938 as threats against Jews were intensifying in Germany. Following service in the U.S. Army, he studied political science at Harvard University, earning his Ph.D. in 1954.

As national security advisor to President Richard Nixon and secretary of state in the Nixon and Ford administrations, Kissinger exercised great influence on U.S. foreign policy between 1969 and 1977, pioneering détente with the Soviet Union, charting the course for relations with China, and helping to effect the Paris Peace Accords of 1973 that established a ceasefire in Vietnam. His Nobel award would become controversial, however, as the hostilities in Vietnam continued until 1975.

Out of government office, Kissinger has provided foreign policy advice to political and business leaders, informally and through his consulting firm, Kissinger Associates, Inc.

– Ellen M. Iseman

HENRY A. KISSINGER

1923–

Nobel Peace Prize 1973 with Le Duc Tho (who declined the award on political grounds)
Centurion since 1960

Honored for arranging a ceasefire in Vietnam after nearly four years of negotiations

WASSILY LEONTIEF

1906–1999

Nobel Memorial Prize in Economic Sciences 1973

Centurion 1980–1999

"... for the development of the input-output method and for its application to important economic problems"

A giant in the history of economic science, Wassily Leontief pioneered the use of quantitative data in the study of economics and the practical application of such data with input-output tables—the process by which inputs from one industry produce outputs for consumption or inputs for another industry. During World War II they helped identify German industrial targets for the U.S. Army Eighth Air Force. They were a predecessor of Google's PageRank system.

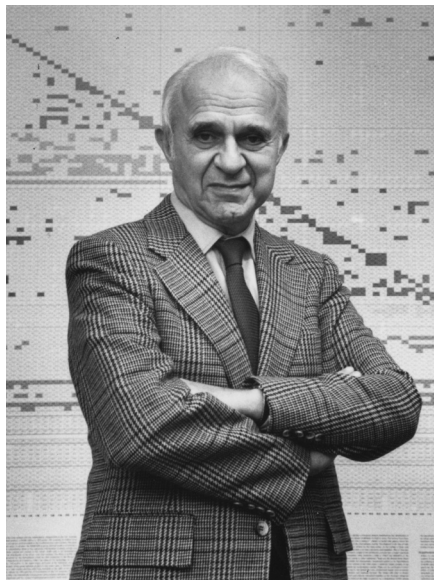
Born in St. Petersburg, Russia, young Leontief was arrested several times for anti-Communist activities and left the country at age 19. He spent most of his life in America at Harvard University. His doctoral students included Nobel laureates Robert Solow (also a Centurion) and Paul Samuelson.

In the words of Arthur Schlesinger, Jr., one of his proposers for membership, he was "a man of the sprightliest mind and the widest cultivation." A lover of fine wines and ballet, he had a special passion for landing a beautiful brook trout.

— David G. Offensend

In chiding his fellow economists for being too theoretical and detached from observed facts he said that his uneasiness "is caused not by the irrelevance of the practical problems to which present day economists address their efforts, but rather by the palpable *inadequacy* of the scientific means with which they try to solve them."

— Presidential Address,
American Economic
Association, 1970



SAUL BELLOW

1915–2005

Nobel Prize in Literature 1976

Centurion 1966–1977

"... for the human understanding and subtle analysis of contemporary culture that are combined in his work"

"A novel is balanced between a few true impressions and the multitude of false ones that make up most of what we call life. It tells us that for every human being there is a diversity of existences, that the single existence is itself an illusion in part, that these many existences signify something, tend to something, fulfill something; it promises us meaning, harmony and even justice."

— Nobel Lecture,
December 12, 1976

Saul Bellow's poor Russian-Jewish family immigrated to Chicago from Quebec when he was young. He attended the University of Chicago and graduated from Northwestern University.

"I was a very contrary undergraduate," he once said. "It was my habit to register for a course and do most of my reading in another field. So that when I should have been grinding away at *Money and Banking* I was reading the novels of Joseph Conrad. I have never had reason to regret this."

His fourteen novels capture the angst of the twentieth century and won three Pulitzer Prizes and three National Book Awards. He won his Nobel at age 56, roughly twenty years younger than the average literature winner.

Here was a great reader, a wry conversationalist, and a fastidious dresser, attributes that seem to complement his care with thought and insight, especially as a lifelong observer of America's social changes and political underpinnings.

— David W. Mallison



George Stigler's contributions to economics were broad and varied, but his groundbreaking work gave birth to two new areas of research on "the economics of regulation" and "the economics of information." Both were the subject of his numerous important books and articles. His essay *The Economics of Information* (1961) begins: "One should hardly have to tell academicians that information is a valuable resource: knowledge is power. And yet it occupies a slum dwelling in the town of economics." Stigler was a core member of the economics colossus at the University of Chicago, where he received his Ph.D. and spent most of his career.

A music lover, he made his own hi-fi system. He laced his writing with a sense of humor and confided to his Century proposer, Frederick Mills, that he had invented "several untenable bidding systems" in bridge.

— David G. Offensend



In describing the challenges of economists doing research on entirely new ideas rather than evolving existing ones, Stigler compares the dilemma with purchasing an automobile: "Their problem is comparable to that of the automobile buyer: to find a reliable vehicle. Indeed, they usually end up by buying a used, and therefore tested, idea."

— Nobel Memorial Lecture,
December 8, 1982

GEORGE J. STIGLER

1911–1991

Nobel Memorial Prize in Economic Sciences 1982
Centurion 1959–1974

"... for his seminal studies of industrial structures, functioning of markets and causes and effects of public regulation"



A native Brooklynite, Robert Solow entered Harvard University in 1940 at age 16 and earned his Ph.D. there, having been research assistant to Wassily Leontief (another Centurion and Nobel laureate). Doctorate in hand, Solow joined the Massachusetts Institute of Technology faculty and never left. He and Nobel laureate Paul Samuelson were colleagues there for forty years.

