Rockefeller Philanthropy and Modern Biomedicine

INTERNATIONAL INITIATIVES FROM WORLD WAR I TO THE COLD WAR

EDITED BY WILLIAM H. SCHNEIDER
ROCKEFELLER PHILANTHROPY AND MODERN BIOMEDICINE
Philanthropic and Nonprofit Studies

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The idea for this book was inspired by a larger project directed by Giuliana Gemelli on “The Role of American Foundations in Europe.” In discussions with her and Jean-François Picard, we decided to organize a comparative study of the development of biomedicine outside the United States in the first part of the twentieth century, with a focus on the role played by the Rockefeller Foundation.

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W.H.S.
ROCKEFELLER
PHILANTHROPY
AND
MODERN BIOMEDICINE
In November 1956 the American Public Health Association presented its special Lasker Award at a ceremony during the annual meeting. The New York Times carried a feature article about the recipient, who was described as follows:

a physician who hasn’t treated a patient in thirty-five years, a medical educator who has never taught a class, a research man who has done no research. Yet, according to the citation accompanying the award, he accomplished more for medical research, medical education and the practice of medicine than if he had been personally outstanding in all three.1

The recipient was Alan Gregg.

The answer to the paradox—how someone with little or no firsthand experience could exercise such influence on medical research and practice—lies in Gregg’s long career with the Rockefeller Foundation. Gregg began working for the foundation in 1919 as a program officer in Brazil before his appointment first as an associate director and then director of the Medical Education and Medical Sciences divisions of the Rockefeller Foundation. The Lasker Award recognized Gregg’s central role at the institution that had the greatest influence on public health and medical research in the world during its nearly fifty years of existence.

Support for biomedical research by the Rockefeller Foundation and other philanthropies during the first half of the twentieth century occurred at a time of remarkable and unprecedented discoveries in biology and their applications in medicine. In examining the relationship between the two, it is important to remember that there were many other influences besides philanthropic giving on developments in modern biomedicine during this era. The range of circumstances could be as specific as the life and ability of individual researchers, and as broad as the effects of worldwide events such as war and political upheaval. Moreover, researchers and practitioners drew on different local resources and customs, which supported or constrained
them in their work. This was the result of a certain “democratization” of scientific research that could be conducted in the best-equipped institutes of London, Berlin, and Paris, as well as more modest laboratories in tropical colonies and poorer countries.2

One powerful feature of modern scientific medicine tended to even out these differences: the rapid spread of new ideas and discoveries, which left no country or individual in isolation. The mechanisms most frequently credited for making new ideas available were the publications and meetings of scientific and medical organizations, and occasional visits and exchange of personnel. Finally, in most countries governments eventually drew up programs and provided resources to modernize medicine, but with a few notable exceptions, the support before 1940 paled in comparison to that given during and after the Second World War.

Perhaps the most important nongovernment source of support for the development of biomedicine in the first half of the twentieth century were the new American philanthropic foundations that made the improvement of health a primary goal of their organizations. These included such foundations as the Josiah Macy Jr., Commonwealth, Milbank Memorial, and Rosenwald funds, but none more so than Gregg’s Rockefeller Foundation.3 During the period from 1920 to 1940 this support was noteworthy in several ways. First and foremost was funding provided on an unprecedented scale and at a time when institutional and government resources were not only constrained but often reduced in the aftermath of the First World War. Another significant feature of philanthropic support was that because foundations were private, relatively few individuals were responsible for making decisions. Normally there were only a handful of trustees and foundation officers, who could quickly change their goals and tactics or stay the course by taking the long-term perspective, if they were so convinced of the value of their endeavors. Finally, because of their large resources and confidence in their goals, the trustees and officers of a few of the largest American foundations, such as Rockefeller, Commonwealth, Milbank, and later Ford, became convinced they could change the practice of science and medicine on a national or even a worldwide scale. They were assisted in this by other international agencies with which these foundations cooperated, particularly the League of Nations Health Organization and the Red Cross, in attempts to set international standards and goals for public health and medicine.4

In recent years scholars have paid increasing attention to the important role that philanthropies have played, and historians have been in the forefront.5 In some ways this has served to dispel the myth that has overemphasized the resources and influence of foundations, such as was reflected in the characterization of Gregg at the time of his Lasker Award. David Ham-
mack points out that Rockefeller’s donation totaling perhaps a billion dollars over forty years represented “less than one per cent of the national income during a single year of the 1920s.” On the other hand, this historical scholarship is in agreement that the Rockefeller and a few other foundations did have significant influence on certain key activities. For example, Hammack notes, “A small group of foundations, led by the Rockefeller Foundation, played a central role in adding research to the agenda of American universities, in creating the twentieth-century American research university, and in focusing university research on practical matters of broad public interest.”

Scholarship to date has focused primarily on the Rockefeller Foundation and its considerable influence on American medicine. Recently, however, researchers from Latin America and China have used the foundation’s records to study the history of medicine and public health in countries whose own records are incomplete. Surprisingly, aside from some studies of Britain and Germany and a recent collection of essays focusing on public health, relatively little attention has been devoted to European medicine. The result has been to overlook much of the activity of the Rockefeller Foundation divisions of Medical Education and Medical Sciences as well as a good part of the International Health Board’s programs in European countries. These included surveys, fellowships, and expenditure of funds for research projects, in addition to the better-known support for the construction of new medical and public health facilities.

This volume examines developments from the perspective of research in the countries where the Rockefeller Foundation and others attempted to reform and establish the scientific practice of medicine. The contributions show, above all, an appreciation of the setting where philanthropic interests attempted reform amidst the complex play of local and wider influences. By studying a variety of places, primarily in Europe, from the interwar period through the 1970s, it is possible to see similarities and differences in several local settings. The overall result is to offer a better understanding of the consequences of local as well as broader influences on developments in biomedicine, and the role of U.S. foundations in the process.

The volume begins with background information about the Medical Education and Medical Sciences divisions from inside the Rockefeller Foundation. These divisions expended large amounts of funds outside the United States, yet scholars have paid far more attention to the work of other divisions such as the International Health Board and Natural Sciences. The medical divisions’ directors, Richard Pearce and Alan Gregg, set themselves such a large task that there is little wonder they did not achieve their goals, yet in some areas their influence went far beyond their expectations. The remainder of the contributions in the volume are case studies of the Rockefeller and
other foundations’ involvement in medical research in various countries outside the United States, primarily in Europe. J. B. Lyons’ examination of Rockefeller work in Ireland shows the limits of American understanding of the local situation, as well as the Irish misunderstanding of what could be expected from the foundation. His findings help correct both the overestimation and underappreciation of American support. Gábor Palló looks at the biomedical research of Albert Szent-Györgyi at the University of Szeged in Hungary, whom the Rockefeller Foundation helped support. This was a departure from the foundation’s usual practice of funding well-developed research centers, and its spectacular success contradicted the oft-repeated guideline that the foundation was supposed to have followed of “making the peaks higher.”

Jean-François Picard and William Schneider look at the modernization of French medical research in the twentieth century. The French resisted the foundation’s strong efforts to support medical reform before the Second World War, but when change came during the postwar era the American influence was considerable, albeit indirect. Margaret Trott’s essay on U.S. medical philanthropy in the new Soviet Union offers an example of how Rockefeller and other American philanthropies attempted to operate under the unusual circumstances of a large country in the midst of revolutionary upheaval. Qiusha Ma’s essay, likewise, provides a useful study of Rockefeller efforts in an even more unusual setting. Her contribution is a reminder that the earliest and most extensive Rockefeller medical program of all was not in Europe or America but in China. It also shows the limits of the foundation’s understanding of the local situation as well as its inability to predict many of the consequences of its plans and programs.

Giuliana Gemelli’s history of the Naples Stazione Zoologica in Italy bridges the period from before to after the Second World War and shows the increasing importance of the Italian government as well as foundations in Italian biomedical research. Essays by Paul Weindling and Doris Zallen look at the post-1945 period in Germany and Britain. Weindling focuses on the Rockefeller Foundation at a time during the Cold War when anti-Nazi and anti-Communist goals sometimes clashed. Zallen examines a new British philanthropy, the Nuffield Foundation, modeled on the Rockefeller Foundation, which supported medical genetics research at the University of Liverpool. It is a telling example of the more specific yet potentially decisive role of foundations in biomedical research during the last part of the twentieth century.

Perhaps the broadest lesson to be learned from these complex changes in biomedical research after the 1920s is the limited ability of the funding agencies to control or predict the influence of their grants. This is not surprising, since their programs often involved whole countries and populations, plus researchers who usually had other sources of funding. Thank-
fully, our understanding has progressed beyond an earlier simplistic notion that the Rockefeller Foundation, as some of its officers and trustees thought at the peak of its influence in the 1920s, could single-handedly introduce “scientific medicine” to the world. On the other hand, scholars of the history of medicine in European countries cannot ignore the role of Rockefeller and other philanthropies in influencing what happened. This is most especially the case in Great Britain, where the foundation provided the largest amount of funding in Europe, following its strategy of “making the peaks higher.”

The history of twentieth-century British medicine points out, however, that it is difficult to move a mountain. The large amount of medical research and other sources of support in Britain tended to limit the impact of Rockefeller efforts there. One surprising theme in the studies in this volume is that the greatest influence of the foundation often followed a principle that was the exact reverse of its often-cited “higher peaks” strategy. The most extreme example occurred in the Soviet Union, as shown by Trott’s examination of the impact of the Rockefeller Foundation emergency aid for medical literature. It was a nuisance for Richard Pearce’s Medical Education division to administer such small sums, but the program provided extensive numbers of publications (literally “tons,” according to Trott), which had an immediate impact on Russian medical research. Likewise, from the perspective of recipient countries such as Hungary, Italy, and even to a certain extent France, the more substantial Rockefeller funding, although still relatively small from the foundation’s perspective, had a magnified effect on medical research for the simple reason that there was so little other funding available.

NOTES

3. Not all of these have received the same amount of attention by scholars. For Rockefeller, see below. For others, see A. McGehee Harvey and Susan L. Abrams, For the Welfare of Mankind: The Commonwealth Fund and American Medicine (Baltimore: Johns Hopkins University Press, 1986); and Clyde V. Kiser, Milbank Memorial Fund: Its Leaders and Its Work, 1905–1974 (New York: Milbank Memorial Fund, 1975).

4. See, for example, Paul Weindling, ed., International Health Organisations and Movements, 1918–1939 (Cambridge: Cambridge University Press, 1995).


6. Hammack, 45.


History has not been kind to Richard Pearce and Alan Gregg. From 1919 to 1951 they directed the Medical Education and Medical Sciences divisions of the Rockefeller Foundation, overseeing the expenditure of tens of millions of dollars to doctors, professors, universities, and institutes engaged in medical training and research. As a result, they were considered among the most influential men in the world of medical research and education, and in the process they set the model for the current relationship between medical centers and external funding sources. Today, however, there is precious little that recognizes their importance.

Of the two, Gregg, who was associate director under Pearce and then succeeded him at his death in 1930, has left something more of a mark. This is not surprising given the esteem he enjoyed by the end of his career. For example, shortly after his retirement in 1956, Gregg received a special award from the American Public Health Association, and Time magazine declared, “No man alive has had a wider or deeper influence on both the practice and teaching of medicine than Dr. Gregg.” The following year a review of a book of Gregg’s lectures suggested, “He probably exercised as much influence on medical education as William Osler and Abraham Flexner before him.” Despite this praise, except for a remarkable biography of Gregg that was published ten years after his death by Wilder Penfield, whose neurological institute in Montreal was created with Gregg’s support, only in the last dozen years have historians found Gregg worthy of even a few scholarly articles. These have focused narrowly on Gregg’s impact on psychiatry in America and on his role as supporter of specific researchers, such as Alfred Kinsey or the historian of medicine Henry Sigerist. About
Pearce, who created the Rockefeller Foundation’s Division of Medical Education (DME) in 1920 and directed it until 1930, there is virtually nothing in recent historical record.2

One reason for the neglect of Pearce and Gregg’s work is that during their own lifetimes both men were overshadowed by Abraham Flexner, the larger-than-life author of a 1910 report on North American medical schools and the driving force behind the General Education Board (GEB) and its support of medical education reform in America. Moreover, in death as in life, the recent revival of interest in Flexner has overshadowed the attention paid of late to Gregg.3 In addition, the work of the Medical Education and Medical Sciences divisions has been pushed even further into the background by recent interest in Warren Weaver, whose direction of Rockefeller’s Natural Sciences division has been judged by historians as having had far-reaching consequences in shaping biomedicine in the last half of the twentieth century.4

This essay is an attempt to show in fuller detail the historical record of Pearce and Gregg and the divisions they directed at the Rockefeller Foundation. It also provides an overview of the role they played in the development of biomedical research in Europe. Although that influence must ultimately be judged for each individual country, it is helpful to examine the evolution of the foundation’s goals and strategies, plus the attempt to implement them, as background in understanding what happened in a particular country as well as the precedent the foundation set for later philanthropic and government support of scientific medical research.

CREATION AND EARLY WORK
OF THE DIVISION OF MEDICAL EDUCATION

Like most of the programs of the Rockefeller philanthropies, the DME was the product of reaction and empiricism rather than a new, full-blown grand strategy. As Gregg described it in hindsight, “[The] division of medical education in the foundation was at bottom an experimental procedure.”5 It was also the result of a number of long-term developments that created the Rockefeller philanthropies, with the improvement of medicine both in the U.S. and abroad as its major focus, and the reform of medical education as one of the most important mechanisms to achieve its goal.

The Rockefeller interest in reforming medicine outside the United States began well before 1919—in fact, even before the creation of the Rockefeller Foundation in 1913. For example, beginning in 1905 John D. Rockefeller Sr. began examining opportunities for philanthropy in the Far East that resulted in the foundation’s purchase of the Union Medical College in Peking from the London Missionary Society in 1915, which became the focus of its subsequent efforts in China.6 Meanwhile, the establishment of the Rocke-
feller Sanitary Commission (RSC) in 1909 signaled the first large-scale public health program of the Rockefeller charities. Although its activities began in the southern United States, plans were quickly drawn up to apply the lessons learned in its hookworm program to foreign lands. One of the first actions of the Rockefeller Foundation after its creation was to replace the Sanitary Commission with an International Health Commission (IHC).7

The most direct precursor to the DME was the General Education Board and its work to encourage the practice of scientific medicine by reforming medical education. The roots of this program lay in Flexner’s study and report in 1910 on medical education in the United States and Canada, which called for the integration of clinical and research teaching by full-time faculty into a university and hospital environment.8 Although his study had been done for the Carnegie Foundation for the Advancement of Teaching, Flexner was named to the Rockefeller Foundation’s board in 1913 and the GEB in 1914. The latter had been created in 1902 for the purpose of aiding secondary and college education in the South, but Flexner was not shy about using the GEB’s resources to implement the recommendations of his report. In fact, just before he joined the GEB, Flexner recommended (and the board voted) $1.5 million to the Johns Hopkins Medical School to establish full-time positions. The following year grants were given to Yale ($500,000) and Washington University in St. Louis ($750,000) for similar reforms.

The first Rockefeller grant for medical education was in 1916, as the result of a request from the GEB to help fund reforms at the University of Chicago. One million dollars was awarded, and that same year the foundation also voted funds for the construction of the new School of Hygiene and Public Health at Johns Hopkins.9 In addition to more resources, the foundation also brought a potentially broader geographical scope to the support of medical education than did the GEB, whose charter was limited by law to operations in the United States.

The specific inspiration for supporting medical education on a wider international scale came in December 1915, when Wickliffe Rose, head of the IHC, contacted Richard Pearce, a professor of pathology at the University of Pennsylvania, to do a survey of public health in Brazil as part of extending the hookworm program there. Pearce was a graduate of Harvard Medical School (M.D. 1897) who interned at Boston City Hospital and then studied at the University of Leipzig. In 1900 he was hired by Simon Flexner, Abraham’s brother, to teach pathology at the University of Pennsylvania, and in 1903 he took a job in Albany, only to return to Pennsylvania in 1908 where he became a professor and chair of the Department of Pathology. He was thus greatly influenced by Simon Flexner, who left the Pathology Department at Pennsylvania in 1901 to direct the new Rockefeller Institute for Medical Research (RIMR). Flexner continued to be an
influence on Pearce as a Rockefeller trustee from 1913 to 1930 and was likely the one to have recommended Pearce to Rose for the Brazil survey.10

Pearce agreed to Rose’s request to visit Brazil and conducted the investigation from January to May 1916.11 As part of correspondence shortly after Pearce returned, Rose asked him to comment on a memorandum titled “A Plan for Increasing Productivity in Medical Science,” which called for expanding as well as improving medical education. Based on his experience recruiting manpower for his IHC, Rose argued that “one of the most important next moves in the carrying out of our program in foreign countries should be in the direction of increasing the number of effective men in medical sciences in this country.”12 Rose’s crucial point was not, as Abraham Flexner’s 1910 report had pointed out, that there were too many schools of inferior quality, but that there were too few opportunities for training “qualified personnel in scientific medicine.”

Pearce agreed in his reply, adding a further practical suggestion, based on his prior experience as a university medical researcher: support for “the isolated investigator.” By this Pearce called Rose’s attention to researchers on a fixed budget who were especially limited because contingencies constantly arise which the fixed budget cannot cover, for example, an unusual turn of an investigation—a new lead—which demands money for expensive apparatus or large number of animals or other equipment; or it may be the necessity of a specially trained assistant to carry on certain lines of work not usually covered by the department. . . . Under such circumstances the university investigator with a fixed budget is helpless for there is no one to whom he can turn except, rarely, some individual who will “put up” the money for a short period.13

Nothing came immediately from this exchange of correspondence, but in September 1916 Pearce was officially appointed “an adviser of the International Health Commission in the area of medical education,” while retaining his position in pathology at the University of Pennsylvania.14

With this new title, Pearce made a second South American survey in 1917, but the U.S. entry into the First World War interrupted any further work. Rose’s concern about adequate medical personnel was not forgotten, however, as indicated by the minutes of a trustees meeting on 17 December 1917, where Rockefeller Foundation president George Vincent echoed Rose’s ideas in a report on “Medical Education on a Worldwide Scale.” Notably missing was any mention of Europe, and this was with good reason. Historically, Europe had been an importer of students from and an exporter of medical professors and ideas to the United States.15 At the same time, Vincent had no idea of how dramatically the First World War would change that situation.
This was not from lack of experience with the effects of the war. The Rockefeller Foundation became involved with war relief efforts well before the U.S. entered the conflict. Beginning with relief projects in Belgium, the foundation supported help for a typhus outbreak in Serbia in 1915 and eventually a large-scale project to combat tuberculosis in France. Despite this experience, by war’s end the Rockefeller officers still had not recognized any need for the reform of medical education in Europe. In January 1919 Rose asked Pearce to resume his survey work in Latin America, starting in Brazil, then Paraguay, Chile, and possibly Bolivia. In a letter to Edwin R. Embree, secretary of the Rockefeller Foundation, announcing the appointment, Rose pointed out that Pearce’s responsibilities went beyond those of the International Health Board (IHB, the new name of the old International Health Commission). “In view of the fact that Dr. Pearce’s work lies, in the main, outside the field of public health and in that of medical education,” Rose wrote, “it would seem to be more in keeping with our general policy if the Foundation make the necessary provision for the journey which is about to be undertaken.” Rose went further and sought to take advantage of the situation to formalize his earlier ideas about the need for underlying reform of medical education in order to achieve his broader goals in medicine and public health. At a meeting in February 1919, the trustees authorized a plan “for the development of an expanded program in medical education.”

By May of 1919 concerns with the need for European postwar reconstruction were added to the plans for expanded work in medical education and resulted in the creation of the new division. At its May 20 meeting, the IHB approved a five-page “Policy in Europe,” which pointed out the need for “the establishment of medical education on a modern basis,” and “development of more effective agencies for public health, including schools of hygiene.” The plan specifically addressed England, Belgium, and France, including endorsement for building a new hospital in Brussels to provide teaching facilities for the medical school, as well as support for medical reforms and a school of hygiene and public health in London. By the time of their December 1919 meeting, the Rockefeller trustees voted to establish a Division of Medical Education, with Pearce as general director.

The minutes of the December trustees meeting reveal that the proposed work of the new division was ill defined, being determined both geographically and substantively by process of elimination. For example, the proposal noted that medical education in the United States was “covered by the program of the General Education Board,” and work in China was “carried out by the China Medical Board.” This left the rest of the world to the new DME as its field of action. Its responsibilities were also left vague, with the most important endeavors of its six-point program being: “1. Surveys of conditions in medical education in various countries outside the
United States . . . [and] 2. Recommendations to [the] Foundation concerning aid in medical development in these countries.”

From the very beginning, the agenda of Pearce’s new division was set by others. For example, a few days after his appointment, he left for England with Rose for a visit to postwar Europe. That trip produced two of the most important programs of the DME in subsequent years: large-scale support for reform of established medical schools in western Europe and emergency aid for libraries and equipment in central and eastern Europe. The large projects were announced after a series of meetings in London and Brussels, where the foundation agreed to help expand the School of Hygiene and Tropical Medicine in London, support full-time university faculty in a unit at the University College London medical school, and help fund a new hospital for the Brussels medical faculty.18 These grants ran to several million dollars and gave a very visible indication of the possibilities of Rockefeller aid. They also dramatically raised expectations of what Pearce’s new DME could provide Europeans, although they were never equaled in subsequent years.

The emergency aid program grew out of Rose’s decision to tour central and eastern Europe following the London and Brussels negotiations. It was a harrowing trip through parts of Europe that were still undergoing the tumult following the collapse of the German, Russian, and Austro-Hungarian empires. Over vast areas, Rose wrote in a memorandum shortly after his return in March 1920, populations were suffering from four or five years of food deprivation and threat of disease. Relief was “hopelessly inadequate,” Rose reported, and the prevalence of communicable disease in the East was seen as a threat by health officials as far away as Denmark and England.19

Rose’s trip helps to explain his motivation for the major programs in public health launched by the IHB in eastern Europe, beginning with a series of survey visits by Selskar M. Gunn, who was working on the Rockefeller Foundation’s anti-tuberculosis program based in Paris.20 Rose’s trip also prompted a four-month visit by Embree to Europe to investigate what else the foundation could do. If Rose’s observations and reactions had been in broad sweeping terms, Embree’s were very narrow and confined to things medical. For example, Embree wrote in July 1920, “Providing research journals is a small but definite task.” Some medical apparatus would also be of immediate assistance, but beyond that, only major initiatives could help the medical schools of central and eastern Europe, which Embree found to be in “great deterioration, if not complete break-down.” In October 1920 the foundation approved $100,000 for the DME as emergency funds for the “rehabilitation of the universities of Central Europe.” Initially, this was to include Innsbruck, Graz, Vienna, Budapest, and Prague,21 but funds
continued to be provided in subsequent years to these and other universi-
ties in an expanded “emergency medical program” which the DME super-
vised.

Thus, within a year the range of options was established for Pearce’s di-
vision. On the one extreme, he oversaw the expenditure of enormous sums
for three large projects that had quickly been decided in western Europe,
while on the other, he had a trifling sum to remedy the hopeless situation in
central and eastern Europe. His obvious next task was to develop a strategy
somewhere in between that would be more appropriate and effective for de-
veloping the Rockefeller notion of scientific medical education in Europe.

From the start there was a recurring pattern of lost opportunities dur-
ing Pearce’s direction of the DME. This was in part the result of timing and
circumstances, but it also reflected the personalities involved. Rose had
helped create Pearce’s division, but Pearce was not the equal of Rose or
Abraham Flexner in either demeanor or experience. Hence, he could not
shape his division by force of personality. Despite the fact that Pearce had
worked for Flexner’s brother Simon at the University of Pennsylvania,
Abraham Flexner made it clear he had little respect for Pearce’s ability.22
Even Alan Gregg, his assistant for eight years and his admirer, admitted that
the first time he met Pearce, “I put a note in my diary that Pearce’s exterior
was about as inviting as a cemetery wall.”23 As a newcomer to the founda-
tion, Pearce might have found his shyness and modesty to have been less of
a handicap if his task had been more focused and manageable. But the geo-
graphical scope of the DME was so broad and the potential projects so var-
ied, circumstances made it necessary to sharpen the focus of the division if
it was to succeed. Timing worked against this, however, as developments
such as the projects in London and Brussels or emergency aid in central Eu-
rope repeatedly forced Pearce to react to circumstances rather than to initi-
ate a well-thought-out plan.

This pattern became evident as soon as Pearce returned to New York
from his trip to Europe with Rose early in 1920. Rather than getting to
work on his strategy for Europe, he was immediately distracted by develop-
ments in two other parts of the world. One was the very large donation of
an additional $50 million to the Rockefeller Foundation by Rockefeller Sr.
in December 1919, with the suggestion, “If your Board should see fit to use
any part of this new gift in promoting medical education in Canada, such
action would meet with my very cordial approval.”24 Needless to say, the
board accommodated its benefactor’s wishes and immediately set aside $5
million for that purpose. The task was turned over to Pearce’s new division,
and by the end of 1920 commitments had been worked out (subject to
matching contributions) of $1 million each for medical schools at McGill
University and the University of Toronto, plus a half-million dollars each
to Manitoba and Dalhousie and lesser amounts to the universities of Montreal and Alberta.

Just as he was completing this phase of work in Canada, Pearce was distracted even further away from DME affairs when in September 1920 he was sent to Peking to direct the foundation’s recently established Peking Union Medical College.\(^{25}\) He remained there through December 1921. In Pearce’s absence, Vincent and Embree began implementation of emergency aid to central and eastern Europe and continued work on the large projects in Canada, London, and Brussels. C. C. Wells joined the New York staff in September 1920 to assist with the other work of the DME’s newly established fellowship program.

When he returned to New York at the end of 1921, Pearce was quick to let President Vincent know that he hoped to get back to the work of the DME in Europe. In a memorandum dated 30 December 1921, Pearce requested help with staffing, arguing that he had been in the field for eighteen of the first twenty-four months that his division had been in existence. Because he anticipated considerable travel in the future, Pearce requested that “an associate, or assistant, or colleague by some other name, be appointed to the Division of Medical Education.”\(^{26}\) Vincent approved of the suggestion, and in a relatively short time Pearce chose Gregg for the job.

Gregg claimed that no one was more surprised than he to be offered the position, although in many respects his credentials were promising.\(^{27}\) He grew up in Colorado, where his father, a Congregationalist minister, had relocated from the east. In 1909 Gregg followed the tradition of his three older brothers as well as his father by attending Harvard, and he continued on to medical school there, graduating in 1916. Gregg was an intern at Massachusetts General Hospital before he volunteered for the British army medical corps, with which he served in France from October 1917 through February 1919. Upon his discharge Gregg decided to go into public health and went to see Rose, who promptly gave him several choices of overseas assignments. Gregg picked Brazil, primarily because it was the area he knew least about, and in March 1919 he began a three-year assignment working with Louis Hackett on the extension of Rose’s hookworm project to the South American country.

Pearce was familiar with Gregg’s work, since he had visited Brazil several times during Gregg’s service there with the IHB. He offered Gregg the DME position at the end of his Brazilian term of service in 1922.\(^{28}\) Gregg was quite surprised, because Rose had recently asked him to do another term of IHB service in Spain. So Gregg returned to the U.S. in April 1922 to contemplate his future. During the course of the next few months his life changed dramatically. In addition to Gregg’s being offered the new post with the Rockefeller Foundation, his father died on May 7, and he rekindled an acquaintance with Eleanor Barrows, an old friend from Colorado,
whom he married on 2 July. Pearce’s offer to Gregg was made official at the
trustees meeting of 31 July 1922, and Gregg accepted. Gregg, therefore,
went from his honeymoon to a position in the New York office that he con-
sidered quite a large amount of responsibility for his young age (thirty-two)
and lack of experience.

Gregg’s anxiety was justified, since he had to represent the whole divi-
sion while Pearce was away, and Pearce planned to spend quite a bit of time
in the field. In fact, at the end of September 1922 Pearce left New York to
spend the next seven months in Europe. Just before his departure, Pearce
made arrangements to hire another staff member for the DME: William S.
Carter, former dean of the University of Texas medical school. Carter was
already in the foundation’s employ, having taken a leave of absence from
Texas to help reorganize the medical school at the University of the Philip-
pines with Rockefeller support. Pearce’s goal was to make Carter a second
associate director who could specialize in the Far East region and help cover
the New York office when neither Pearce nor Gregg was there. Despite
these plans for help in New York, Carter remained based in the Philippines
and traveled to China, Thailand, and Japan on DME business.

This left Gregg at the New York office with less than two months for
Pearce to train him. Pearce’s sensitivity and care in the process left a lasting
impression on Gregg, although things did not start off well. For example,
in the beginning Pearce’s secretary sorted the mail according to urgency,
with items requiring immediate attention going to Pearce, and the rest
going first to Gregg. Gregg soon went to Pearce and indicated that the pro-
cedure unfortunately resulted in his “not getting to know the business.” He
therefore proposed a one-day delay for most incoming mail, so that it could
first go to Gregg, who would read it and “sketch in a written note attached
to it how I would answer the letter without you, so to speak, being in-
volved.” Despite the inconvenience, not to mention the presumptiveness
of his new associate, Pearce agreed to the arrangement immediately, after
which Gregg “burrowed into the actual responsibilities of the division
pretty rapidly.”

Notwithstanding Pearce’s plans for showing his junior colleague the
ropes, perhaps the most important training of all for Gregg was an inadver-
tent result of Pearce’s departure in the fall of 1922. As Gregg recalled it,

When he [Pearce] departed from the New York office he appointed me as the
representative of the division with the perfectly clear understanding that I
wasn’t going to go off on any private, personal and individual tangent. What
I was to do was to hold the machinery together, attend the meetings and pro
forma hold things in a state of suspense for him. Well, that was a useful expe-
rience too because I went in with my much senior colleagues to trustees’
meetings and saw glimpses of what was really going on from the inside.
One of the main purposes of Pearce’s trip was to conduct surveys of medical education in European countries; another was to make arrangements to share the Paris office of the IHB as a base for the DME in Europe. This was in part because of the increased work involved with the unexpected emergency aid program but also because Pearce was already thinking of shifting Gregg to Paris. In December 1922 Pearce met with Gunn, head of the Paris office, who agreed to the arrangement.34

In the meantime, Pearce added another staff member, Henry O. Eversole, to the Paris office specifically to help with the emergency aid program and occasionally to do field surveys as Pearce might require. Gregg did not get along well with Eversole but found a way to work with him, which, Gregg later recalled, “sharpened my wits and sophistication.”35 In June 1926, when poor health prompted Eversole’s resignation, Daniel P. O’Brien was hired as Gregg’s assistant. O’Brien had been a Yale undergraduate, with a medical degree from Johns Hopkins. He spent a year in Paris at the Cochin Hospital, spoke French and German, and had recently served as physician with the Byrd expedition to the Arctic. The final associate added to the Paris office was Robert A. Lambert, a pathologist who joined the foundation in 1928 after teaching first at Yale, then overseas in Brazil and Puerto Rico.36

These personnel decisions indicate that Pearce had extensive plans for the DME, but distractions and interruptions beyond his control continued to delay his putting these plans into practice. The emergency aid program is a case in point (see Table 2.1). Created after the war as a temporary means of providing help to medical schools in central and eastern Europe, the pro-

<table>
<thead>
<tr>
<th>Year</th>
<th>Emergency Aid</th>
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<tbody>
<tr>
<td>1920</td>
<td>3,274</td>
</tr>
<tr>
<td>1921</td>
<td>43,813</td>
</tr>
<tr>
<td>1922</td>
<td>125,394*</td>
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<td>1923</td>
<td>60,316</td>
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<td>1927</td>
<td>86,191</td>
</tr>
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<td>1928</td>
<td>114,098</td>
</tr>
</tbody>
</table>

*Includes temporary aid for Germany

gram to supply of journals and laboratory equipment soon took on the trappings of a more permanent status, prompting additional personnel, time, and money.

Pearce was always anxious to end the emergency aid and institute a program of “developmental aid,” which would be more focused and have a fixed term. Yet, even after the nominal end of emergency aid in 1926, the DME continued to have a program to supply journals to institutions and laboratory equipment to fellows after they returned from work in other countries.37

**MEDICAL SURVEYS**

The emergency aid program, along with the fellowship program described below, distracted Pearce from developing and implementing the DME’s larger goals. In a sense the country surveys also meant a delay, but the Rockefeller philanthropies had usually done careful studies of potential projects ever since Frederick Gates came to assist Rockefeller Sr. in responding to requests for funds before the turn of the century. Moreover, Abraham Flexner established a new standard and demonstrated the importance of medical school surveys in his 1910 study. At the same time, the experience of Rose’s international health program abroad had shown the need to understand local conditions in a country before attempting new projects. In fact, both Pearce and Gregg participated in that process in Latin America. What was unusual in the case of the DME was the prospect of systematically studying and providing assistance to a whole continent as complex as Europe.

Pearce and Gregg were familiar with England and Germany from personal experience, but they were ignorant of medical matters in the rest of Europe, especially the new conditions in postwar countries, many of which had not existed before 1919. Thus, there was no question about the need for more information about all of Europe, let alone more formal surveys for specific projects. Table 2.2 indicates the speed and extent of the work of Pearce’s new division in gathering the information it needed to formulate a plan for its work.

By 1925 most of the major countries of Europe had been surveyed, albeit in a variety of ways. Initially, the Rockefeller Foundation’s Information Service collected published materials plus responses to questionnaires sent to the medical schools in each country. These ranged from lists of names and departments to full-scale self-studies. Authorship for most of the early surveys was attributed to the foundation staff member who visited the country, although these visits typically lasted for only a few days. Their observations were included in the form of diary excerpts (usually from Pearce) or more formal summaries and even recommendations in the case of other assistants or consultants hired by the division such as Eduard Uhlenhuth or
<table>
<thead>
<tr>
<th>Date</th>
<th>Country</th>
<th>Author</th>
</tr>
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<tbody>
<tr>
<td>1920</td>
<td>Medical Education in Belgium</td>
<td>Pearce, Richard M.</td>
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<td>Poland: Report on Medical Education</td>
<td>Pearce, Richard M.</td>
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<td>Medical Education in Germany</td>
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<td></td>
<td>Medical Education in Bulgaria</td>
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<td></td>
<td>Medical Education in Romania</td>
<td>Eversole, Henry O.</td>
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<td></td>
<td>Medical Education in Switzerland</td>
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</tr>
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<td></td>
<td>Medical Education in Constantinople</td>
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<td></td>
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<td></td>
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<td>Medical Education in Spain</td>
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<td>Medical Education in Italy</td>
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</tr>
<tr>
<td></td>
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<td>Pearce, Richard M.</td>
</tr>
<tr>
<td></td>
<td>Medical Education in Ireland</td>
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</tr>
<tr>
<td></td>
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<td>1927</td>
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<td>Medical Education in Russia</td>
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<td>1929</td>
<td>Sweden–Medical Education survey</td>
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<td>1930</td>
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<td>Survey–Medical Education in Greece</td>
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<tr>
<td>1931</td>
<td>Survey of Medical Education in Portugal</td>
<td>O’Brien, Daniel P.</td>
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Sources: Field Offices—Prewar Reports, Series 1.3, RG 6.1; Projects-Europe, Series 700, RG 1.1, Rockefeller Foundation Archives, RAC.
Eversole. After Gregg was stationed in Europe, the surveys became more systematic, thorough, and tied to program development. Given the amount of staff time that went into the surveys and the importance attributed to them, it is worth commenting about a few of their features. Moreover, despite some obvious biases, the information in a number of these surveys remains to this day a remarkable “snapshot” of conditions in these countries at the time.

First, it should be noted that the importance of the surveys depended on the country and the foundation’s agenda. England, for example, was only surveyed by the foundation years after the 1919 announcement of assistance to the London School of Hygiene and Tropical Medicine and University College London projects. One reason may be that the British had already done their own survey, thanks to the work of the Haldane Commission before the war, but the personal and cultural familiarity of Rockefeller Foundation officers and trustees also undoubtedly gave them confidence they could make decisions without a formal survey. In lieu of a survey of Great Britain, Pearce had reports compiled on medical schools in London, the rest of England, and Scotland. (Wales was added later, and Northern Ireland was done in conjunction with Gregg’s report on Ireland.) This information was, therefore, of use in deciding which other British medical schools to support outside of London during the 1920s and 1930s. Likewise, Pearce compiled the Belgian information a year after the decision was made to aid the University of Brussels medical school. In this case, the survey was a justification for the decision to aid this medical school and not any of the other three in Belgium.

The early surveys of central and eastern Europe were done in conjunction with the emergency program of the DME. Specifically, the visits by Uhlenhuth (Germany), Pearce (Austria, Switzerland, and Poland), and Eversole (Bulgaria, Romania, the Baltic states, and Constantinople) were used in making decisions about funds to purchase laboratory equipment, supplies, and library materials. Most of the information in the surveys was collected and prepared ahead of time by the foundation’s Information Service. This was not only for the visits and internal decisions but also for the foundation’s own publication series, “Methods and Problems of Medical Education,” which first appeared in 1924 and was distributed free to medical schools around the world.38

Gregg dramatically changed the nature of the surveys in 1925 by making them more systematic, unified, and focused. Soon he developed a format involving a visit to the country and a report based on more extensive, firsthand observations and discussions with individuals at medical schools. The surveys usually contained three parts: background, a description of medical facilities and personnel, and specific recommendations for the
DME. Additional materials, including previous “surveys” by the foundation, were included in an appendix. One problem with Gregg’s new approach was that the visits inevitably led to raised expectations in the country he surveyed, despite Rockefeller officers’ disclaimers that surveys were no indication of forthcoming grants. This resulted in some highly publicized embarrassments, such as occurred, for example, in Ireland and in France, where local newspapers stirred public interest and even prematurely announced Rockefeller Foundation support, which at the time was only under discussion and in fact never was approved.39

Another question about the surveys from the start concerned the quality of the information they gathered. This concern was justified, as any review of the records shows, especially for the early surveys. Even for the more thorough ones, based on extended firsthand visits, the Rockefeller officers’ perspective was definitely a product of their times, with all the prejudices of early twentieth-century Anglo-Saxon America. An example of this, as J. B. Lyons points out, was Gregg’s limited understanding of Irish history, which can be seen in his description of English lands as “purloined” by the new Irish Free State.40 On the other hand, Gregg also recognized that the Catholic medical schools represented the future of the country, and he was open to new judgments about the leaders. In a letter to his mother during the Irish survey, Gregg revealed this mixture of stereotype and an open mind:

> I am finding work very much easier and more agreeable here than in Italy, of course, and I am really thoroughly enjoying it. Ireland is settling down rather remarkably. Yesterday I had an audience with the President of the Free State, Mr. Cosgrave. He was very young and natural in his manner, and seemed not at all the wild Irishman of song and story.41

As to the quality of the surveys overall, it should first be noted that both Pearce and Gregg, the two most frequent authors, were experienced at conducting studies of foreign medical conditions. Pearce was one of the first people upon whom Rose called to study conditions in Brazil, Argentina, and Uruguay in 1916 and 1917, prior to expanding the work of the IHB. Moreover, Pearce spent eighteen months in China as director of the Peking Union Medical College in 1921–22. Gregg spent three years in Brazil and did a survey of Colombia in 1923 during his stay in the New York office. By far the best surveys were those Gregg conducted during his service in Europe from 1924 through 1930, including Ireland (despite its flaws), Norway, Russia (a notable exception to his rule of visiting each medical school, since Gregg was only permitted to visit Leningrad and Moscow), Iceland, Sweden, Finland, and Greece. It was the survey of Italy, however, that established the model.
Italy was Gregg’s first European survey, and in his Reminiscences he was quite candid about his own lack of knowledge, as well as Pearce’s inadequacy as a mentor. “Pearce didn’t know Europe,” Gregg stated quite bluntly in his reminiscences. “He wasn’t capable of speaking any foreign language for negotiation purposes.” This made him overly cautious in judging professors in the foreign medical schools and handicapped him in both formal and informal dealings with them. Gregg thought there was “a somewhat potentially well-informed critic in Abe Flexner,” because he had surveyed medical education in western Europe after his 1910 report. With a few exceptions like the emergency aid for Germany, however, Flexner left Pearce and Gregg alone.

Gregg later recalled how little he knew of Europe, using Italy as an example. When he arrived in the country in 1924 to conduct the survey, Gregg stated in his Reminiscences,

I didn’t know the story of the Risorgimento with any real competence. . . . I didn’t know what Rome meant. I didn’t know that the government of Italy had very deliberately been moved to Rome for psychological, traditional and historical purposes, and under a great deal of explicit and hidden opposition and criticism from the Florentines. . . . I didn’t realize how near we were in Italy in 1924 to 1866, and we were near."

Part of the problem was that Gregg did not have much time for preparation, even though Pearce began seriously to consider him as a representative of the DME in Europe as early as November 1923. In fact, the offer was made because Gregg was tiring of the strains of the New York office routine and was thinking of returning to the public health work he had done in Latin America. He was also under consideration for an appointment as an assistant dean at Johns Hopkins early in 1924; but the prospect of the European position was more enticing. In hindsight, Gregg could see that he had other kinds of preparation for the European work, dating back to when he was ten years old: his going away to college, his experience in France during the war, and his three years in Brazil. He also claimed, as he put it, that he “prepared in retrospect.” By that he meant, where necessary, he learned to understand his experiences through subsequent interpretation.

There is much evidence that Gregg was quite successful. Following in the footsteps of Abraham Flexner, who had surveyed more than 150 medical schools in the U.S. and Canada, Gregg very quickly learned how to learn about the medical schools in the countries he visited. This applied to things both small and large. For example, one way of telling whether a laboratory was really an active place was to use the “drawer test,” explained to him by a professor at Johns Hopkins. “You just pull a drawer open and run
your finger along the edge of the drawer,” his friend explained. “Then if you look at your finger and it’s covered with dust, you can make a fairly sound conclusion.” Gregg added, “Later I got to the point of not needing this test.”

At the other extreme, Gregg also learned from these visits how to understand the hierarchy of European medical establishments.

In Europe I discovered the immense importance of knowing how personnel in the medical schools were chosen. In the beginning I didn’t think that was of fundamental importance. My European visit was the first time that I saw the significance of tradition. At that time tradition in the United States didn’t amount to a damn in point of recognition of real power. In Europe it amounted to a lot. In Europe it was the guide line to find out how things happened to be.