In the 1960s he was senior staff economist for the President's Council of Economic Advisers and winner of the American Economic Association's John Bates Clark Award for the best economist under 40. He was later the association's president.

Solow won the 1987 Nobel Memorial Prize in Economic Sciences for pioneering work on growth theory, which represented a quantum leap forward in understanding what drives economic growth.

His scholarship came with a sharp wit: "Everything reminds Milton Friedman of the money supply. Everything reminds me of sex, but I try to keep it out of my papers."

— David G. Offensend

"There is no evidence that God ever intended the United States of America to have a higher per capita income than the rest of the world for eternity."

— Book review in *The New Republic*, September 10, 2008

ROBERT SOLOW

1924–

Nobel Memorial Prize in Economic Sciences 1987
Centurion 2008–2010

"... for his contributions to the theory of economic growth"

TONI MORRISON

1931-

Nobel Prize in Literature 1993

Centurion 1989-1995

"... who in novels characterized by visionary force and poetic import, gives life to an essential aspect of American reality"

Toni Morrison started out as Chloe Ardelia Wofford, born into a working class family in Ohio. At 12 she became a Catholic; her baptismal name, Anthony, morphed into "Toni" and stayed with her.

Educated at Howard and Cornell Universities, she briefly taught at Texas Southern University before returning to Howard. In 1964, having married, divorced, and with two young children to support, she took a job as a textbook editor in Syracuse, New York. She proved especially adept at this work and soon moved to Random House in New York.

A prolific and highly acclaimed novelist, Morrison is respected for her capacity to limn imaginative characters, create realistic dialogue, and develop complex themes. Her best-known works include *Sula* (1973), *Song of Solomon* (1977), *Beloved* (1987), and *The Bluest Eye* (1994).

Morrison, the first African-American woman elected to the Century, has taught at Yale and Bard Colleges and established a residency at Oberlin College.

– Ellen M. Iseman

"At some point in life the world's beauty becomes enough. You don't need to photograph, paint or even remember it. It is enough."

– *Tar Baby* (1981)



ERIC KANDEL

1929-

Nobel Prize in Physiology or Medicine 2000 with Arvid Carlsson and Paul Greengard
Centurion since 2007

"... for their discoveries concerning signal transduction in the nervous system"

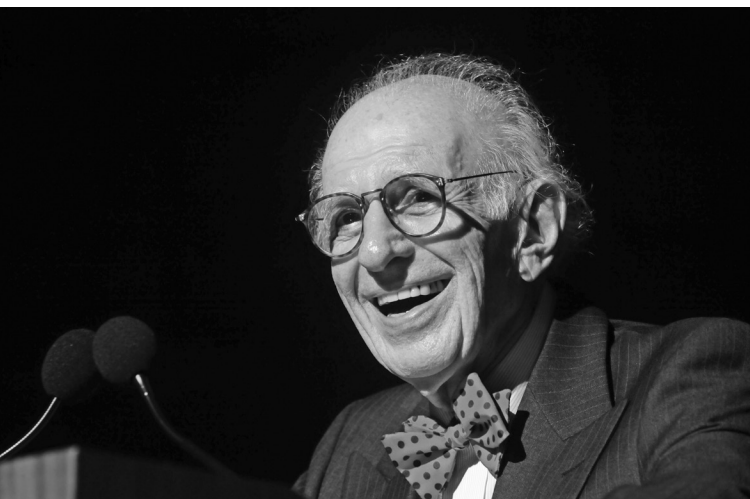
"Science seeks to understand complex processes by reducing them to their essential actions and studying the interplay of those actions."

– *The Age of Insight* (2012)

Eric Kandel chose the sea slug for his research on memory because it has only 20,000 nerve cells compared to 100 billion in human brains. At the presentation of his prize, the Nobel spokesman said that "you and I will remember this ceremony" because of discoveries by Professor Kandel and the two others who shared the prize in 2000.

Born in Vienna in 1929, transplanted to Brooklyn after the Anschluss in 1938, the young Eric went to Erasmus Hall High School, where he says he was interested in "history, writing and girls." Thence to majoring in history at Harvard College until he became fascinated by psychoanalysis, which led to the New York University Medical School and his career in neuroscience. He is now a University Professor in the College of Physicians and Surgeons at Columbia University. His book *In Search of Memory: The Emergence of a New Science of Mind* (2006) explains his amazing life.

– Richard E. Mooney



CONTRIBUTORS

Century Nobelists was organized by the Committee on the Archives of the Century Association and co-sponsored by the Century Association Archives Foundation. Members of the subcommittee on the project researched and wrote the essays on the club's twenty-nine Nobel laureates.

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CAPTIONS

2: Theodore Roosevelt with Russian and Japanese envoys aboard the *Mayflower* during the negotiations concluding the Russo-Japanese War, 1905

6: Woodrow Wilson and his wife Edith en route to his second presidential inauguration, 1917

13: John R. Mott, decorated as general-secretary of the National War Work Council, 1914

20: James D. Watson (right) with fellow researcher Francis Crick in Cambridge, 1953

22: Murray Gell-Mann with Gustaf VI Adolf of Sweden at Nobel Prize ceremony, 1969

24: Henry Kissinger at Paris Peace Talks, 1970

30: Eric Kandel at his eightieth birthday party, 2009

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