Recognizing his shortcomings, Gregg decided to overindulge himself during his first assignment in Europe to survey Italian medical education. As he recalled in his Reminiscences,

I thought, “I will do one thorough survey, absurdly thorough for the reason that it will let me find out what the guide lines are and what the relative value of all the details is.” Before I left I specifically asked Pearce for plenty of time to do the Italian survey, which was the first survey that I was going to do. I said, “I am deliberately going to go into a detail that may not ever appear again in a survey, but I’ve got to go into the microscopic side of this thing as well as the gross.” He understood and to my delight he said, “You’ve got plenty of time.”

Gregg clearly took advantage of Pearce’s desire to accommodate him. Thus, after a stay in Paris during the summer of 1924, Gregg went to Italy in September along with his wife and young child. They rented a house on the Isle of Capri to serve as a home base for his visits to Italian medical schools. By the end of October he reported that he needed additional time. Pearce replied, “In regard to your plans for Italy and the fear that you may be rushed, get this idea out of your head at once. You are to take all the time that is necessary. If a year is necessary for Italy, take it.”

Pearce continued to be supportive throughout Gregg’s entire stay, encouraging him to “take plenty of time for language and reading,” reimbursing him when his wallet was stolen in Pisa, and visiting him for ten days in February 1925. When Pearce noticed Gregg becoming “a little out of touch with the New York office,” he arranged to have copies of his diary and those of other DME officers sent to Gregg. Gregg remained in Italy until May 1925, and his report on Italian medical education, based on visits to all twenty-one medical schools, was 319 pages, not counting appendices.
PEARCE’S LATIN STRATEGY

The Italian survey was exceptional, not only because of the time involved and its thoroughness but also in its impact on the plans of Pearce and Gregg for medical education in Europe in the 1920s. Its net effect, along with Pearce’s survey of France at the same time, was to reshape and reinforce the overall strategy of the foundation in Europe, which was set in 1919 when the DME was created. In hindsight, this strategy was simplistic, influenced by Flexner’s approach to medical reform, and also the product of the officers’ and trustees’ cultural bias. This was largely Anglophile, with an ambivalence toward France and an anti-German bias at least in the aftermath of the war.

The resulting mind-set in the 1920s—the “high noon” of Western imperialism—saw health and medicine in Europe as well as the world divided into the Anglo and Latin cultural spheres, with London and Paris as their centers. This was evident in the IHB’s first consideration of medical programs in Europe at its May 1919 meeting—hence, even before the creation of the DME. One of the “general considerations” of a policy of the board in Europe was that “the mandatories under the League of Nations will tend to center in Europe the development of the more backward countries and will thus emphasize the importance of leadership in medicine, hygiene, and public health in European countries—particularly in England and France.”

The board also viewed the situation in Belgium, where it was considering a project, in the larger context of the French situation. The reasoning was as follows:

France is particularly backward both in medical education and in public health. The French system has been copied in Belgium and throughout Latin-America.

So far as one may judge at the present time progress in France promises to be slow.

The shortest road to modern medicine and hygiene in France seems to lie through Belgium. It is believed that the stimulating effects of a demonstration in Brussels would be felt in France and throughout the sphere of French influence.

The DME adopted this same perspective, in part because from the start Pearce had little time to develop an alternative strategy for the division thanks to the numerous distractions, including his term as director of the Peking Union Medical College. Even after his return, however, Pearce showed little inclination to depart from this original strategy. For example, in a “Review of Progressive Program for Aid of Medical Education in Europe,” prepared for the Rockefeller Foundation trustees meeting of 24 May
1922, Pearce stated that the broader goal of the DME was “the establishment of fairly complete medical schools in such centers as would aid appreciably the people looking to those centers for guidance.” As progress to date he reported, “The first effort was made in London in connection with University College Hospital Medical School. The advantage of this move is already evident in the very extensive changes which have occurred in the organization of medical education in Canada, Hongkong [sic] and other English Dominions and colonies.”

The other part of Pearce’s plan, as yet unrealized, was to assist the development, if possible, of Latin medicine. It was not possible to do this at once in France, but the aid given to the University of Brussels would have, it was hoped, an influence on Paris and on the countries, including those of South America, dependent on Paris for their educational point of view; and in this connection continued efforts were made to develop a really adequate school in Brazil as the latter country represents one of the most important under Latin influence.

Pearce admitted that the program had been interrupted by his service in China, so that what was needed in the immediate future were continued surveys in the English and Dominion schools, as well as Scandinavia, central Europe, and the Near East. Above all, he stressed the need for “development of the Latin program by obtaining a more thorough knowledge of conditions in Italy, Spain and Portugal.” This was the rationale for the hiring of staff at this time, including Gregg.

Although this mimicked Abraham Flexner’s strategy of concentrating resources on a few medical centers, which could serve as models for others, Flexner himself had doubts about its applicability to Europe. In a rare memo of advice to Pearce in September 1922, shortly after his trip to Europe to gather material for a new book on European medical schools, Flexner observed that two things shaped medical education there. First were Europe’s deeply rooted history and traditions, which would create resistance to any change. The second feature was that “education in Europe is almost entirely state-made and state-controlled.” This called into question the larger Latin strategy, which presumed international influences. Instead, Flexner urged a focus of attention on the differences between countries.

Despite this advice, the overall strategy of exercising influence through Anglo and Latin centers of medicine continued as long as Pearce directed the division. The only changes were how best to exercise that influence. Clearly, the first order of business was to do surveys, and that is why as soon as Gregg was hired to cover the New York office, Pearce spent the next seven months (from September 1922 to April 1923) in Europe, conducting a number of the surveys called for in his report to the trustees. Curiously, they did not include the most important country of all: France.
This avoidance of France soon prompted some questions by the other foundation officers and trustees. For example, in September 1923 Embree met with Pearce and asked him why France had not yet been surveyed. Pearce replied that he hoped to do the study himself, but he was worried for fear of unduly raising expectations. Embree, who had just returned from France, countered with the suggestion that instead of a high-profile, formal survey of France, Pearce should “visit one center, such, for instance as Lyon, [and] get thoroughly acquainted with the men handling the institution.”57 Pearce at first agreed with the suggestion, but when he went to Europe in the winter of 1923–24, he spent most of his time in France working out the administrative changes in the Paris office that would accompany Gregg’s arrival later in 1924.

Meanwhile, back in New York Gregg had to respond to trustees’ impatience with the delay in implementing the Latin strategy. For example, he reported to Pearce in Paris that at the 29 February 1924 meeting, trustee William Allen White asked “to what extent we had attacked the stronghold of Latin medicine [Paris] and stated that he thought it a more important problem than the assistance to medicine in the Far East.”58 Gregg replied that “Latin medicine has not by any means escaped our attention”; and John D. Rockefeller Jr. added that aid to Brussels “would undoubtedly affect the condition of medical education at Paris.”

In fact, Gregg’s move to Europe permitted Pearce to conduct formal surveys of the two most important countries in the Latin strategy: Italy and France. While Gregg began his survey of Italy in the fall of 1924, Pearce returned to Europe for a tour from November 1924 to April 1925, during which time he worked on his study of France. In the process, he was finally able to follow Embree’s advice and pay a visit to Lyon in December 1924.59 Pearce’s initial findings, however, were not very encouraging. Part of the problem was the result of the expectations that Embree had raised during his visit the year before. In addition, although Pearce also was impressed with the eagerness of the dean of Lyon’s medical school to cooperate, one of the reasons was that the dean was in the middle of a new hospital construction project that was not very well conceived and needed substantial financial support. A diary entry by Pearce for 7 December 1924 stated that he found Lyon “most depressing,” and in a letter back to Vincent from Paris in January 1925, he revealed that “a plan to cover the French situation is as far distant as ever.”60 By the spring of 1925, however, Pearce had found a new way of implementing the Latin strategy, inspired in part by Gregg and his Italian survey.

Gregg realized early on that no single Italian medical school could serve as the model for a general reform of medicine in the country: “The dominant academic center was supposed to be the University of Rome, but it was not. When you wanted really topnotch performance, you looked for it in
Turin, Milan and Florence. Or in Bologna which was gaining politically because it was the home of the fascists.61 Although Gregg found no single research center suitable for funding, he met several bright and promising researchers for whom he recommended support. Traveling fellowships for a year in Britain or the United States were fine, but there was need for continuing support upon the researchers’ return to Italy, support that the university or government could not be expected to provide. As a result, Gregg proposed a way of supporting researchers for an extended but limited number of years, especially in setting up laboratories at their home universities.

Pearce also found this approach appropriate for France once he had completed his survey, although for different reasons.62 The medical school of the University of Paris was the obvious place to serve as the model for reform not just in France but the whole Latin medical world. Unfortunately, Pearce found very few French medical leaders who saw the need for significant reform. His hope was to support a limited number of those interested, in order to convince others of the value of reform. Specifically, Pearce recommended aid to a few individuals in laboratory fields who might be willing to convert their departments to full-time teaching and research, beginning with Emile Brumpt, the full-time head of the Department of Parasitology at the University of Paris medical school.

To describe a program for the DME that could accommodate these recommendations for Italy as well as France and possibly other countries, Pearce used various terms such as “fundamental” or “constructive” program.63 From March to May 1925 he and Gregg exchanged several memos discussing different versions of the program. They finally decided to recommend a “Developmental Program,” initially for France and Italy but later extended to Ireland, which was approved at the 27 May 1925 trustees meeting.

The day before the meeting, however, Pearce was admitted to the hospital with heart problems. For a while it looked like Gregg would have to return from Ireland, where he was in the middle of a survey, but after a few months’ rest Pearce was discharged and returned to the office. Not surprisingly, both Gregg and Pearce took this as a sign of the need to collaborate even more closely (they began exchanging personal correspondence by first names after this). After the trustees meeting of 6 November 1925, when a fuller version of the DME’s revised Developmental Program was approved, it was increasingly difficult to separate the work and ideas of the two men.

The features of the Developmental Program were not very complicated, and in a sense what was not included was as important as what was. The 6 November meeting of the trustees authorized $50,000 for the program with the following rationale:
This program assumes that with the gradual improvement in economic conditions and with readjustments that have taken place during the seven years since the war, there is no longer need of general emergency assistance of the type previously in force. It would seem advisable therefore in countries which cannot cooperate with the Board in definitely constructive programs involving new buildings or endowment, to take care of a few outstanding men in important departments who have the power to attract and the ability to train promising younger men, and whose departments could thus be aided in a small way to facilitate this training and thus to encourage the younger group of medical scientists. Such a program might lead later to significant fundamental aid.64

The original goals of the DME thus persisted, even if the immediate strategy had changed as a result of the surveys in Italy and France. At least, Pearce was to be rid of the Emergency Program.

The Developmental Program did not last very long, primarily because of the Rockefeller Foundation’s reorganization in 1928, which folded the DME into the new Medical Sciences division, and the development program became part of small grants in aid of research. Hence, it was not in existence long enough to be implemented beyond Italy, France, and Ireland. While it existed, the program was most successful in Italy.65 This was in part the result of low foundation expectations, or, to put it another way, Gregg’s pleasant surprise at finding so many good, albeit scattered, medical researchers in the Italian universities he visited. In 1926 twelve individuals were awarded funds for their work in preclinical fields such as anatomy, pathology, physiology, and pharmacy; however, they were at nine different universities, with only Turin (three) and Florence (two) having more than one recipient.66 Because support was spread so widely, the program did not have an immediate, dramatic impact on one institution. In the long run, however, the funding helped to break several key Italian medical researchers out of their previous isolation, thus preventing the further stagnation about which Gregg had been warned by one of the most impressive researchers he had met, Giuseppe Levi of the Institute of Normal Anatomy at Turin. “In about ten years,” Levi predicted, “Italy will be about the level of Greece.”67 Instead, thanks to Rockefeller Foundation support, Levi’s students and other Italian researchers traveled to England, Germany, and the U.S. to learn the latest developments in their fields; despite hardships in the late 1930s and during World War II, they became a core and base for the revival of Italian medical research after 1945.68

If Italy was a case of success because of low expectations, Ireland represented a failure to meet unusually high expectations, at least from the Irish perspective. In 1928 the foundation awarded developmental aid to the De-
partment of Pathology at Queen’s University, Belfast, and the Department of Pathology and Hygiene at Trinity College Dublin. The following year aid was extended to the School of Anatomy at National University Dublin. In 1931 these three programs were approved for another three years with total funding of $55,000.69 As Lyons shows, however, the Irish medical leaders as well as the public expected so much from the Rockefeller Foundation visits that nothing short of a major building program could be satisfactory. On the other hand, from Gregg’s perspective, this funding was more than generous, given his judgment of the quality and prospects of Irish medicine. Developmental aid in Ireland was, therefore, a case in which a compromise antagonized rather than placated the two parties in disagreement.

France was the primary reason for the creation of the development program, that is, to serve as a holding action until forces for more fundamental change could be identified and supported. In the short run, the program achieved its goals, although Pearce and Gregg proceeded more slowly in awarding funds to French professors. A total of seven other awards were made in the following years besides the one to Brumpt: two each at Lyon and Strasbourg, and three more at the University of Paris.70

Even as they implemented this new program, the two leaders of the DME paused to step back and examine what they had accomplished as well as what lay in the future. After all, the program was meant to be transitional; also, Pearce and Gregg had just completed surveys of the two major countries in their strategy. Then there was the matter of Pearce’s illness. In an exchange of memos during November and December 1925,71 Pearce began by telling Gregg that he was offering “things I wish to get off my mind.” Proceeding geographically, Pearce examined the places where he thought he had been most effective—England, Scotland, and Wales—about which he said that the “essential program is now established.” For all the rest of the countries, however, work remained to be done. The reason, Pearce explained, was that the British program had been “an exception.” Everywhere else, since he had been placed in charge of the DME, Pearce complained to Gregg,

I have never been able to work out a consistent program according to my own ideas. . . . Our work has been in the truest sense opportunistic, or as in Europe, frankly emergency. This has been unavoidable. During all this time I have been trying to clean up these programs and to start on definite programs based on my own ideas.

With few exceptions, he noted, the division had never been free to go ahead with its own plans.72

Pearce was uncharacteristically immodest in describing how in Britain he was able “to work a program which I considered wise for the empire, the
doominions and colonies—that is, the English-speaking world outside of the United States.” He was quite blunt, however, in expressing his doubts about aid for most other countries in Europe, except France, for a number of reasons. Holland and Switzerland, for example, already had “too many universities.” The same was true for Belgium, which did not need any further assistance beyond the project begun in 1920. Elsewhere, internal squabbles prevented reasonable requests for aid from countries such as Denmark and Sweden. In Italy and Ireland, recently surveyed by Gregg, Pearce expected a policy to be worked out, while other countries such as Spain and Portugal and all of eastern Europe had yet to be surveyed, although he had doubts because of their political problems and inability to use the support effectively.73

France remained the most likely prospect for medical reform with the widest benefits. Here Pearce frankly sized up the limited options. Strasbourg was already in place to serve as an alternative, if expectations for Paris did not work out, but for the time being there was nothing to be done. Lyon held out some prospects if a “striking demonstration” could be made. Pearce was least encouraged by the situation in Paris, however, suggesting to Gregg, “If the university continues hopeless, [the] question of influencing higher levels of advanced teaching in medicine and the medical sciences, as at Pasteur Institute, general physiology at the Sorbonne, Collège de France, Jardin des Plantes, etc., might be considered.” In some ways Pearce was quite prescient, as post-1945 French medicine was eventually reformed from institutions outside the university, with the Pasteur Institute and the new Centre nationale de la recherche scientifique (CNRS) taking the lead.74

To everyone’s surprise, a period of intense negotiations over medical reforms at Lyon and Paris began at almost the same time as the adoption of the new Developmental Program. Prospects at Lyon picked up shortly after Pearce’s disappointing visit there in December 1924.75 In early June 1925 a delegation from the Lyon medical faculty visited University College London, Oxford, and Cambridge; then the following year another Lyon group toured the U.S. under foundation auspices. After a temporary delay because of the crisis of the French franc in the fall of 1926, prospects improved with Dr. Jean Lépine’s reelection as medical school dean. In addition, the mayor of Lyon, Edouard Herriot, was appointed minister of public instruction, thus enhancing the prospects for financial support for the project by the French national government.

In the spring of 1927 the Lyon medical school changed its curriculum to require a first year of preclinical sciences before students began their clinical work. This was the signal Gregg and Pearce had awaited, and at the next meeting of the Rockefeller trustees they were authorized to negotiate for up to 50 million francs of support for construction of the new medical school. With a French government promise of 15 million francs for the project, the
trustees approved a contribution of 41,206,000 francs ($1,625,000) at its 4 November 1927 meeting. It is not a coincidence that halfway between the foundation's approval of the Lyon project in November 1927 and the groundbreaking in March 1928, Brumpt and the dean of the Paris Medical School asked Gregg and Gunn for a meeting with Pearce when he visited Paris in January 1928. On 20 January 1928 the group toured a potential site for expanded medical school laboratories in the company of Sebastian Charléty, the rector of the University of Paris, at which time he presented Pearce with a written memorandum requesting assistance.

In the course of the next five years, the hopes of the Rockefeller Foundation's officers for major reforms at the Paris medical school came close to being realized, albeit not without complicated and long negotiations, before ending in disappointment and failure. The key to beginning the process came when Charléty asked Gregg and Pearce explicitly for help in building new laboratories for the medical school. Upon hearing of the request, the foundation officers and trustees were delighted. Vincent wrote, “What a magnificent opportunity there would be then to create a modern medical teaching and research center in the capital of the Latin empire of the world! But I must stop here before I begin making a speech.” Plans quickly expanded for a much larger project, including a new site for the medical school, and in November 1929 the trustees committed $6 million for construction and another $6 million for medical education reform. Charléty was unable, however, to make good on his promises. He faced opposition within the medical school, or at least found no one willing to take the lead; then when political opposition developed led by the wine merchants whose land was to be taken for the new construction, progress ground to a halt.

In an attempt to revive the project, Charléty appointed a committee to study an alternative site. In February 1933 he formally proposed a plan to utilize a new location at St. Anne Hospital. The new site was smaller, indicating the likelihood of a less ambitious project and thus the need to begin a whole new round of negotiations. Given these problems, together with the prospect of having diminishing funds at their disposal because of the deepening economic depression, the Rockefeller Foundation trustees voted on 12 April 1933 to reject the French proposal for the new St. Anne site and rescinded its November 1929 offer to assist development of the site at the old location. Six days later Gregg wrote to his associate Lambert in Paris, “For the future our position should be that we are prepared to consider any projects within the general field of the M.S. [Medical Sciences] program, but that aid on an institutional basis is out of the range of possibilities.” As if it were necessary, Gregg was making explicit that the old Latin strategy, with France and the University of Paris at its center, was
dead. It had been replaced by a new program in Medical Sciences, itself the product of a reorganization of the entire foundation that had taken place since 1928. Despite Gregg’s encouraging instruction to Lambert on the occasion of the trustees’ vote, in his *Reminiscences* Gregg revealed a different, although equally succinct view of what happened. He called the Paris project “a tragic failure.”

**FROM MEDICAL EDUCATION TO MEDICAL SCIENCES**

When Gregg wrote to Lambert in 1933 about the possibilities for new programs, much had changed at the Rockefeller Foundation since the beginning of deliberations about medical reform in Paris. For example, a reorganization in 1928 had replaced the old Division of Medical Education with a new Medical Sciences division. The reorganization also transferred the medical education program of the General Education Board to the new division, and Abraham Flexner had reluctantly retired. In 1929 George Vincent stepped down as foundation president; he was replaced by Max Mason, who came from the University of Wisconsin after a brief time as president of the University of Chicago. Finally, in 1932 Mason brought in Warren Weaver from Wisconsin as the head of the foundation’s Natural Sciences division, another of the new divisions created during the reorganization. Given these changes, it is a wonder that the negotiations for a large capital grant to reform medical education at the University of Paris were allowed to proceed as long as they did. The failure ended the last major initiative of the DME.

Of all of these changes, the approval of reorganization by the foundation’s trustees at their May 1928 meeting was probably the most far-reaching. The main reason for this change, according to the “standard” historical account, was that by the mid-1920s the four different Rockefeller boards—the foundation’s board, the GEB, the International Education Board (IEB), and the Laura Spelman Rockefeller Memorial (LSRM)—each incorporated independently with its own funds and trustees, had run into difficulties of overlap and duplication, not to mention confusion on the part of existing and potential grantees. To resolve these problems, a committee was created in 1926 representing the four philanthropies. It eventually recommended concentrating all activities within the Rockefeller Foundation under five divisions, including an International Health Division (IHD), which kept intact the IHB (only changing it from a board to a division), plus new divisions for medical sciences, natural sciences, the humanities, and social sciences. The other three boards (GEB, IEB, and LSRM) would be liquidated or transfer their assets to the foundation. The guiding principle in
consolidating or developing programs would be “the advancement of knowledge.”

Raymond Fosdick, the longtime confidant of Rockefeller Jr. and foundation trustee who drew up the reorganization, took care that the changes did not raise questions about the foundation’s long-standing support for health. Organizationally, his solution was to keep public health intact and recognize medicine as a distinct enough field of knowledge to warrant a separate division. Pearce later recalled that this view was shared by Rockefeller Jr., who felt “that the Foundation had received so much prestige from the development of medicine that it would be unwise to subordinate this field.” Fosdick admitted that there was a blurred line between natural and medical sciences, but it was left to be worked out later. That proved to be a continuing problem, especially when biology was placed under the natural sciences, but at least the uncertainty was recognized from the start.

Given the centrality of medicine in the Rockefeller programs, it is surprising how little Pearce was involved in the plans for reorganization. One historian of the foundation has argued that in a backhanded way Pearce’s lack of forcefulness and his conciliatory nature gave his views extra weight in the debates over reorganization. There is little evidence in the record of reorganization, however, that Pearce offered serious ideas about or reactions to the reorganization. Gregg was equally lacking in practical suggestions, although he offered one of the more quotable reasons why a reorganization was needed. Early in his service in Europe Gregg was struck by the confusion expressed by those he met about the different Rockefeller programs and people. For example, in a diary entry from Vienna in November 1924, Gregg reported, “I wish we could get a copyright for the name ‘Rockefeller Foundation!’ Or else fuse IHB, DME, RF, PUMC, IEB, DS, GEB, and LRSM and go into business as ‘the Rockefeller people!’ our common name in Europe.” Two years later Gregg repeated this in a formal response to Fosdick’s request for ideas about reorganization from all foundation officers. “So far as the public is concerned,” he wrote, “we might just as well have the Rockefeller boards incorporated under the title of the ‘Rockefeller people.’”

In private correspondence with Gregg during the reorganization, Pearce minimized the significance of the change and demonstrated that he continued to think in terms of national strategies. For example, in the midst of the internal discussion about reorganization in October 1927, Pearce wrote a confidential letter to Gregg warning him about becoming too dependent on the new Developmental Program, not because of plans for reorganization, but because “the biggest work we can do is in larger capital developments, and we do not want to have our efforts in that field hampered by a mass of detail in connection with developmental or other programs.” Pearce obviously was not thinking about abandoning large-scale aid to medical teaching institutions, the cornerstone of the DME’s work.
After the trustees’ approval in 1928, the work of reorganization took various forms. In the case of the IHB, for example, there was little to be done other than change the last word in its title to make it a division. In the case of natural sciences, humanities, and social sciences, there was much more to be done. Rose retired from the IEB; Abraham Flexner did likewise from the GEB, as expected; and few other staff stayed on, so new directors of the divisions had to be hired and the rest of the organizations created. The fate of the DME was unique in the continuity of both its leadership and significant parts of its program, while at the same time charting a new course of action.

To guide the transformation of the division, four foundation trustees were appointed to a Special Committee on the Work and Organization of the Division of Medical Education, chaired by David Edsall, dean of the Harvard Medical School. On 9 November 1928 the committee presented a “plan of action for the work in the medical sciences,” which was the basis of a seven-point resolution on medical sciences approved by the trustees at their meeting of 3 January 1929. The first point summarized the committee’s recommendations:

That concern with the development of medical schools as institutions be lessened and the principle of aid to individuals, groups, and departments in relation to research and advance of medical knowledge be emphasized with the understanding that this change implies lessening concern with medical problems of backward countries and departure from the policy of multiplying well-organized and complete schools, but leaves the officers free to continue to promote such parts of the old policy as may seem wise.89

The move away from Abraham Flexner’s institution building was no surprise, since Edsall had been an ardent critic of Flexner during the 1920s.90 Beyond that, the emphasis on research was not as big a change as the report suggested. Despite the focus on education suggested in the title of the DME, its bedrock principle was the Rockefeller definition of scientific medicine, the most important feature of which was making research a part of medicine. Hence, most of medical education funding had gone to the construction of research laboratories, the support of full-time faculty who could do research and teach, and fellowships for visitors to work in these research labs.

The biggest change in the foundation’s support for medicine as a result of reorganization was, therefore, not the establishment of a new goal of scientific research, but a shift in strategy away from reforming medical schools toward the support of researchers themselves. The “advancement of medical knowledge” shifted attention down to the level of individual researchers and their departments or institutes, and eventually the specific projects proposed for funding. The work of the division staff thus changed
from judging the political considerations that affected the national medical schools in Europe, toward assessing the qualifications of individuals and the importance of the scientific disciplines and research questions they worked on. This left wide open the question of an overall plan or strategy to help guide decisions about supporting the wide range of projects or individuals claiming to advance knowledge in the medical or natural sciences. As a result, the foundation’s officers and trustees spent a great deal of time after 1929 proposing, debating, adopting, and modifying lists of priorities in such research fields as vital processes, psychiatry, and experimental and molecular biology.

The recommendations of Edsall’s committee acknowledged the need for supporting some selected medical training, but this was based on an assessment of subspecialties. The committee singled out parasitology as well as psychiatry and mental health, or at least the “definitely medical aspects” of the latter that were subject to “research especially by methods of the exact sciences.” Other suggested fields were obstetrics, dermatology, general pathology, physiology, and “diseases of advancing years.”

This list quickly changed as information was gathered about which specialties were most worthy of support for the advancement of knowledge, but a few of its predictions proved especially accurate. For example, Edsall’s report recognized that program officers’ time would become even more scarce, because “judging the value of research activities requires longer and more intimate study of the projects and the personnel engaged in them than does judgement as to the prospects of general improvement.” The report also recognized the overlap implicit in Fosdick’s expedient of dividing the natural and medical sciences. It offered no solution to the problem, other than a concluding recommendation that “cooperation between the activities in the Medical Sciences and those in the Natural Sciences, and the adequate development of the Natural Sciences is of the highest importance for the future.” This advice proved to be more easily said than done.

Although the main elements of the report charted the general direction of the new Medical Sciences division, the more detailed recommendations exercised little quick or direct influence. Rather, there was a period of transition from the old to the new medical division that lasted four to five years. This delay was not only the result of personnel changes, such as the death of Pearce and the change of presidents of the foundation, but also the fact that the foundation was not as nimble an organization at changing directions as its leaders claimed. The foundation might have been able to take quick advantage of specific funding opportunities that arose, but it was so large and its officers and trustees so conservative by nature that they could not make far-reaching decisions, let alone implement them, without extended consultation and debate. In addition, the onset of the Great Depression gave the trustees additional reasons for ending the expensive older
programs, but it did not make them feel comfortable about predicting the future.\textsuperscript{94} The effect of the foundation’s large size, conservatism, and fear of the future made the trustees more likely to do nothing than to adopt a bold new course of action.

After the trustees’ reorganization vote, Pearce left it to Gregg to take the initiative in examining more specifically the possible new directions of the division. Gregg, however, was greatly preoccupied with negotiations during 1929 about funding for the University of Paris medical school that culminated in the trustees’ offer of support in November of that year. As a result, Gregg did not have much time or inclination to do a thorough job of responding to the reorganization. Thus, in March 1929 he repackaged the projects in which the DME had been involved, excluding the surveys and capital projects, and claimed, “You can describe in terms of ends and objectives the work you have in mind in medical sciences.” It was not terribly inspired, with the only innovations being Pearce’s “aid to leaders” that he had suggested earlier in the month and a new category called “fluid research,” which provided limited unrestricted funds for a few U.S. medical schools. Pearce was equally unenthusiastic in his April 10 response, calling Gregg’s classification memo “excellent and in every way satisfactory as a working chart.” He pointed out only a few questions about projected funding and division of responsibility between New York and Paris.\textsuperscript{95}

There was little time to continue the discussion, because Pearce was re-admitted to the hospital in September 1929 with a recurrence of his earlier heart condition. Gregg remained in Europe, and Pearce was back at work in time for a meeting of division directors with the newly appointed President Mason early in January 1930. At two sessions on 10 and 13 January Pearce presented a history of the DME, an assessment of which programs would continue (including those taken over from other boards), and comments on the future of the new Medical Sciences division. The last point was the least developed. He paid lip service to the idea of close cooperation and made a weak pitch for his “aid to an outstanding leader” idea.\textsuperscript{96}

Pearce’s real thoughts are more accurately reflected in a letter to Gregg dated 10 February 1930—his last communication with his colleague. After dispensing with a few minor office details, Pearce indicated that his broader concern was for the position of his division within the foundation as a result of the reorganization. He clearly wanted, for example, biology to come under the Medical Sciences. In fact, Pearce was made acting director of Natural Sciences when Mason left the division to become president.\textsuperscript{97} Pearce told Gregg that a permanent change would have to wait, because a biologist, Herman Spoehr, had been chosen to succeed Mason as the director of Natural Sciences. “If Spoehr had not accepted, we probably should have considered the union I thought of and then have found a man to handle mathematics, physics, chemistry, etc., only. So this problem we can
dismiss for the moment, though I think we might keep it in the back of our minds as a possible later development.”98 This advice helps to explain why Gregg was so frustrated when Spoehr’s successor, Weaver, who was a mathematician, decided to pursue and expand his division’s interest in biology.

At the other extreme, Pearce took pains to assure Gregg that although there was logic to making medicine a part of the natural sciences, “it is improbable that this should ever come about.” Pearce recalled that when this possibility was first discussed in planning for reorganization, both Rockefeller Jr. and Fosdick “vetoed it at once.” Pearce’s confidence that this would not happen was bolstered by his favorable impression of the new foundation president, Max Mason. “I am delighted with the way he is taking hold,” he concluded in his letter to Gregg.99 Pearce made special note of Mason’s ability to bring about agreement and present his own point of view. Unfortunately, Mason’s honeymoon did not last long with the staff and trustees.

GREGG AND MEDICAL SCIENCES AFTER 1931

Pearce’s optimism at Mason’s ascendance reflected the generally high expectations among the staff at the “brilliant coup” of bringing the president of the University of Chicago to head the Rockefeller Foundation. The transition from Pearce to Gregg as head of the Medical Sciences division, however, revealed some of the shortcomings of the new president, which foreshadowed not only the difficult relationship between the two men but also Mason’s early departure from the foundation.100 When Pearce died on 16 February 1930, Gregg was in France, where plans for the Paris medical school project had just taken a turn for the worse. The Tardieu government had fallen, and Gregg began to hear disturbing comments about the prospects for medical reform from several French leaders whom he interviewed. Having heard nothing from Mason in New York about a successor to Pearce, Gregg left Paris for a long-planned study of medical education in Greece at the end of March and returned in mid-April. Finally, as part of a European tour in May, Mason visited Gregg in Paris, where they discussed the future of the Medical Sciences division.

According to his notes of the meeting, Gregg expressed his desire to continue in the Paris office, unless he was “not wanted by Pearce’s successor.” In response, Mason inquired why Gregg wanted to continue, then made a cryptic remark. “If Pearce is to have a successor at all, you will be called to New York.”101 Gregg was left to speculate for months about what this meant, especially whether Pearce’s worst fears of Medical Sciences’ being subsumed under the Natural Sciences would be realized. In August Gregg went to Germany for a vacation, and when he returned in mid-Sep-
tember, he found a handwritten letter from Mason, referring to Gregg as “the new Director of the Medical Sciences Division of the Rockefeller Foundation.” Gregg quickly set sail for New York, arriving at the beginning of October 1930. At the end of the month he wrote back to his wife Eleanor that the trustees had met and would announce his appointment as director beginning 31 January 1931, commenting, “So that phase of things is finally at an end.”

Gregg has left an ample record of his frame of mind at the time, the very fact of which indicates his introspective and contemplative nature. From it his biographer, Wilder Penfield, has painted the picture of a man at age forty who clearly knew that he was at a turning point in his life. In fact, Penfield concluded that given his experience, Gregg might have been in line to succeed Vincent as president of the foundation had it not been for the foundation’s recent reorientation. In Gregg’s mind at the time, however, the responsibilities of the Medical Sciences were quite enough. As he wrote to his wife in the letter about his appointment as director, “I find myself responsible for diminishing the hours, days, and years of suffering and incapacity of I wonder how many people who may through the aid of Rockefeller Foundation money initially, be eventually affected by discoveries and improvements of the real people in the practice of medicine and the prevention of disease.”

As daunting as the task was that Gregg faced, the situation of the division he took over was dramatically different from his experience in the old DME. His first concern was the commitment of Mason and the trustees to the foundation’s focus on medicine. Mason’s remark when he visited Paris about whether Pearce would have a successor bothered Gregg enough that he raised it at a meeting with Abraham Flexner during his first week as the new director of the division. Gregg specifically asked Flexner where he stood with the trustees, because, as he recorded in his personal diary, “I had been unsettled by MM’s raising the question as to whether there should be any Medical Sciences as apart from Natural Sciences. Flexner’s reply was that Fosdick was convinced that there should be a continued activity of the foundation’s boards in association with the development of medicine.”

Gregg noted that Flexner did not mention any other trustee’s views.

A second major change from the old DME was that Europe in general and specific countries in particular ceased to be the focus of the Medical Sciences division’s strategy. This was not only because of the shift to research projects but also because that division took over responsibility for the former GEB medical projects in the U.S., and these naturally took primacy over foreign concerns. Thus, in 1929 the Medical Sciences division funded eleven new projects in the U.S. and Canada, and only one in Europe. The following year there were five new projects in the U.S. and only two in Europe (see Table 2.3). In addition, Gregg eventually came around
to Flexner's position on the importance of institutional support for selected medical schools in order to maintain the reforms of the early 1920s. This was not surprising, given Gregg's experience of focusing on national systems of medicine, but the problem was that Gregg was swimming upstream against the reforms of 1928, which focused on new knowledge through support of individual research projects.\footnote{107}

Another development diminishing the Rockefeller Foundation's influence in Europe and elsewhere was the Depression and the corresponding decline of the foundation's assets, which reinforced the tendency toward supporting short-term projects with limited funding. This also had the effect of increasing the division's role in developing (or managing) scientific disciplines as opposed to granting support to institutions or individuals. Admittedly, these distinctions were not so clear-cut. The fellowship program, for example, which began in the early 1920s and continued without a break, inevitably supported individuals and the institutions where they worked. The hiring of Weaver to head the Natural Sciences division in 1932, however, greatly accelerated the trend of viewing research projects from the perspective of scientific disciplines.\footnote{108}

When Gregg moved back to the New York office in 1931, he could not avoid being drawn into this line of thinking and pattern of funding, despite his protests and proposals for alternative funding strategies. The most important development forcing Gregg reluctantly down this road was Weaver's enthusiastic embrace of biology as the focus of the Natural Sciences division.\footnote{109} This was ironic, because Weaver was the mathematician who Pearce predicted would allow the Medical Sciences division to take over biology, and even though Gregg repeatedly complained about his new colleague's lack of training in the field, Weaver moved energetically and unashamedly to shape a program in biology and medicine under various headings—vital processes, experimental biology, and eventually molecular biology. Weaver's underlying strategy was to apply the techniques of the physical sciences to the life sciences.

Gregg and the Medical Sciences division were left to work primarily in the field of psychiatry and closely related disciplines such as neurology. Recent scholarship has begun to give Gregg the credit he deserves for the role he played in helping psychiatry become integrated into American medicine.\footnote{110} The reason for the concentration on psychiatry was only partly the result of Weaver and the trustees' precluding Gregg's division from continuing broad institutional support for the preclinical medical sciences. According to Penfield, another reason why psychiatry rather than some other field became the focus of attention was that Mason and Fosdick had personal reasons for supporting the development of psychiatry. Both of their wives suffered from mental illness and committed suicide, and Fosdick's wife also tragically killed their children.\footnote{111} Gregg was aware that many of
the trustees also “had intimate family experience with the field of psychiatry (in brothers, wives and other relatives).” For example, he mentioned in a letter to Harvard psychiatrist Joe Aub that foundation trustee Edsall was influenced by the mental illness of his wife. Gregg also recalled Edsall’s questions about psychiatry at trustee meetings, but Edsall’s most important influence was the 1928 report of his committee on reorganizing the DME, which singled out psychiatry as one of the four “subjects in which somewhat general aid still seems wise, but with the especial aim of developing research in them.”

Some authors have suggested that two grants by the DME to support psychiatric research in the 1920s were precursors to the emphasis on psychiatry in the 1930s. Although there is some evidence of a new general interest in the “science of the mind” by the foundation in the mid-1920s, it was limited and tentative. Analysis of internal documents about the funding of the first psychiatry project, partial support for a new building at Emil Kraepelin’s Institute for Psychiatric Research in Munich, reveals that it was the result more of a combination of unrelated circumstances than of a conscious decision about long-term funding for a new field. In fact, Pearce was originally unimpressed by Kraepelin, and only after a recommendation by Simon Flexner and a visit by Gregg to Munich did Pearce recommend support for Kraepelin’s institute. The trustees voted at their May 1926 meeting to grant $325,000 for the construction of a new building for the Munich institute.

Gregg had been impressed enough with what he saw in Munich to suggest that psychiatry might be an area worthy of more DME support. This came in response to Pearce’s letter about “things on his mind,” in December 1925. Gregg speculated on what would happen in five years’ time, once all the European medical schools had been considered for possible aid. His suggestion to Pearce was for the division to support “the concentrated investigation of a single subject” in medicine. Although Gregg’s first example was physiology, he went on to add, “The beginnings of a study of the field of psychiatry, which my visit to Kraepelin’s clinic provided, is somewhat the thing I have in mind developing, in relation to other branches of medicine.”

Pearce agreed on the need for new approaches, recognizing that what he had done in England had only limited applications beyond what was planned for French-speaking countries. As he admitted to Gregg, “Certainly outside of Germany and Austria, we can do nothing significant on the clinical side in the ordinary medical school.” Pearce went on to acknowledge that Gregg’s idea arising from the Kraepelin project was something he had “at the back of my head during the past several years,” but this was not because of a compelling need he saw for research in psychiatry. In fact, any number of research fields might do. Specifically, Pearce suggested,
We can help advancement through stimulating work in certain research institutes which can train a higher type of men as graduates. Whether or not we decide to do anything for Kraepelin doesn’t matter, but I should be prepared to do the sort of thing we contemplated for Kraepelin somewhere in Europe for psychiatry, neurology, pediatrics, if we find the right concatenation of circumstances.”

Pearce, it seems, saw the project primarily as a vehicle for broadening the program of the DME. The matter was dropped, and Gregg did not investigate a second project in the field until November 1928, when Oskar Vogt requested support for his brain research in Berlin.

It is, therefore, difficult to conclude that Gregg and Pearce were interested in launching a research initiative in the field of psychiatry until the circumstances of the 1928 reorganization and change of personnel produced the opportunity to support such a program. The most important effect of these initial projects was, in hindsight, to provide a learning experience for the Americans about European psychiatry. This was strikingly similar to what Simon Flexner had originally hoped in his remarks to Vincent in 1925. Responding to Vincent’s assessment that the U.S. “badly needs psychiatric clinics,” Flexner suggested a strategy “to help a few clinics in Europe as training for Americans and others to build up psychiatry in their own countries.”

Once the decision was made to support psychiatry, Gregg did a remarkable job of developing the discipline by providing a combination of support for innovative and traditional institution building, following along the lines established by the DME in the mid-1920s. In 1929 Gregg and Pearce obtained approval from the trustees for a ten-year, $1 million project to support neurology and psychiatry at the Yale Institute of Human Relations, jointly funded by the Social Sciences division. Gregg then showed his skill and experience by developing large grants, beginning with one to Penfield at McGill University in Montreal, followed by support to a number of departments and institutes in America and Europe. Despite this success, Gregg always aimed at broader medical reform, which was repeatedly denied first by Mason and then by Fosdick and the trustees, who preferred to limit the Medical Sciences division to psychiatry, while leaving support for other medical science fields to Weaver’s approach.

The details of the organizational politics, as well as the personal debates and struggles of Gregg in the Medical Sciences division and the larger foundation, have been well covered by his biographer Penfield and by Steven Wheatley’s institutional history of Rockefeller and the reform of American medical education. Hence, the following are observations about Gregg as director of Medical Sciences and an assessment of the foundation’s impact on European biomedicine, given the new strategy of the foundation in the
1930s. After 1930 Gregg was one of the few of the inner circle of foundation officers with medical training. Yet this education, which had been an asset when the foundation had placed a high priority on the improvement of health, not only was less relevant after the reorganization, but in some ways actually hindered Gregg’s ability to work toward the foundation’s new goal of advancing knowledge. For example, because he had never gone into practice himself, Gregg was especially sensitive to the needs of the medical practitioner. As Gregg wrote to his wife shortly after becoming director of the Medical Sciences division, “If only I could have one of all the prospects I work on, some day prove to have been necessary in the understanding and prevention of some important disease I’d feel justified in having deserted the practice of medicine where you know you’re of help even if not much use in a strict sense.” Gregg’s medical training thus tempered his view of the new emphasis on research from the practical perspective of the practitioner.

Gregg was also the foundation officer in the New York office with by far the most international experience. In fact, he had only lived in the U.S. for a two-year period since he left his medical residency in 1916 to join the British Expeditionary Force. Gregg recorded an example of his very different perspective almost immediately after he took up his responsibilities as director of Medical Sciences. The occasion was an Executive Committee meeting on 2 February 1931, where there was a proposal for the foundation to make an appropriation to the American Red Cross for unemployment relief. As badly as the Depression was affecting America, Gregg reported to his wife in a letter at the time, “I have seen more misery and suffering than anyone in this room in Europe during the past six years.” Gregg’s point was not to outdo others in stories of suffering but rather to stress that “the RF has been greatly respected for its tenacious adherence to study, preparation, and farsighted constructive programs. If [the] policy of RF is to be dictated by emotion and sympathy, the officer in the less fortunate countries will have some difficulty . . . in explaining it to applicants for similar aid to local emergencies.” One officer (Thomas M. Debevoise) responded, “The RF is an American corporation and its funds are of American origin and that measures taken by the RF to meet American emergencies could hardly be criticized.” This justification paled in comparison to Gregg’s argument: “I have lived abroad so long that human misery is human misery regardless of nationality and yet I do not feel that this proposal is sound as policy.” No action was taken on the proposal.

Gregg’s time overseas gave him a broader perspective on the world, but it also meant that he lacked experience in the everyday politics of U.S. academics, an area in which Weaver had an advantage over him. Gregg was quick to establish contacts, having had experience doing national surveys in Europe, but his focus, of necessity, was on medical schools. Weaver’s expe-
perience in a university department of mathematics meant he needed to learn a lot about medicine, but he certainly knew about scientific disciplines and academic departments, as well as the other natural sciences that might be applied to medical questions. In addition, because Weaver was not tied to any earlier approaches, he welcomed the elimination of Natural Sciences’ obligations for institutional support, preferring the advantages of more limited research grants. Wea

Weaver deferred to Gregg as the senior administrator, and both men recorded a personal appreciation of each other in their reminiscences. Just as with the strength of his expertise in medicine, however, Gregg was unable to take advantage of his seniority or familiarity with the trustees to bring them around to his way of thinking about Medical Sciences funding. They were unwilling to approve larger and longer-term commitments to institutions, or research with more clinical applications, preferring Weaver’s smaller, short-term grants for research on more fundamental scientific problems.

Most histories give Fosdick credit (or blame) for supporting Weaver in the disagreements with Gregg. This was despite the fact that during the 1930s Gregg and Fosdick had much in common and grew very close in other respects. They were not far apart in age (seven years) and were among the few officers left who had known the “greats” of the foundation. Fosdick began working with Rockefeller Jr. before the First World War and was named a trustee in 1921. When Rose hired Gregg in 1919, he told Fosdick about the promising young Harvard Medical School graduate, although Fosdick did not meet Gregg until a 1924 visit to Paris. Gregg recognized Fosdick’s importance during the reorganization and increased his contact with him when he became director of Medical Sciences, including some personal correspondence outside official channels. For his part, Fosdick recognized Gregg’s experience, perceptivity, and honesty, not to mention his devotion to the foundation. Fosdick wrote the foreword to Penfield’s biography of Gregg, calling him one of his “right-hand men” but also acknowledging some of their differences of opinion.

The men drew much closer together as relations between Mason and the trustees deteriorated in 1935, and this closeness continued after Fosdick became president of the foundation in July 1936. For example, Fosdick wrote a personal note to Gregg after a month in office, where he expressed the realization that in the past six years the foundation had spent $140 million, “a tremendous sum of money.” He confessed, however, to having doubts. “What mark have we left? Have we genuinely influenced the tide of human affairs by what we have done?” Fosdick stressed that this was not a prelude to another reappraisal or the beginning of a formal audit. In fact, the note invited Gregg to Fosdick’s summer house in Connecticut for “discussion in leisurely fashion” about “whether this $140,000,000 has
been spent in ways that effectively increase the sum total of human happiness and welfare."129

Despite this close relationship, Gregg was unable to convince Fosdick to change the policies he had set in motion during reorganization. Gregg had his own explanation for this, as expressed in a “Prophecy on RBF” which he wrote in February 1936, as problems with Mason were coming to a head five months before Fosdick took over as president. In an otherwise flattering portrait of the man, Gregg noted, “He lacks the desire to settle things once and for all, preferring temporary and inconclusive makeshifts if these be necessary to avoid decisions he dislikes.” Despite this observation, which reflected Gregg’s inability as yet to win over Fosdick in his dispute with Weaver, Gregg had confidence that he would prevail in the future. Later on in the “prophecy” about Fosdick’s pending presidency, Gregg wrote, “The first year or two will see the NS fused with the MS and possibly WW’s [Weaver’s] departure on the basis of lack of knowledge of his field.” Gregg proved a better judge of Fosdick’s character than a prophet of institutional change.130

MEDICAL SCIENCE PROJECTS AND FELLOWSHIPS

The Medical Education division of the Rockefeller Foundation had a broad and indirect impact on medical research in Europe in the 1920s, given the nature and evolution of the division. Things changed in the 1930s as the new Medical Sciences division focused its attention on the increase of knowledge, but the impact varied among countries. After the reorganization, the two most significant Medical Sciences programs were fellowships and project grants, reflecting the goal of moving away from large-scale capital expenditure or endowment grants. Although the ultimate impact on biomedical research is best judged on a country basis, an overview of these two kinds of grants is useful in completing the picture of the evolution of the foundation’s strategy and its overall influence on biomedicine in Europe.

Looking first at project grants awarded by the Medical Sciences division through 1939 (see Table 2.3), one can see how Europe was overshadowed, compared to the U.S., thanks in large measure to the merger of the GEB medical programs with the DME.

Only in three years did the amount of funding for projects in Europe exceed that in North America. Moreover, the total number of awards for North America was double and the funding amount almost triple that for European projects in these years. The main reason for the difference was that more than half of the funding ($3.9 million) went toward Gregg’s institutional support of psychiatry at medical schools and hospitals in American universities ($2.66 million) and Penfield’s Neurological Institute at McGill ($1.25 million) (see Table 2.4).
### TABLE 2.3

**Major Grants Awarded by the Medical Sciences Division in Europe and North America (Dollars), 1929–1939**

<table>
<thead>
<tr>
<th>1st Year of grant</th>
<th>North America</th>
<th></th>
<th></th>
<th>Europe</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Amount</td>
<td>No.</td>
<td>Amount</td>
<td></td>
</tr>
<tr>
<td>1929</td>
<td>11</td>
<td>1,940,300</td>
<td>1</td>
<td>331,200</td>
<td></td>
</tr>
<tr>
<td>1930</td>
<td>5</td>
<td>757,000</td>
<td>2</td>
<td>304,000</td>
<td></td>
</tr>
<tr>
<td>1931</td>
<td>4</td>
<td>395,000</td>
<td>6</td>
<td>551,500</td>
<td></td>
</tr>
<tr>
<td>1932</td>
<td>5</td>
<td>1,465,152</td>
<td>2</td>
<td>129,000</td>
<td></td>
</tr>
<tr>
<td>1933</td>
<td>3</td>
<td>529,500</td>
<td>1</td>
<td>16,400</td>
<td></td>
</tr>
<tr>
<td>1934</td>
<td>13</td>
<td>867,950</td>
<td>3</td>
<td>60,000</td>
<td></td>
</tr>
<tr>
<td>1935</td>
<td>7</td>
<td>731,250</td>
<td>4</td>
<td>826,550</td>
<td></td>
</tr>
<tr>
<td>1936</td>
<td>10</td>
<td>306,250</td>
<td>2</td>
<td>128,250</td>
<td></td>
</tr>
<tr>
<td>1937</td>
<td>3</td>
<td>100,000</td>
<td>7</td>
<td>229,000</td>
<td></td>
</tr>
<tr>
<td>1938</td>
<td>4</td>
<td>316,000</td>
<td>1</td>
<td>12,750</td>
<td></td>
</tr>
<tr>
<td>1939</td>
<td>5</td>
<td>296,280</td>
<td>6</td>
<td>150,500</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>70</td>
<td>7,704,682</td>
<td>35</td>
<td>2,739,150</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Rockefeller Foundation Annual Report (1929–1939).*

*Notes:* Grants were usually for multiyear projects. In such cases, the total amount eventually awarded is given for the year in which grants were announced. “Major” grants are defined as projects mentioned in the *Rockefeller Foundation Annual Report*.

### TABLE 2.4

**Rockefeller Foundation Medical Sciences Support for Psychiatry Departments at U.S. Medical Schools (Dollars), 1929–1939**

<table>
<thead>
<tr>
<th>Medical school</th>
<th>Total funding of project</th>
<th>First year of funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yale</td>
<td>1,300,000</td>
<td>1929</td>
</tr>
<tr>
<td>Harvard</td>
<td>226,000</td>
<td>1933</td>
</tr>
<tr>
<td>Johns Hopkins</td>
<td>105,300</td>
<td>1934</td>
</tr>
<tr>
<td>Colorado</td>
<td>80,000</td>
<td>1934</td>
</tr>
<tr>
<td>Michigan</td>
<td>51,000</td>
<td>1934</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>114,000</td>
<td>1934</td>
</tr>
<tr>
<td>Chicago</td>
<td>318,000</td>
<td>1935</td>
</tr>
<tr>
<td>Illinois</td>
<td>80,000</td>
<td>1936</td>
</tr>
<tr>
<td>Tulane</td>
<td>54,000</td>
<td>1936</td>
</tr>
<tr>
<td>Washington U. (St. Louis)</td>
<td>150,000</td>
<td>1938</td>
</tr>
<tr>
<td>Columbia</td>
<td>100,000</td>
<td>1938</td>
</tr>
<tr>
<td>Catholic U.</td>
<td>85,000</td>
<td>1939</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,663,300</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Rockefeller Foundation Annual Report (1929–1939).*
In fact, excluding this support, the remaining funding for research projects in North America ($3.8 million) is much closer to the Medical Sciences division’s funding in Europe between 1929 and 1939 ($2.7 million).

One trend evident in the European projects is the relatively small size of grants. Moreover, although the numbers fluctuated, the size declined over time, thus conforming, despite Gregg’s protest, to the pattern championed by Weaver of more frequent and smaller project grants. Nine projects were funded in Europe in the first three years of the division’s existence, averaging over $130,000, whereas fourteen grants were made in the last three years of the decade, averaging slightly more than $28,000 each.

Although relatively fewer grants were made in Europe, the total of thirty-five projects from 1929 through 1939 had potential significance, especially considering how they were distributed by country and discipline. Judging by the trustees’ grants, the best researchers were in Britain and Germany. In the four years from 1929 through 1932, five of the eleven awards went to German researchers. It is significant, however, that only one project was funded in Germany after the Nazis came to power. This was a $19,600 appropriation in 1937 to Kurt Beringer at the Neuropsychiatric Clinic of the University of Freiburg for research assistants, equipment, and supplies. Thus, the foundation clearly shied away from new commitments to projects in Hitler’s Germany.

The German researchers’ loss, however, was British researchers’ gain, as indicated by a dramatic increase in the number of projects funded there. Before 1933 only two grants went to researchers in the U.K. Both went through the government’s Medical Research Council (MRC): one for $13,000 to Henry Dale in London to study viral diseases, and the other for $105,000 to study the cause of puerperal fever at Queen Charlotte’s Maternity Hospital in London. From 1933 through 1939, however, thirteen of the twenty-four grants in Europe went to the U.K. The remaining eleven grants were spread among researchers in nine countries, with no other country having more than two. These European research grants were increasingly in psychiatry and related fields, thus reflecting the shift of focus of the Medical Sciences division. Thus, only three of the eleven awards from 1929 to 1932 were in these fields, but nineteen of twenty-four grants in the remainder of the 1930s were for research in such fields as psychiatry, psychology, neuroanatomy, mental illness, and brain chemistry.

An assessment has yet to be done as to how much the Rockefeller Foundation may have influenced psychiatric research in Britain. The lesson from other European countries, however, is that more funding did not always assure more influence. A few Rockefeller grants could have an important impact, especially if there were no other funding for medical science. The case of Italy has been noted, beginning with developmental funding in the late 1920s. In the 1930s the most spectacular case was Hungary, where one
grant, as Gábor Palló shows, was the catalyst to “make a peak on the plain.” The work of the Szent-Györgyi team at the University of Szeged was greatly helped by a four-year grant of $155,000, jointly funded by the Medical Sciences and Natural Sciences divisions beginning in 1931.131

Fellowships were the other major mechanism of foundation support for medical research, and they were very extensive, in their duration as well as the different forms of support and the numbers of researchers who received awards. This variety makes it difficult to analyze the fellowships in comprehensive fashion.132 Anecdotal evidence has always suggested that the fellowships may have been the most important of all Rockefeller Foundation support in the long run. The awards were highly prized, and there were few alternative sources of support, especially for young researchers. Hence, almost any scientist who achieved prominence from the 1920s to the 1950s was likely to have been a Rockefeller fellow.

This certainly does not mean that the Rockefeller Foundation can claim credit for all subsequent work, nor that research would not have been done without the fellowship support. Yet for a number of individuals, especially in Europe during the 1920s and 1930s, as well as the immediate postwar period until the mid-1950s, a year’s support from the foundation to study in a top-level research laboratory made an important difference. For example, Louis Rapkine was a French biochemist who did significant research in the 1920s but gained greater recognition for assisting expatriate French researchers during the Second World War and arranging for external support for France after 1945. In his later years he wrote to Weaver about what influenced him most in his life: “It is of course true that I owe the most to my parents, but it is equally true that I owe the next most to that Rockefeller Board which gave me training almost in spite of my proud foolish self.”133 Likewise, the daughter of Giuseppe Levi, the famous anatomist at the University of Turin who greatly impressed Gregg, wrote in her autobiography that her father often spoke of the five things he most appreciated in life: “socialism, Zola, his beloved mountains, the Valle d’Aosta guides and . . . the Rockefeller Foundation.”134 A final example can be found in the autobiography of Robert Millikan, the American Nobel laureate, who called the fellowships “the most effective agency in the scientific development of American life and civilization that has appeared on the American scene in my lifetime.”135

In 1959 the foundation conducted a census of all fellowships given from 1917 to 1950. A detailed analysis of the fellowships awarded in fields of biomedicine and health is contained in Table 2.5. The total number of fellowships (more than 6,000) suggests that a great deal of time was required to administer the program. Some shortcuts were used through regranting agencies, such as the National Research Council (NRC) in the
### TABLE 2.5
**Rockefeller Foundation Fellowships in Biomedicine and Health, 1917–1950**

<table>
<thead>
<tr>
<th>Country</th>
<th>Public Health</th>
<th>Nursing</th>
<th>Medical Sciences</th>
<th>Natural Sciences (biochemistry, biology, biophysics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>9</td>
<td>3</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>Belgium</td>
<td>2</td>
<td>11</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>35</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>53</td>
<td>12</td>
<td>24</td>
<td>17</td>
</tr>
<tr>
<td>Denmark</td>
<td>6</td>
<td>16</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>England</td>
<td>4</td>
<td>16</td>
<td>136</td>
<td>62</td>
</tr>
<tr>
<td>Finland</td>
<td>8</td>
<td>23</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>France</td>
<td>17</td>
<td>45</td>
<td>48</td>
<td>35</td>
</tr>
<tr>
<td>Germany</td>
<td>5</td>
<td>2</td>
<td>82</td>
<td>42</td>
</tr>
<tr>
<td>Greece</td>
<td>24</td>
<td>8</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Hungary</td>
<td>40</td>
<td>23</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>Iceland</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Ireland</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Italy</td>
<td>23</td>
<td>7</td>
<td>26</td>
<td>11</td>
</tr>
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<td>Latvia</td>
<td></td>
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<td>1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>8</td>
<td></td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>N. Ireland</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>15</td>
<td>10</td>
<td>18</td>
<td>9</td>
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<td>Poland</td>
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<td>Portugal</td>
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<td>7</td>
<td></td>
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<tr>
<td>Romania</td>
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<td>16</td>
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<td>Scotland</td>
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<td></td>
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<td>Sweden</td>
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<td>Switzerland</td>
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<tr>
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<td>1</td>
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<tr>
<td>Yugoslavia</td>
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<td>All Europe</td>
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<td>375</td>
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<tr>
<td>Worldwide</td>
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<td>689</td>
<td>1,263</td>
<td>577</td>
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</tbody>
</table>

U.S., the MRC in Britain, and the Notgemeinschaft der deutschen Wissenschaft in Germany, but the majority of fellows were selected by Rockefeller staff members. Moreover, because the typical fellowship was for a young researcher to spend time in a research facility in another country, this required additional work for the staff. The reason the foundation invested so much time was not just to nurture budding researchers for the future growth of science and medicine; fellowships also fostered the communication of new discoveries and techniques. Also, as Robert Kohler has noted, by providing occasions for discovering which institutions had the facilities, organizing talent, and resources for research training on a large scale, the fellowships helped the foundation’s officers keep abreast of worthy prospects for large-scale research support.136

The number of fellowships indicated for health-related fields (more than 4,400) was a significant majority of the 6,342 fellowships awarded by the Rockefeller Foundation during this time period (see Table 2.5). Thus, it confirms the prominence of health for the foundation’s philanthropy. Fellowships in Europe, although not quite as dominant, were a sizable proportion of the biomedical fellowships, representing more than half of all fellowships worldwide in the medical sciences (54 percent) and natural sciences (65 percent) fields.

The evolution of this pattern of support can be seen in the fellowships awarded by the Medical Education and Medical Sciences divisions from 1920 to 1939. Table 2.6 is based on the annual reports only of the Medical Education and Medical Sciences divisions.

Again, one can see how extensive the numbers of fellowships were (almost 3,000), even if the dollar amount awarded (less than $3.5 million) was relatively small by Rockefeller standards. A significant number of the fellowships for North America were administered through the NRC (617), for Britain through the MRC (187), and special German agencies (482). Although this helped with the burden of administration, judging by the records of correspondence of the staff, the fellowships still required a great deal of attention. The NRC fellowships began in 1922 with joint funding by the GEB. Following the model of the fellowships in chemistry and physics, these awards were open to U.S. and Canadian citizens and typically supported thirty to forty researchers each year.137 A similar program began in 1924 through the British MRC with funding for about a dozen fellowships annually.

Thanks to Abraham Flexner’s intervention, from 1924 through 1927 an emergency program supported researchers mostly in Germany but also in some other central European countries. Funds went to pay for equipment and supplies, as well as fellowship stipends for researchers to continue work in their own labs. These “residential” fellowships were aimed at keeping positions open until budget constraints no longer threatened their elimina-
tion. In 1928 a more restrained and formal program was established through
the Notgemeinschaft to award traveling fellowships to around a dozen re-
searchers from Germany each year. A limited version of this program also
was briefly established for Hungary. The only other change in the fellow-
ship program lasted for a short period in the mid-1930s, when funds were
earmarked for fellowships in psychiatry, but this designation was soon
dropped in favor of the flexibility afforded the undesignated fellowship
program.138

TABLE 2.6
Rockefeller Foundation Medical Education and Medical Sciences
Fellowships (Dollars), 1920–1939

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>11</td>
<td>13,500</td>
</tr>
<tr>
<td>1921</td>
<td>10</td>
<td>17,574</td>
</tr>
<tr>
<td>1922</td>
<td>42</td>
<td>30,167</td>
</tr>
<tr>
<td>1923</td>
<td>91</td>
<td>84,261</td>
</tr>
<tr>
<td>1924</td>
<td>463</td>
<td>226,062</td>
</tr>
<tr>
<td>1925</td>
<td>311</td>
<td>362,841</td>
</tr>
<tr>
<td>1926</td>
<td>182</td>
<td>277,690</td>
</tr>
<tr>
<td>1927</td>
<td>218</td>
<td>221,774</td>
</tr>
<tr>
<td>1928</td>
<td>166</td>
<td>235,609</td>
</tr>
<tr>
<td>1929</td>
<td>167</td>
<td>256,521</td>
</tr>
<tr>
<td>1930</td>
<td>166</td>
<td>217,651</td>
</tr>
<tr>
<td>1931</td>
<td>150</td>
<td>235,140</td>
</tr>
<tr>
<td>1932</td>
<td>168</td>
<td>216,806</td>
</tr>
<tr>
<td>1933</td>
<td>161</td>
<td>224,164</td>
</tr>
<tr>
<td>1934</td>
<td>162</td>
<td>227,403</td>
</tr>
<tr>
<td>1935</td>
<td>130</td>
<td>146,282</td>
</tr>
<tr>
<td>1936</td>
<td>97</td>
<td>89,445</td>
</tr>
<tr>
<td>1937</td>
<td>97</td>
<td>104,851</td>
</tr>
<tr>
<td>1938</td>
<td>90</td>
<td>130,469</td>
</tr>
<tr>
<td>1939</td>
<td>89</td>
<td>124,080</td>
</tr>
<tr>
<td>Total</td>
<td>2,971</td>
<td>3,442,290</td>
</tr>
</tbody>
</table>

Notes: These include regular fellowships, 1920–1939, National Research Council fellow-
ships jointly funded with the General Education Board beginning in 1922, fellowships ad-
ministered through the Medical Research Council (Great Britain) beginning in 1924, emer-
gency aid to Germany from 1924 to 1927 and through the Notgemeinschaft from 1928 to
1935, and emergency aid to other central and eastern European countries from 1924 to
1926.
The long record of fellowship support for Europe was abruptly suspended in 1939 by the beginning of the Second World War. In fact, the war was a major turning point for the Medical Sciences division and the Rockefeller Foundation as a whole. Its immediate effect was to disrupt programs in Europe, but it was also a terrible disappointment to anyone working in philanthropy. In the long run, the war also marked the beginning of the end of the role that the foundation had played in the world since 1913, thanks to the Cold War and increasing government support for scientific and medical research, which quickly overshadowed the efforts of foundations.

Given his experience in Europe going back to service in the First World War, Gregg was particularly disillusioned by the outbreak of the war. Indeed, he claimed that it was one of the main reasons for his pacifism (or anti-nationalism) before the United States entered the war after the bombing of Pearl Harbor. Even in the worst years of the conflict, however, he wrote long-range and perceptive observations about postwar reconstruction and the role of the foundation. Despite Gregg’s desire to move quickly to provide assistance for medical and scientific research in the wake of the German surrender, the constraints of larger political forces such as the Cold War limited the foundation’s role in medical science to reestablishing communications and sharing new information between researchers cut off by wartime.

The importance of the Rockefeller Foundation diminished after 1945 because of the enormous task of rebuilding Europe and the increased role of governments in the process. In addition, changes in the foundation by successors to Fosdick placed even greater emphasis on short-term grants and diminished further the importance of medicine. As a result, Gregg became increasingly unhappy with his position. In March 1951 he wrote a confidential letter to Chester Barnard, who followed Fosdick as president of the foundation, admitting his disappointment with the current situation. He had no sympathy especially with “the policy of spending the Foundation out of existence nor, on the other hand, with the policy of making large numbers of small grants-in-aid.”

The following month, at the April trustees meeting, Barnard recommended a merger of the IHD and the Medical Sciences division into a Division of Medicine and Public Health under Robert Morison. The change was approved, and Gregg became vice-president of the foundation. This freed him to pursue his growing interest in writing and speaking about medicine, which he had pointed out to Barnard in his March 1951 letter “and in talking with persons undertaking new enterprises in medical education and research organization.” He remained in that position, traveling and speaking on behalf of physicians, medical education, and research worldwide until his retirement in 1956. Alan Gregg died 19 June 1957.
CONCLUSION

The Division of Medical Education of the Rockefeller Foundation was established in 1919 to support medical education and research around the world. Yet when the DME began, its two largest grants (for Great Britain and Belgium) had already been decided. Thereafter, despite surveys of every major country in Europe and several others elsewhere, no large projects followed on the same scale.

The reasons were many, but most were related to the unfortunate strategy followed by Pearce, the first DME director, and Gregg, his associate director, after 1922, which focused most of their attention on “Latin” medicine. They did so as much by process of elimination as by following the principle of return on investment. By their reasoning, the reform of British medical education and research was accomplished early at University College London, the London School of Hygiene and Tropical Medicine, and Edinburgh. The division gave only relatively small grants to labs at Oxford and Cambridge thereafter. Moreover, since the British had already begun medical education reform before the First World War, the foundation’s impact was less dramatic.

The division had relatively little time to influence German medicine. It was precluded from involvement in Germany, at first because of negative feelings in the aftermath of World War I in addition to the view that German medicine was already well established. Although this changed by the end of the 1920s, it was not long before the Nazis came to power in 1933, and the division restricted its activity in Germany. Scandinavia and the North Sea countries were thought to be too small to have much impact beyond their borders, and many individual researchers were taken care of by the IEB (later the Natural Sciences division) and the IHB. The foundation’s medical divisions faced a paradox in eastern Europe and Ireland, in that they were the countries most in need and most anxious for aid but were written off for some of the same reasons as Scandinavian and North Sea countries: small size and little influence. In addition, some doubted whether the researchers in these countries could make use of funds, because of political uncertainty and the lack of local resources. This view was reinforced by considerable cultural bias on the part of foundation officers.

Given these perceptions of conditions in Europe, the Rockefeller Foundation officers and trustees were drawn inexorably to a “Latin” strategy, with France (Paris) as the main target and Italy closely linked, while Spain and Latin America plus some of the eastern European countries were expected to follow if France could be induced to adopt modern scientific medicine. The irony is that most of the French did not want help, a fact most clearly evident in the failure of the proposal of new facilities for the Paris medical
school. After the foundation’s reorganization in 1928 and the failure of reform in Paris, when Gregg succeeded Pearce, he found his geographical options greatly expanded to include the U.S. Programmatically, however, he was forced to concentrate on bio-psychiatry, while Weaver and the new Natural Sciences division moved into “vital processes.” This became the base for new fields in experimental biology, including molecular biology.

How important were Pearce, Gregg, and their divisions of Medical Education and Medical Sciences in changing biomedicine from the 1920s to the 1950s? There is always a question about who deserves credit for change in fields supported by external research funding: the grantor or the grantee. Pearce had time only to support a few substantial projects in Britain, where they were part of other, government-funded reforms. Gregg served longer in the two divisions and oversaw far more projects and expenditures than Pearce did. He certainly was responsible for making an impact on the practice of psychiatry and related neurological fields, especially in the U.S. But the main importance of these grants was the introduction of psychiatric departments in medical schools and hospitals. Despite Gregg’s explicit efforts to give psychiatric research a more scientific grounding, the breakthroughs in pharmacological psychiatry that accomplished this revolution grew out of research supported by pharmaceutical companies and the government after World War II.144

There is ample material from which to draw some conclusions about Gregg’s own assessment of his role. He was very introspective and has left many private observations about what was going on around him. Although he took pride in what he was able to do for psychiatry, Gregg clearly had a broader vision of what the Rockefeller Foundation might achieve. He was most disappointed by the shift away from larger, long-term projects toward the more focused, short-term grants after the reorganization of the foundation in the 1930s. A 1937 memo shows how far-sighted and perceptive Gregg was about the fundamental transformation that small, short-term grants made in the relationship between grantor and grantee:

We are really in many cases a University playing hide and seek in other universities’ buildings. We select the kind of work to be done (or they sagaciously anticipate our wishes), we choose the personnel and we pay the bill. But we don’t accept the responsibility for personnel or for the future. And it is in the short-term, small-amount, square-in-program items that the most unfortunate results of such a relationship appear. The work itself is fragmentary and inconclusive, the employees are timid and restless, and the University uncertain or resentful.145

After the Second World War Gregg recognized another trend with far-reaching consequences: government support for medical research. “The
present policies in the National Institutes of Health,” he noted in the 1949 report of his Medical Sciences division, “have been derived more from Rockefeller experience than anywhere else.” He did not, however, see this as a point of pride, especially since “it seems clear that the trustees’ insistence on (1) no endowments and (2) no long-term support has resulted in large numbers of small grants.” The best that could come of these two developments, Gregg noted sarcastically, was, “Thanks to this imitation, the Foundation no longer risks becoming the largest distributor of chicken feed in the country.”

Even if Gregg could not alter the changes in Rockefeller philanthropy, he witnessed them and left his critique from firsthand experience. Gregg’s legacy is, therefore, not just in the projects he developed and approved, but also, equally as important, the observations and warnings about this shift of philanthropy and funding. To a great extent, Gregg’s prophecy has become an entrenched feature of contemporary scientific and medical research.

NOTES


2. It is not surprising that the most extensive account of Pearce’s work was by Alan Gregg, “The Work of the Rockefeller Foundation in Medical Education and the Medical Sciences, 1920 to 1929 Inclusive, under the Direction of Richard Mills Pearce, Jr., M.D.,” *Rockefeller Foundation Quarterly Bulletin*, 5 (1931): 358–374. Gregg is also the source of the infrequent biographical references to Pearce in contemporary literature on the history of medicine, such as Joseph C. Aub and Ruth G. Hapgood, *Pioneer in Modern Medicine: David Linn Edsall of Harvard* (Cambridge: Harvard Medical Alumni Association, 1970).


6. For background, see below and the Ma chapter in this volume.


10. Minutes of the Rockefeller Foundation trustees meeting (hereafter cited as RF trustees minutes), 3 December 1919, 19136, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, Rockefeller Archive Center, Sleepy Hollow, New York (hereafter referred to as RAC); and Gregg, *Reminiscences*, 141–146. Obituaries offer very little additional information about Pearce. See, for example, *New York Times*, 17 February 1930, 21; and *Journal of the American Medical Association* 94 (1 March 1930): 650.

11. Rose to Embree, 13 January 1919, folder 3, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC. This and subsequent chronology are drawn from an internal history of the Rockefeller Foundation, available in the reading room at the RAC under the title “Source Book for a History of the Rockefeller Foundation” (unpublished manuscript, RAC), hereafter cited as “Source Book.”


13. Pearce to Rose, 24 May 1916, folder 3, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

14. RF trustees minutes, 26 September 1916, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.


16. Rose to Embree, 13 January 1919, folder 3, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

17. International Health Board (IHB) minutes, 20 May 1919, 19060–19063, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

Plans for the Belgian project can be traced back to a visit to the New York foundation headquarters in early May 1919 by René Sand of the Belgian Health Ministry. There he met with Embree, Rose, and Flexner to ask for support of a new medical center in Brussels. See Embree officer’s diary, 9 May 1919, RG 12.1, Rockefeller Foundation Archives, RAC.

19. Rose telegram, 30 January 1920; Rose to Vincent, 3 February 1920; Rose to Vincent, 14 March 1920, folder 1, box 12, series 700A, RG 1.1, Rockefeller Foundation Archives, RAC.


21. Embree to Vincent, 21 July 1920, folder 121, box 6, series 700A, RG 1.1, Rockefeller Foundation Archives, RAC; and RF trustees minutes, 22 October 1920, folder 1, box 1, series 700A, RG 1.1, Rockefeller Foundation Archives, RAC.


26. Pearce to Vincent, 30 December 1921, folder 3, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

27. On Gregg’s surprise, see *Reminiscences*, 145–146. Penfield has written the definitive biography of Gregg, based also on the Alan Gregg Papers, MS C 190, subsequently deposited in the National Library of Medicine, Bethesda, Maryland (hereafter referred to as AGP NLM).

28. Although Gregg’s *Reminiscences*, 136, 146, state that Pearce offered him the job in Brazil, Pearce’s diary states that he first considered Gregg in April and offered him the position back in New York in May, while Gregg was seeing Rose about his next assignment in Spain. Pearce officer’s diary, 4 April 1922 and 16 May 1922, RG 12.1, Rockefeller Foundation Archives, RAC. Regardless of timing, Gregg was happy to return home, as reflected in Gregg’s letter to his parents, 6 July 1922, box 2, AGP NLM.


30. On Carter, see Pearce officer’s diary, 19 August 1922, RG 12.1, Rockefeller Foundation Archives, RAC; “Source Book,” 2672; and a brief biography dated 29 January 1931, box 19, AGP NLM. The RF trustees confirmed Carter at their 6 December 1922 meeting.


33. Ibid., 225.

34. Pearce officer’s diary, 12 September 1922, 2 December 1922; conference with Gunn, 2–11 April 1923, appendix to Pearce diary, 1923, RG 12.1, Rockefeller Foundation Archives, RAC.

35. Gregg, *Reminiscences*, 225–227. This was an understatement, to say the least. Gregg’s personal papers include charges that Eversole used his position to seduce a series of young male traveling secretaries by bribes and threats. See notes and memos, 11 November 1925 and 5 April 1928, “Rockefeller Foundation, 1927–29” folder, box 25, AGP NLM.
36. On O’Brien, see Pearce officer’s diary, 23 June 1926 and box 23, AGP NLM; on Lambert, see “personal history,” box 19, AGP NLM.


38. See RF Annual Report (1924), 14–16, 331–332. By 1932 there were twenty-four volumes in the series, with almost 450 articles, on many other topics besides the surveys. See RF Annual Report (1932), 210. Copies of most of the unpublished surveys of medical education and public health can be found in folders 515–543, boxes 44–49, series 1.3, RG 6.1, Rockefeller Foundation Archives, RAC.

39. For Ireland, see the Lyons chapter in this volume, and for France, see the chapter by Picard and Schneider.

40. See the Lyons chapter in this volume.

41. Gregg to “Ma,” 22 May 1925, box 2, AGP NLM.

42. “Source Book,” 3801.

43. Gregg, Reminiscences, 225, 231–232.


45. Penfield, The Difficult Art of Giving, 166–168. According to records at the time, these were much more complicated negotiations than Penfield describes. Pearce began considering the idea of Gregg’s going to Paris immediately after Pearce returned from Europe in May 1923. But it was not until 3 January 1924 that formal agreement was reached with Gregg and President Vincent. See Pearce officer’s diary, 29 May, 24 June, and 25 June 1923 and 3 January 1924, RG 12.1, Rockefeller Foundation Archives, RAC; and Pearce to Gregg, 5 November 1923 and 17 January 1924, box 24, AGP NLM.

46. Gregg, Reminiscences, 220–222.

47. Ibid., 187–188.


49. Ibid., 223.

50. Pearce to Gregg, 24 October 1924, box 24, AGP NLM.

51. Examples of Pearce’s support are from Pearce officer’s diary, 5 December 1924, 12–25 February 1925, RG 12.1, Rockefeller Foundation Archives, RAC. See also Pearce to Gregg, 6 June 1924, 24 October 1924, and 3 March 1925, box 24, AGP NLM. The report on Italian medical education can be found in folder 26, box 3, series 751, RG 1.1, Rockefeller Foundation Archives, RAC.

52. For another example of this worldview in Rose’s International Education Board, see Kohler, Partners, 150–156.

53. IHB minutes, 20 May 1919, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

54. RF trustees minutes, 24 May 1922, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

55. Ibid.

56. “Memorandum for Dr. Pearce,” 14 September 1922, folder 116, box 16, series 906, RG 3, Rockefeller Foundation Archives, RAC.

57. Pearce officer’s diary, 18–19 September 1923, RG 12.1, Rockefeller Foundation Archives, RAC. Embree’s choice of Lyon was not random; in fact, he had met with the dean of the Lyon Medical School during his visit there.

58. Gregg to Pearce, 29 February 1924, folder 5, series 500A, RG 1.1, Rockefeller Foundation Archives, RAC.


60. Pearce to Vincent, 15 January 1925, folder 3, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.


63. Pearce to Gregg, 23 March 1925, folder 116, box 6, series 700A, RG 1.1, Rockefeller Foundation Archives, RAC.

64. RF trustees minutes, 6 November 1925, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.


66. RF trustees minutes, 6 November 1925, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

67. Gregg officer’s diary, 23 March 1926, RG 12.1, Rockefeller Foundation Archives, RAC.


69. It was divided as follows: $9,000 to Belfast and $23,000 each to the Dublin schools. See “Source Book,” 3900.

70. Ibid., 3828–3829.

71. Pearce to Gregg, 20 November 1925, folder 116, box 6, series 700A, RG 1.1, Rockefeller Foundation Archives, RAC.

72. Pearce to Gregg, 28 December 1925, folder 116, box 6, series 700A, RG 1.1, Rockefeller Foundation Archives, RAC.

73. Ibid.


75. For a detailed narrative chronology, see “Source Book,” 4581–4627.

76. See “Report on the Faculty of Medicine at Lyon,” prepared for RF trustees meeting of 25 May 1927; and on the trustees meeting of 4 November 1927, see Norma S. Thompson to Lépine, 10 November 1927, folder 28, box 3, series 500, RG 1.1, Rockefeller Foundation Archives, RAC.

77. Charléty to Pearce, 23 February 1928, folder 28, box 3, series 500, RG 1.1, Rockefeller Foundation Archives, RAC.

78. Vincent to Gunn, 2 February 1928, folder 28, box 3, series 500, RG 1.1, Rockefeller Foundation Archives, RAC. For more on this, see the Picard and Schneider chapter in this volume.

79. RF trustees minutes, 13 November 1929, 29442–29443, as cited in “Source Book,” 4661–4662.

80. Gregg to Lambert, 12 April 1933, box 19, AGP NLM; and Gregg, Reminiscences, 216.

81. The standard historical account is by Fosdick, Story, 135–144, who was also the principal architect of the change. The archival record of the reorganization is found in folder 122, box 17, series 900, RG 3, Rockefeller Foundation Archives, RAC. The most thorough historical reexamination of these changes is by Robert E. Kohler, “A Policy for the Advancement of Science: The Rockefeller Foundation, 1924–1929,” Minerva 16 (1978); and Kohler, Partners, 233–264.

82. Fosdick, Story, 135–138. Kohler, Partners, 238, characterizes the study and plans as more of a “widening” process that evolved in both scope and depth, especially late in 1927,
than an attempt to reorganize the philanthropy based on a new goal. Fosdick’s ultimate organizing principle (advancement of knowledge) came only after an unsuccessful search for “a rational organization into which these various programs would all fit.”

83. Pearce to Gregg, 10 February 1930, box 24, AGP NLM.
85. Wheatley, The Politics of Philanthropy, 156. There is only one memo in the RAC archives from Pearce on reorganization: Pearce to Fosdick, 24 February 1926, folder 122, box 17, series 900, RG 3, Rockefeller Foundation Archives, RAC.
86. Gregg officer’s diary, 1 November 1924, RG 12.1, Rockefeller Foundation Archives, RAC; and Gregg, “Memorandum on Reorganization,” 24 July 1926, folder 122, box 17, series 900, RG 3, Rockefeller Foundation Archives, RAC.
87. Pearce to Gregg, 11 March 1926, box 24, AGP NLM.
88. Pearce to Gregg, 26 October 1927, box 24, AGP NLM.
89. RF trustees minutes, 3 January 1929, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC. The report, hereafter called the Edsall Report, can be found in folder 7, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.
90. On Edsall’s disagreements with Flexner, see Wheatley, The Politics of Philanthropy, 149–151.
92. Ibid., 8.
93. Ibid., 33–34.
95. Gregg to Pearce, 26 March 1929; Pearce to Gregg, 10 April 1929, box 24, NLM AGP.
96. Staff conference, 10 and 13 January 1930, folder 4, box 1, series 906, RG3, Rockefeller Foundation Archives, RAC.
97. Kohler, “Management of Science,” 286; see also Thompson to Mason, 31 March 1930, folder 1, box 1, series 915, RG 3, Rockefeller Foundation Archives, RAC.
98. Pearce to Gregg, 10 February 1930, box 24, AGP NLM.
99. Ibid.
100. For details about Mason, including his relationship with the trustees that eventually brought his departure, see Kohler, Partners, 245, 273–275.
101. As quoted in Penfield, The Difficult Art of Giving, 209. Mason’s diary confirms the meeting and the topic discussed, but with little detail. His brief note, however, reveals why Gregg may have been anxious. Mason recorded, “General discussion of the M.S. MM indicates that many subjects will need a leisurely and extensive discussion.” Mason officer’s diary, 19 May 1930, RG 12.1, Rockefeller Foundation Archives, RAC.
102. Ibid.
103. Alan Gregg to Eleanor Gregg, 30 October 1930, box 2, AGP NLM.
105. Alan Gregg to Eleanor Gregg, 30 October 1930, box 2, AGP NLM.
106. Gregg personal diary, 4 February 1931, box 5, AGP NLM.
109. For background on how Weaver came to this focus for his division, see Kohler, Partners, 278–282.

112. Gregg to Aub, 1 February 1957, 3–4, box 12, AGP NLM.

113. Edsall Report, 1; see also Edsall’s “Memorandum regarding possible psychiatric developments,” 3 October 1930, folder 19, box 2, series 906, RG 3, Rockefeller Foundation Archives, RAC.

114. See, for example, Brown, “Alan Gregg,” 160–163


116. For Pearce’s initial reaction, see Pearce officer’s diary, 18–19 March 1925, RG 12.1, Rockefeller Foundation Archives, RAC. Although Simon Flexner did not know Kraepelin, he told Vincent the German psychiatrist’s work was “the sort of thing that ought to be encouraged—psychiatry coming to the front as a most important subject which has been too much ignored.” See Vincent officer’s diary, 2 July 1925, RG 12.1, Rockefeller Foundation Archives, RAC. For subsequent meetings and the trustees’ vote, see Pearce to Kraepelin, 21 July 1925; Kraepelin to Pearce, 8 and 17 August 1925; Vincent officer’s diary excerpt, 2 September 1925; and RF trustees meeting, 6 November 1925, 25276–25279, folder 1, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.


117. Gregg personal notes, 4 December 1925, box 24, AGP NLM.

118. Pearce to Gregg, 28 December 1925, folder 116, box 6, series 700A, RG 1.1, Rockefeller Foundation Archives, RAC.

119. Vincent officer’s diary, 2 July 1925, RG 12.1, Rockefeller Foundation Archives, RAC.

120. In addition to Wheatley, *The Politics of Philanthropy*, see other articles cited in Note 110. For a summary of his own work, see Gregg’s article, “Emphasis on Psychiatry,” which he authored for the *Trustees Confidential Bulletin* of October 1943. An excerpt can also be found in folder 18, box 2, series 906, RG 3, Rockefeller Foundation Archives, RAC.


122. Alan Gregg to Eleanor Gregg, March 1931 (no day recorded), box 2, AGP NLM.

Emphasis in original.

123. Gregg personal diary, 2 February 1931, box 5, AGP NLM.


126. See for example, Gregg to Fosdick, 27 October 1930, box 16, AGP NLM. It was Pearce who taught Gregg the value of multiple means of communications.


128. See, for example, Fosdick to Gregg, 29 January 1935; Gregg to Fosdick, 7 September 1935, box 16, AGP NLM.

129. Fosdick to Gregg, 29 July 1936, box 16, AGP NLM.
130. “Prophecy on RBF,” 7 February 1936, box 16, AGP NLM.

131. For more, see the Palló chapter in this volume.

132. For background, see below. For an initial attempt at an analysis, see Jean-François Picard and William H. Schneider, “The Development of Biomedical Research in Europe,” in Managing Medical Research in Europe, ed. Gemelli et al., 35–40. Some of what follows is drawn from that article.


137. On the establishment of the program, see folder 2065, box 169, series 200, RG 1.1, Rockefeller Foundation Archives, RAC.

138. For more detail, see the relevant RF Annual Report.

139. On Gregg’s initial pacifism, see Penfield, The Difficult Art of Giving, 286–290.

140. See, for example, Gregg to Fosdick, 16 July 1943, box 16, AGP NLM.

141. For the example of France, see Zallen, “Louis Rapkine”; on the special case of aid to West Germany, see the Weindling chapter in this volume.

142. Penfield, The Difficult Art of Giving, 294–297. See, for example, Gregg to Chester Barnard, 27 October 1950, box 16, AGP NLM.

143. Gregg to Barnard, 5 March 1951, box 16 AGP NLM, also quoted at length in Penfield, The Difficult Art of Giving, 299–300. For a further discussion of this, see Wheatley, The Politics of Philanthropy, 186–192.


To be fair, in 1937 Gregg laid out a three-stage “Strategy of our Program in Psychiatry,” only the first of which—improving teaching at U.S. universities—he had the time or money to support. 1 November 1937, folder 4, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC. When Morison took over his new division, he acknowledged the progress in teaching psychiatry but reported to his superiors, “Psychiatric practice is still without a scientific foundation.” Morison to Andrew J. Warren, 11 April 1951, folder 4, box 1, series 906, RG 3, Rockefeller Foundation Archives, RAC.

145. “Medical Research—Programs and Policies,” 5 March 1937, box 8, AGP NLM.

146. Penfield, The Difficult Art of Giving, 295. This was not the first time Gregg used the “chicken-feed” phrase. In the 5 March 1937 memo, “Programs and Policies,” box 8, AGP NLM, he observed, “The officers’ time is pulverized by small grants and the correspondence and interviews attendant upon the reputation of being in the small grant business. It is just as much work to make sure of the honesty and effectiveness of a small grant as a larger one. And the habit of short periods for small grants invited acceptance of more uncertain projects—and hastens the time when all is to do again for a renewal, or an extension or a rejection. We haven’t the time without large increases in staff to develop a huge dispensary of chicken feed.”
INTRODUCTION

Addressing the Medical Society of the King and Queen’s College of Physicians of Ireland in 1870, William Stokes (1804–1878) said that in the past fifty years “a great school of Practical medicine, Surgery and Midwifery” had been established in Dublin, of such a character “as to constitute at least one source of legitimate national pride, so much wanting in Ireland; a possession which to any country is more to be valued than wealth or power, or the barbarous triumphs of war.” He was speaking of what is sometimes called the “golden age” of Irish medicine, an attractive and well-established concept, but who shall say when it began or ended, or if its existence be beyond challenge?

The school that Stokes praised so highly comprised the collective efforts of Dublin University’s School of Physic, the Royal College of Surgeons in Ireland (RCSI), and some unchartered or private schools. These included Kirby’s School in Peter Street, the Park Street School, the Carmichael School, and the Catholic University Medical School in Cecilia Street, important as the forerunner of the present-day University College, Dublin (UCD).2

The Rotunda Hospital, the first midwifery or lying-in hospital established (1745) in the English-speaking world, had given Dublin doctors an expertise in obstetrics, and many Irish anatomists and clinicians earned eponymous fame there. The terms “Colles’s fracture,” “Cheyne-Stoke’s breathing,” “Graves’ disease,” and “Corrigan’s pulse” are still in use.3

Throughout the nineteenth century, journals were available in Ireland for those who wished to contribute to medical literature. Published first in 1808, the *Dublin Medical and Physical Essays* was succeeded in 1817 by the *Dublin Hospital Reports*. The Association of the Fellows and Licentiates of the King and Queen’s College of Physicians published its *Transactions* be-
between 1817 and 1830. The Dublin Journal of Medical Science (first published in 1832 as the Dublin Journal of Medical and Chemical Science) continues to circulate as the Irish Journal of Medical Science. The growth in journals was paralleled by a growth in university facilities, which by the 1850s were found in the provincial cities of Cork, Galway, and Belfast.

Whatever happened to the golden age of Irish medicine? This seldom-posed question lacks any satisfactory answer, but its demise was predicted as early as the mid-nineteenth century by Thomas Seward Holland (1828–1857) of Cork, who graduated in Edinburgh, studied under Carl Rokitansky in Vienna, and returned to his native city in 1851. Holland began to teach pathology in 1852 and did not mince words about the situation as he found it. He issued a warning: “The Irish School of Medicine has . . . reached its culminating point, and must of necessity decline if we continue basking in the sunlight of our teachers’ names.” He continued:

> Medicine and surgery are no longer to be learned, by the bedside exclusively; the products of disease should not be hastily cut into, and then cast away; the excretions are now examined, not for form’s sake, but with the intent of deriving information from them, such as can be obtained in no other way; with a microscope, and chemical reagents, the physician, while in his study, frequently learns more of the true nature of the case, than he has done in the sick-room.4

The acceptance of these tasks was time-consuming. Clinicians and others who flourished later in the Victorian age found that the advances that were presented to them and the expansion of surgery permitted by antisepsis and anesthesia increased their work, leaving less time for research.

When Stokes confessed in his 1870 address that “looking at the body of literature relating to scientific medicine,” Ireland’s share of it was comparatively small, he had Holland’s observation as a warning. Having failed to keep up with “microscopic morbid anatomy, and pathological chemistry,” he insisted that “it is the deficiency in our schools and hospitals, as to the use of the scientific method that demands to be pointed out.” Leaving aside “the palatial institutions” on the European continent, he admitted that “compared with London and Edinburgh, Dublin was deficient not alone in the investigation of disease by the modern application of physical science, but also in affording means of instruction to the students in this direction.”5

A series of famines decimated the Irish population in the nineteenth century, and medical reforms were further delayed as the nation was riven by political strife in the first quarter of the twentieth century. The Irish Free State was established in 1922 but at the cost of partition: Six northern counties remained under British rule.
EARLY SURVEYS AND PUBLIC HEALTH SUPPORT

In *The Health Services of Ireland*, Brendan Hensey referred to the situation in the early 1920s as “administrative tumult,” and Ruth Barrington has described how a “clandestine” Local Government Department from the first Dail (1919) and a “demoralised” Local Government Board from the old regime “were integrated as a new department of health on 1 April 1922.” Paramount among problems facing Irish officials was an economic question: *How were they to fund their operations?* The authorities in the medical schools were equally concerned, and both groups thought of the Rockefeller Foundation as a possible source of aid.

It may be said at the outset that the foundation made an important contribution to public health in Ireland and provided resident and traveling fellowships in the universities, but one is left with the impression that the schools were disappointed with what they received. One reason is that the approach of Irish doctors and officials was uncoordinated and divided. They had little real understanding of the foundation’s pragmatism—it did not exist to help lame dogs over fences, real or imagined. Contrary to the usual principle of charity, the foundation’s “peaks higher” strategy aimed to assist the *strong*, rather than to help the weak, to promote the *successful* and discourage falterers. It exemplified perfectly the un-Christian aspiration of *Land of Hope and Glory*: “God who made thee mighty, make thee mightier yet.”

It is unnecessary here to refer to the history of the Rockefeller Foundation in any detail. By the early 1920s, through its International Health Board (IHB), the foundation had helped to combat hookworm infection, malaria, yellow fever, and other diseases on a global scale and was undertaking a broadening program in public health. It established schools of hygiene in America and abroad. Strongly influenced by Abraham Flexner’s report on medical education in the United States and Canada, the General Education Board (GEB) earmarked $45,000,000 for medical education in the United States. This, indeed, was liberality on a colossal scale. The China Medical Board was created, and the Peking Union Medical College dedicated in 1921. Medical schools in Europe received grants from a Division of Medical Education (DME), which the foundation established in 1919. In the United Kingdom, medical schools in London, Cardiff, Oxford, Cambridge, and Edinburgh benefited, and Irish educators would have looked enviously at their neighbors’ good-fortune.

Wickliffe Rose (1862–1931), director of the IHB and formerly a professor of philosophy, visited Dublin in April 1922 at the invitation of Sir Edward Coey Bigger, medical commissioner to the Irish Free State’s Local Government Board. They both agreed to await a politically stable situation...
before organizing a public health system on a county basis and establishing a central diagnostic laboratory. Selskar Gunn (1883–1944) of the IHB visited in November 1922; he returned with his colleague Col. Frederick F. Russell (1870–1951) a year later.

Accompanied by another colleague, George Bevier (b. 1870), Gunn came to Dublin again in May 1924. They spent nearly three weeks traveling in the country and produced the first extensive report on health and medical care in the Irish Free State. In their survey they concluded that the public health service was “distinctly backward and cannot be compared with the corresponding situation in England.” They recommended fellowships for health officers and for those who held administrative posts in the Department of Local Government and Public Health (DLGPH). The time was not yet ripe to start a laboratory.

Dr. Edward F. Stephenson, whom the Rockefeller officials described as “a very forceful and most active man,” had succeeded Sir Edward Coey Bigger as chief medical adviser to the department of health. An Irish Chief Justice whom the Americans met said that he approved of any effort to improve public health in Ireland but “doubted whether one could ever get the Irish to do anything.” The Americans often encountered this point of view. Among the poorer classes, they frequently reported “a slovenliness and degradation out of proportion to the degree of poverty.” They related it to a time when absentee landlords charged for improvements. “The landlords, then, put a premium on being poor, slovenly and unprogressive, and they did these things with a vengeance.”

Gunn and Bevier estimated that a doctor in practice earned about £1,000 a year. Rural doctors charged £1 per visit or nothing at all. Laboratory methods were little used, other than in medical centers. Midwives attended births more frequently than doctors did, partly because of their cheaper fees, partly because of the rural women’s “misguided prudishness.”

Visiting a laboratory in Trinity College Dublin (TCD), where the student body was almost exclusively Protestant, Gunn and Bevier met Dr. Joseph Warwick Bigger (1891–1951), son of Sir Edward Coey Bigger and an able young researcher. They reported, “At the laboratory of the National University, Doctors O’Kelly and O’Farrell make examinations on the specimens sent to them personally, fees for which are presumably paid directly to them. There are no records, and the doctors are even unable to estimate the number of examinations made.”

There were many other examples offered by the report of backward health care in Ireland. Bartley O’Beirne, the full-time tuberculosis doctor in Galway, seldom sent sputum for examination, saying that the cases were too advanced to require diagnostic confirmation. The Irish clergy were opposed to the Wassermann test for venereal disease. Unmarried mothers were segregated from the married in delivery wards. What was to be done
with a girl who was wed a week before her delivery? If she were housed with the married women, these women would object to “a girl who had been indecent,” while if she were housed with the unmarried, the hastily wed girl herself would object “to being put in the shed with the fallen women.”

After the visit by Gunn and Bevier, the Rockefeller Foundation followed its usual pattern of assistance in public health. Dr. Robert P. McDonnell, a chief inspector in the DLGPH, and Dr. Matthew Russell, medical officer for health in Dublin, visited the United States under the auspices of the IHB in the fall of 1925. Nine fellowships were granted to Irish doctors intending to pursue careers in public health as county medical officers for health.

Reviewing progress in 1928, Stephenson and his colleagues in the DLGPH stated “that never could they have gotten their public health organization and schemes under way had they not had the offer of the Rockefeller Foundation’s grants.” The IHB, too, regarded its undertakings in Ireland with considerable satisfaction.

MEDICAL EDUCATION AND THE GREGG SURVEY

Despite this early cooperation in public health, requests to the Rockefeller Foundation for help with medical education met with a very different response. When the Reverend John Henry Bernard (1860–1927), provost of Trinity College Dublin, sought a contribution from the foundation in 1923 toward the cost of building a reading room, he was told that his request did not come within the foundation’s interests. He wrote again in 1924, explaining that political circumstances had reduced the university’s income, restricting its ability to engage in scientific research. The chair of bacteriology in Trinity College had been suspended, and Trinity College desired to reestablish it properly. In response to Bernard’s request for a grant-in-aid, George Vincent (1864–1941), president of the Rockefeller Foundation, confirmed the foundation’s interest in medical education in Ireland and indicated that a visit was planned by Richard M. Pearce (1874–1930), the former pathologist who was director of the DME.

Gunn and Russell had seen laboratories at TCD and UCD during their short visit in 1923. Gunn had reported thus to Pearce:

There is a very strong desire at Trinity College for D.M.E. fellowships and Dr. Russell and I believe that there would be a good opportunity in this direction. The financial situation of Trinity College is distinctly critical. One gets the impression that the National University—which of course is Catholic—is being favoured. In our very short visit to Trinity College we discovered that the Department of Pathology and Bacteriology was in serious need of equipment for the fitting up of two teaching laboratories.
Gunn believed that the time was ripe for the DME to make a study of medical education in Ireland.

Sir Edward Coey Bigger visited the United States in 1924. On his return, he interviewed representatives of TCD, the National University of Ireland (NUI), and the RCSI, giving them forms to complete in relation to the proposed survey of medical education in Ireland. He stressed “that the giving of the information in no way implied any promise of help from the Rockefeller Foundation.”

Meanwhile, Denis Coffey (1865–1945), president of UCD, wrote to the Rockefeller Foundation 20 November 1924 to appeal for aid “towards the building and equipment of Medical Departments of the College which now worked in old buildings with very imperfect equipment from the point of view of Medical Education.” The college, he explained, had received inadequate funding since its beginning in 1909. A capital sum of £200,000 would provide all they needed for departments of anatomy, physiology, biochemistry, and bacteriology. A Rockefeller official acknowledged the appeal but reinforced Coey Bigger's warning that the foundation's request for information was part of a survey on world conditions of medical education and did not imply any promise of aid in a particular case. The rumor that £500,000 had been earmarked for Ireland circulated, nevertheless, and was printed in the Irish Statesman.

These reports prompted others to make requests and give advice to the foundation. For example, claiming the authority of a person who had himself devoted seven years to research (including four years in the Rockefeller Institute), Henry Moore (1887–1954), physician to the Mater Misericordiae Hospital, wrote to the foundation independently 12 December 1924. He had nothing to gain personally, he said, by any action the foundation might take in Ireland, but he believed it to be “of the utmost importance that your investigators should insist upon coming into direct contact with all the interests concerned, as there may be an effort made by a group to prevent this.”

P. J. Merriman (1877–1943), president of University College, Cork (UCC), began a letter of appeal 13 January 1925 by stating that, as Cork was “in the next parish” to the United States, it was appropriate that the Rockefeller Foundation “should found there a tête de pont for its beneficent invasion of the Old World.” The physiology and public health departments could be profitably helped, Merriman believed.

Bernard inquired in March if a visit from Pearce might be expected. He had hoped for an opportunity “to lay personally the position of our Medical School, and in particular, of our Bacteriological Department, before you in more detail than is possible in a typewritten statement.” He expected to be in New York himself in June for the commencement at Columbia University and would be available for interview.
Moore met Alan Gregg (1890–1957), associate director of the DME, when Gregg finally visited Ireland in Pearce’s stead in 1925 for the long-anticipated survey. He showed the American the Mater Hospital, and they talked late into the evening. Moore wrote to Vincent in June to disclose that funds amounting to between £100,000 and £150,000, “originally collected for a philanthropic purpose,” would become available in the near future for a use other than that for which it was at first intended. Moore, encouraged by James G. Douglas, deputy chairman of the Irish Free State Senate, believed he could secure the money for medical education and research, “provided that a further sum would become available from other sources.”

On being reminded that the DME was concerned with education rather than research, Moore suggested that the foundation’s grant of £150,000 to £200,000 should provide buildings for UCD, which, in addition to the teaching departments of a medical school, would accommodate a research department. Moore remarked pointedly that TCD “has excellent, and I think wholly adequate buildings.” In private comments, Gregg rejected Moore’s bias favoring UCD and disapproved of the promotion of a Medical Research Council, which he felt the standard of primary medical education did not justify.

As luck would have it, a controversy erupted at the time of Gregg’s survey when the Irish Free State government decided to establish an independent medical register for Ireland in accordance with its new national status. It was, however, uncertain whether the British General Medical Council would give automatic recognition to Irish medical degrees, with damaging consequences to the schools if it failed to do so. Pearce believed, incorrectly, that a separate Irish register would lead to a reduced number of graduates, resulting in the elimination of medical training at Cork, Galway, and the RCSI, weakening TCD, and leaving UCD as the principal school.

Gregg forecasted that Galway “would die” and Cork would be “doomed to slow extinction.” TCD would “put up a long and able fight to maintain itself,” but the future probably depended on “a medical school in the National University supported by national funds and aided by other funds.” It was unlikely that TCD and the NUI would unite, and, in the circumstances, the Rockefeller Foundation should not immediately formulate a program for Ireland.

At this time of uncertainty, the best Pearce could say to Gregg was that “there is for every country an ideal program.” He continued with Byzantine subtlety:

It might not always be possible of development but at least after making a survey one should know the ideal program and be able to state it. We of course are not interested in compromising or in adjusting the interests of
various factions. Having decided on an ideal program we can assist it or not as we see fit.

In future I think it might be well to keep this point in mind and remember that in stating an ideal program you do not necessarily recommend it, for very few ideal plans are capable of fruition, but an ideal program is always a point towards which we can work with or without compromise as circumstances determine.29

A letter from Bernard, the provost, informed Gregg that “conversations” regarding medical registration had taken place between William Cosgrave and medical representatives, “and they have been conducted without quarrelling or hard words.” He hoped that the Rockefeller trustees would not be deflected from whatever “benevolent intentions . . . they may have had in regard to Dublin and to the Trinity College Medical School in particular.”30

Gregg recorded his impressions of the educational situation in the Irish Free State in his diary during his visit from Paris. He also compiled a 304-page report for the DME.31 Rockefeller Foundation officials were obviously at pains to maintain fairness in their dealings with TCD and UCD, but, when reading the documents, one gains the impression that the Americans were more at ease in the company of TCD’s Protestants than in that of UCD’s Roman Catholics. There was, too, a suggestion of hostility toward Irish nationalism.

The weakness of the historical preamble of Gregg’s report, so uninformed about the Land Acts, may be judged by the following extract:

Previous to the rebellion in 1916, most of the land in Ireland was owned by the members of English aristocracy. Since the rebellion in 1916, however, most of these landowners have been driven out and it remains to be seen how the administration of the land previously owned and since purloined from these previous owners is to be administered.32 (emphasis added)

Gregg neglected to mention the fact that these lands had been previously “purloined” from the Irish inhabitants by English settlers more than 250 years before and seemed unaware that holdings transferred to former tenant farmers were paid for at acceptable rates arranged by the Land Commission.33

Gregg also drew a parallel between the Irish situation and that obtaining in the American colonies after the American Revolution. The ruling “Free Staters” represented little “in tradition, education, intelligence or administrative experience.” Cosgrave was “an intelligent but not an educated man,” and Eoin McNeil, the director of education, was a professor of history “steeped if not quite lost in the remote intricacies of Irish lore” and said to be a poor administrator.34
Gregg found TCD to have “superior labs and superior clinical facilities, in spite of the grave defects of the latter, to any other school in Ireland.”35 The medical school was supported by a group with fine traditions and considerable intellectual prestige. UCD, under the “strictly National programme of medical instruction,” was likely to be the most important school in the future. Gregg described it as “weak, ineffective and ill-supported at the present, and its weakness in the future will be due to the very relationship which may also prove its strength, namely its closer relationship with the Free State Government.”36 His comments on the RCSI, UCC, and University College, Galway (UCG) were dismissive. Belfast (which had the best clinical facilities of all),37 TCD, and UCD should have the only faculties of medicine.

Gregg acknowledged that the Free State medical schools required better clinical facilities, adequately equipped modern buildings, and the amalgamation of the smaller hospitals, which should be under academic instead of religious auspices. To this end, however, he only recommended that the foundation give opportunities to enable a few able young men to continue their training in medical science by way of resident or traveling fellowships. Those responsible for medical instruction should be educated in regard to the more important conceptions of medical education, which in Ireland was dominated by “the authority of the practitioner” and the aim of training a young man to be able “immediately after education to undertake a practice, rough and ready if need be, under the conditions which obtain in Ireland or England or elsewhere in the Colonies.”38 A government commission should first be appointed to study medical education and to make recommendations.

Gregg’s disparaging survey was not open to Irish negotiators, and, experienced as he was in conducting country surveys, his Irish hosts could not easily have read his mind. They nevertheless appreciated by now that stores of manna were unlikely to be deposited incontinently by the Rockefeller Foundation. Their pertinacity was a measure of their need. Professor David Barry (1870–1955) of Cork was the most persistent, and Gregg, writing to Vincent, said, “His is a case for economy of correspondence on our part.”39 Not all Irish correspondents were thus shrugged off; the observations of Bigger Jr. of TCD, for example, were generally regarded with considerable approval.

By 1927 the political situation was stable and the registration problem amicably settled, but, after two years, Gregg accepted that the government was not going to appoint a commission: “They don’t feel they need it, and they know quite well that selection of such a commission would involve quarrels and difficulties which they are in no position to assume at present.”40 He drew up a plan to provide TCD and UCD with three assistant-
ships each for a five-year period. The scheme of developmental aid would come into operation gradually, starting in the fall of 1928. The cost of stipends and equipment would be approximately $77,000, and the specialities catered for were hygiene (an essential subject in both schools), physiology and biochemistry, anatomy, pathology, and pharmacology. There would be additional traveling fellowships for selected individuals, but the Rockefeller Foundation avoided becoming involved in a building program.\

Given the raised expectations, it is not surprising that Gregg’s recommendations were met with disappointment. Professor Barry of Cork, conscious of UCC’s “utter failure to obtain aid,” made no attempt to conceal his bitterness at the resulting loss of prestige. He wrote to the president of the foundation in January 1928:

I have no wish to cavil unnecessarily, but I desire to convey to you my honest impression that, so far from benefiting by the visit and survey of our school by your representative more than two years ago we have fallen back some as a result. From no source can we now get grants; yet efforts and results in investigation in my laboratory . . . are and have always been far greater than in any other laboratory of similar means and material.

Your foundation has, I understand, given as a reason for the blank drawn by Ireland the instability of the political situation and the uncertainty about the Irish Medical Register. Both these problems are finally and definitely settled. So I would beg once more your consideration for this struggling school of ours.

Possibly as a sequel to this angry letter, Merriman submitted to the foundation on 6 March 1928 proposals for establishing in the university a public health laboratory for Cork city and county. Making the case that the projected development should interest the DME as well as the IHB, Merriman recalled the foundation’s benefactions elsewhere:

Knowing that the Rockefeller Foundation is international in its interests and activities [he continued], we note with regret that no effective case for a contribution towards medical education seems to have been as yet made by any University Institution in this country in spite of our notorious lack of resources.

Merriman went on to stress that the project had government approval and that, as Cork offered exceptional advantages, UCC wished to discuss the matter with the foundation. In the IHB, however, it was felt that it would “be irrational to establish a branch laboratory before the main one was established.”
THE COLLIS AFFAIR

Just as these disappointments with Gregg’s proposed aid began to appear, an unexpected development muted the disagreement between Irish medical leaders and the officers of the Rockefeller Foundation. A young Irishman, later to be a leading pediatrician, Dr. Robert (“Bob”) Collis, then a trainee at the Johns Hopkins Hospital, made an independent approach to the foundation. Born in Killiney, County Dublin, in 1900, young Collis was educated in England at Rugby School, Cambridge University, and King’s College Hospital, and in the United States at Yale; he played rugby for Ireland in 1924, 1925, and 1926. Having been house-physician at the Hospital for Sick Children, Great Ormond Street, he decided on a career in pediatrics, and the Medical Research Council (MRC) in London gave him a research fellowship enabling him to work with Ned Park at the Johns Hopkins Hospital in Baltimore, Maryland. While there, he learned from prominent Irish Americans of the existence of a large sum of money donated by supporters of Irish nationalism, which must soon be returned to the donors unless appropriated for use in Ireland for an acceptable cause.

What cause could be better, young Collis asked, than child welfare? With the decisiveness that was to characterize his career, he immediately sought to enlist in the support of his crusade the Rockefeller Foundation and George Russell (better known by his nickname AE), poet, mystic, and editor of the Irish Statesman, then visiting America.44

On 21 February 1928 the young man corresponded with his father, W.S. Collis, chairman of the board of the Meath Hospital, who intimated that he had spoken to Sir William Taylor. Taylor felt that they should get Cosgrave and Ernest Blythe interested in the matter. Taylor promised to speak to Dr. Stephenson, chief medical officer to the DLGPH, who would approach Cosgrave. Collis senior would speak to Sir James Craig, M.D., who represented Trinity College in the Dail, and would also arrange for the younger Collis to meet Dr. Edward Lennon, a member of the board of the Meath Hospital, “who saved Mrs. Cosgrave’s life, and is very intimate with Mr. Cosgrave.”

Bob Collis was critical, as young men tend to be, of the situation in Dublin: “Our existing institutions are not only useless as far as their building is concerned, but their medical staffs are not composed of pediatricians at all, but of general practitioners.”45 A school of pediatrics should be established in Dublin, but opposition must be expected, he pointed out, for at least three reasons:

(1) The doctors on the staffs of the present so called hospitals will say the fund would be better spent in helping the already existing institutions. (As
has already been pointed out, bolstering up the present rotten system is of little real value, though some amalgamation and co-operation with the present institutions is possible.)

(2) The Roman Catholic Church will strongly urge the fund to be placed under its control, and that children in a Catholic country need its care perhaps more than anybody else. (This is true, but it would be impossible to run a teaching centre in an organization entirely controlled by Nuns. It would however be possible to co-operate absolutely with the Church both in the wards—a Chapel and a Chaplin [sic] being provided—and in the outpatients, where the Almoner Department could be in their hands almost entirely).

(3) Each University—Trinity and the National—would want the chair. (Here we stipulate that the chair is independant [sic] of both Universities, and the Colleges of Physicians and Surgeons, but associated with all four. It would be the first plank in the bridge of union.46

Under such circumstances, Collis concluded, it would be best to have the fund controlled by those “who see the vision and are prepared to put it into practice.”

On 3 April 1928 Collis handed his memo, “Medical Education in Ireland,” to Pearce, who sent a copy to Gregg. The opening paragraphs explained how some $2 million collected in America for political purposes remained unclaimed, and certain of the trustees were of the opinion that it should be used for the real benefit of the Irish people:

It is considered that Child Welfare would be the object most likely to appeal to the bond holders. The trustees feel that under the circumstances, especially if some assurance was forthcoming from the Rockefeller Foundation to the effect that they would support a scheme for general medical education and reorganization in Dublin, a minimum of $1,000,000 (possibly $2,000,000) could be obtained for Child Welfare in Ireland.

They feel that the best way such a fund could be spent, would be in establishing a School of Pediatrics in Dublin, rather than presenting the existing inefficient organizations with such a large sum. It is proposed to form a committee of Pediatricians to work out such a plan, the enclosed plan, based on figures obtained from the Hospital for Sick Children, Great Ormond Street, London, is very roughly the lines along which it is proposed to work.47

The Irish government had been urged to set up an impartial commission. AE, the writer and artist just then visiting America, had assured Collis that he would be prepared to act as an intermediary. Collis continued:

The fact that George Russell has promised to help is of the greatest importance, he has been about the strongest non-political force in Ireland for a
generation. He has tremendous influence with the Irish Government, and on public opinion through the Irish Statesman. Also while over here he is able greatly to influence Irish American opinion. He has studied education in all forms for years, and has a thorough understanding of the medical needs at the present moment. He will be in New York again in the middle of April for some time before sailing, when it is hoped a conference will be held on the whole matter.48

Duly impressed, Pearce sensed that young Dr. Collis would be satisfied by an expression of moral rather than financial support on the part of the foundation, and it was agreed that on AE’s return to New York a luncheon would be held to discuss the problem. Early in April Collis reported that he and an influential Irishman, Michael Doyle of Philadelphia, were to meet the Irish Minister in Washington. “It is now merely a question of getting the thing launched,” Collis said.49

The luncheon conference held by Rockefeller’s President Vincent and members of his staff on 18 April was attended by AE, Judge Richard Campbell of New York, Collis, and Doyle. Vincent outlined Gregg’s plan to aid both UCD and TCD for a five-year period and underlined the foundation’s policy of avoiding intervention in internal situations, which the Irish themselves must solve.50

AE spoke briefly, giving comparative figures (supplied by Collis) for the average infant mortality rates in the years between 1920 and 1924: Dublin (13 percent), Belfast (11.2 percent), London (7 percent), and New York (6 percent). It had been said, he reminded them, with obvious truth that it was safer to serve in the trenches in the Great War than to be born in Dublin. “I appeal then,” he said, “for the children of Ireland, North and South, East and West begging you to consider this suggestion of mine.”51 He intended to ask the Irish government to arrange with the medical schools to formulate a plan that the government would aid. If this were done, he asked, would the foundation contribute? To which Vincent replied that it was impossible in advance “to write a blank cheque.” It was preferable to say that the Rockefeller Foundation would “await with sympathy and interest the development of an Irish plan for improving medical education.”52

Collis decided temporarily to interrupt his postgraduate studies and research and return to Dublin in furtherance of his educational plan. He sailed with AE on the Samaria on 21 April. They played deck tennis together, and, referring to the voyage in The Silver Fleece, Collis wrote, “For ten days I sat at his feet and learned more of heaven and earth than in all the other years of my life.”53

Back in Dublin, Collis, until then hardly known to the medical “establishment,” found himself regarded with suspicion, his intervention represented. The foundation, too, received criticism for negotiating with AE and
Collis. Moore alleged that the latter had “Rockefeller Foundation” in parentheses on his personal visiting card and was masquerading as the foundation’s informal representative. “People look to Collis as a kind of agent of ours,” the Paris office informed Pearce, “but he is unable to say anything definite. The medical people and the university authorities feel that they have been left out in the cold.”

The interchange of carefully worded letters continued between New York, Paris, and Dublin as the bureaucrats attempted to mend their fences. Not all of this correspondence has survived, but evidently it was decided “that a letter to Collis with copies to the various officials concerned would clear the air.” The letter’s opening paragraph contained a sentence that was manifestly incorrect. The error did not attract Collis’s attention but was to be pointed out by AE, conscious now that he was being “used by others for the furtherance of their own policies.” Collis’s reply was placatory; he denied having given the impression that he was a representative, unofficial or otherwise, of the foundation and regretted “how very annoying this whole business” must have been for Vincent. Collis explained:

As you know, Mr. Russell and I sailed at the end of April. He reached Ireland shortly before I did and immediately started “conversations” with the Provost, Mr. Gwynn and Dr. Coffey. After the lunch on April 18th he considered he had a special mission e.g. that of telling the different sides in Ireland that if they would agree and produce a joint plan that the Rockefeller Foundation might consider helping.

In contrast, AE’s letter to Vincent was angry and direct:

I have received a copy of the letter dated Aug. 7, addressed to Dr. Colles [sic]. I wish to say this, that it is not correct that I sought any interview with you or any other member of the Foundation. I do not know what Dr. Colles may have said to you or written to you. All I know was that I had been asked to meet you and some other members of the Rockefeller Foundation at lunch. . . . Rather to my annoyance I was urged to take some interest in matters of medical politics altogether outside my knowledge. I was very busy and my work, such as it is, lies outside medicine.

AE had given an account of the foundation’s policy as he had heard it from its officials:

I explained to the Provost of Trinity and to Dr. Coffey of the National, exactly what you or Dr. O’Connor told me and no more. I suggested that they might come to some agreement about medical education and research and they tried with the aid of their medical staff to do this, but up to the present as far as I know they did not succeed. I have no responsibility for anything
Dr. Colles [sic] may have said or any scheme he may have tried to promote. I am exceedingly sorry that I was persuaded to deal with this at all. I only wished in writing to you to deny that I sought any interview with you.56

After visiting Dublin in August, Daniel P. O’Brien (1894–1958), assistant director in the foundation’s Paris office, reported to Pearce that he had discussed fellowships, visited the colleges, and spoken with some of the leaders of the profession. Nothing whatever was said publicly regarding “the situation which has arisen between the National University and Trinity College.” In the privacy of his home, however, Moore, “who seems to represent the extreme-left-wing of the National group,” was outspoken and informative. O’Brien continued:

Some of his statements were a bit conflicting. He felt, for example, that all the money of the Foundation, if given now, would not wipe out the feelings of antagonism between the two universities. He mentioned a period of some 25 years as the time necessary for the feeling of tolerance to become developed. On the other hand, he stated that there was a distinctly friendly feeling between the medical groups of the two universities and an inclination toward cooperation even in the immediate future. He indicated that the more fundamental opposition lay in the arts’ groups of the two universities. He thought that Collis had done a certain amount of harm in that he had antagonized certain of the hospital groups by a stupidly-worded circular that he sent around asking for their opinion on the possibility of amalgamation.57

Collis, according to Moore, was seen to have “his own axe to grind” in the sphere of pediatrics. The Trinity group registered appreciation to O’Brien for what the foundation was doing. O’Brien reported, “There seemed to be a distinct feeling that cooperation between the medical schools could be both considered and realized.”

Collis had called on General Richard Mulcahy, minister for local government and public health, and President Cosgrave. He believed they would be cooperative if a scheme were proposed by the foundation. Collis also tried to secure a commitment from O’Brien, but the latter avoided giving any definite undertaking. As O’Brien reported to his superiors:

I have the impression that Collis has been a bit over-zealous and likewise tactless in his methods, but nevertheless deserving of some praise in that, although he definitely has much to gain in his field in Pediatrics by a development in Dublin, he has taken a certain initiative locally and has, I feel, been the cause of a certain favourable “rapprochement” between the authorities of the two schools. He seems to be a neutral party so far as the two groups are concerned.58
O’Brien was satisfied that the foundation’s current policy regarding Irish medicine was sound. Contact with the situation should be maintained with constant emphasis on the attitude of the Irish. “The important thing for them is primarily in building up personnel and not buildings,” he said.

Vincent followed that advice when replying to AE, while not being overly apologetic: “Your letter makes it plain that we misinterpreted your relation to the luncheon in New York. I am sure that Doctor Collis had no thought of misleading us in any way. Thank you sincerely for your frankness in setting us right on this point.”

Sending Vincent in mid-September a copy of the Trinity-National agreement reached by Edward Gwynn, provost of TCD, and Coffey, AE took the opportunity to reaffirm that he had not initiated the luncheon meeting. “I can assure you it would never have occurred to me, a literary man, to go outside my own range of interest or to tackle the problems, esoteric to me, of medical education in Ireland.” He continued:

I gathered from you and Dr. O’Connor that medical education in Ireland was a matter of interest to the Foundation and that there had been difficulties in the past owing to a cleavage of interest between two groups in Ireland roughly representing a Catholic and Protestant cleavage. I myself had heard rumours of this in Dublin before I went to America. It was with this in mind I asked you whether if an agreement could be come to between the two groups so that each might specialise in some branch of medical education which would not involve duplication or conflict, would that be a way out of the difficulty and you replied that [it] might be a possible way out. I thought it only right to repeat what you said to Dr. Gwynn, the Provost of Trinity and to Dr. Coffey, the President of the National University and brought them together in an effort to bring about an agreement which might tentatively be submitted to the Foundation.

AE stressed that he had no intention of involving himself further with medical education, lacking the technical knowledge: “I would get outside my depths if I went beyond the effort to bring the two groups together.” Acknowledging the letter and enclosure, Vincent wrote, “I beg to assure you that we have neither misinterpreted nor in any way resented your obviously disinterested and public-spirited desire to be of service in connection with the medical situation in Ireland. It was a great pleasure to us to have you as our guest in New York.”

When Gwynn and Coffey’s memorandum was read by the Rockefeller Foundation’s officers, Gregg was a trenchant critic. He disagreed with certain recommendations (“Pathology and Bio-Chemistry, entirely wrong grouping. Anatomy and Physiology ditto. Plan shows no conception of modern clinical medicine, nor even an adumbration of the importance of hygiene and bacteriology”) and concluded:
I do not see in the memorandum that the schools are coming together in any other sense than that they hope to receive, at the same time, assistance from us for departments which would not reduplicate efforts. There is no suggestion of exchange of students and joint control of staff or finance is explicitly excluded. This is not in disagreement with your suggestion that the tendency of the two universities to get together might be encouraged. Indeed this is the line to follow, but I know you deplore with me any hasty efforts on the part of the Irish to secure our support before they have thoroughly considered both the magnitude of their opportunity and of their obligations.62

Later, in a memo to Pearce, Gregg was more frank: “Their principal concern at present is ‘What can be done to get R.F. aid? ’ As I see my responsibility to them and to the R.F. it is to get them thinking: ‘What can be done to concentrate all effort and pool all resources for the common good of Irish Medical Education.”63

The reply sent to Dublin by Gregg was couched more diplomatically:

The memorandum you have prepared is the result of co-operated effort between the authorized representatives of two of the most important colleges in the Irish Free State, and it is significant, I believe, that you have raised as the principal question: “What is the position in Dublin”? Thorough exploration of the situation, if made from this broader point of view, might lead to developments in which I think it likely that the Rockefeller Foundation would be interested.64

The secretary of the Medical Research Council in London had been in correspondence, meanwhile, with the Rockefeller Foundation in regard to the postgraduate fellowship that Dr. Collis had so abruptly interrupted to pursue an unconnected objective. The MRC found it difficult to renew it unless “assured that it was particularly desired by the Foundation.”65

Pearce was at pains to indicate that Collis had no connection with the foundation:

The problem of Dr. R. W. F. Collis, your Council should settle as it sees fit. Collis pointed out to us the importance of his return to the Free State in the midst of his fellowship, and we saw no reason to decline his request. I doubt, however, whether he would gain a great deal by returning for a short period of study, I may say frankly that it should not be done as an action recommended by us, and I wish further to make it clear that his return to Ireland was not in any way connected with projects in which we are especially interested, as it was in no sense done at our request. It is true that we have some general interest in medical education and public health in Ireland but no special interest in the project which is uppermost in Dr. Collis’s mind. Please, therefore, make your decision without regard to the Foundation.66
Collis was permitted to resume his training at the Johns Hopkins Hospital. He eventually obtained appointments in Dublin at the Meath, National Children’s, and Rotunda Hospitals. His play, *Marrowbone Lane* (dealing with tuberculosis and slum conditions), was a tour de force; the autobiographical *The Silver Fleece* (1936) is an idyll. The posthumously published *To Be a Pilgrim*—his death in 1975 resulted from a fall from a horse—also was autobiographical. His career is outlined by Davis Coakley in *Irish Masters of Medicine*.67

PUBLIC HEALTH LABORATORY

While the Collis initiative was under consideration by the DME, the Rockefeller International Health Board continued its work in Ireland. The IHB believed a National Public Health Laboratory to be essential for the evolution and development of a scientific basis for Irish medicine. As things stood, laboratory work was “farmed out on a contract fee arrangement either to the laboratories of universities or to local chemists or pharmacists.” This was unsatisfactory from viewpoints of accuracy, speed of service, and dependability. The expected increase in demand could be dealt with by giving aid to the existing labs (which “would undoubtedly appeal to the University clique”), entailing less initial expense, or, preferably, to the health department’s own laboratory. If the government provided a site for the latter and bore the running costs, the foundation would build and equip the laboratory. A sum of $105,000 was set aside for this purpose.

Joe Bigger told Gregg that fees from private diagnostic work in his Trinity College laboratory contributed about £1,800 annually. Most of this would be lost if a central laboratory were established, yet he agreed that it would be unfair of him to oppose it. By September 1931, however, realizing that the “State Laboratory” was more than a vague possibility, Bigger changed his mind in a letter to O’Brien. “Personally I should suffer to the extent of £130 p.a. which, in these days of a depreciated pound, is not pleasant; but the effect on the department as a whole is more serious.”68

The availability of the fund was confirmed by the IHB in 1931, but a Rockefeller Foundation officer’s diary note indicated that there was opposition to the project:

The two professors of bacteriology Bigger and Riley [O’Kelly] for the first time in history got together and waged a political campaign against the local government ministry to protect their personal monetary interests in the present Lab arrangement. The Government facing a general election in February decided to hold the matter in abeyance until later in year.69

By March 1932 it was clear that that the laboratory project was at a standstill. The DLGPH suggested a State Serum Institute or a Municipal
Laboratory for Greater Dublin as alternatives, but the foundation was not interested. On 20 January 1933 the appropriation of $105,000 was cancelled.

PERSONAL CONFIDENCES

A degree of familiarity inevitably developed between the Rockefeller officials and the Dublin doctors, and the former may have become adept at extracting confidences from their Irish hosts, whom they possibly saw as a distinct and different species. A note in Gregg’s diary refers to a dinner on Malahide Island: “Very friendly and rough-and-tumble affair. I know no other capital where the leading professors and medical dignitaries would spend an hour pitching pennies after dinner.”

The officials’ comments, pungent or otherwise, were mainly reserved for letters that were shuttled between Europe and New York. Professor Barry, the Cork physiologist, became a particular bête noire through his gratuitous references to the Rockefeller Foundation in the pages of the Irish Statesman—the comment, for instance, that its directors lavished millions in London and Cambridge but “sadly refuse a ten shilling note to foolish Ireland.” Speaking to Dr. R. E. Tottenham in 1924, F. W. O’Connor of the DME was told how the medical situation in Ireland was complicated by politics. Tottenham, gynecologist to Dr. Steevens’ Hospital, said that the NUI was republican in policy and under clerical control. The scientific departments, in consequence, were greatly handicapped. The Cork and Galway Colleges could easily be scrapped; their faculties were not good, and they lacked both equipment and facilities.

William Doolin’s review in Studies of Flexner’s Medical Education: A Comparative Study attracted favorable attention. Gregg, said the editor of the Irish Journal of Medical Science, “appears to have a better point of view than many of the men in Dublin, and I shall make a point of seeing him the next time I go to Dublin.” The gossips predicted in 1927 that the Apothecaries’ Hall and UCG were doomed to extinction; nobody referred to UCC, but this might simply be evidence of the rivalry between Cork and Dublin. T. G. Moorhead (1878–1960) assured Gregg that the feeling between Trinity and UCD was getting better all the time.

Gregg attributed Henry Moore’s eminence in Dublin, and the existence of the only biochemical lab in a Free State hospital, to his work in the Rockefeller Institute. Rockefeller personnel, however, were not enamored of Moore. Rufus Cole confirmed that at the institute he was a good worker, a bright and intelligent man, but, he added, “Since going back to Ireland I understand that he has been engaged largely in practice. I was never very certain of the soundness of his judgments and, like many of his country-
men, I think he is temperamental and possibly unduly interested in politics, but this did not interfere with his work while he was here.”74

Moore’s tendency to stir things up irritated Pearce, who said, “Personally I feel we might let the Irish situation ‘stew’ for a while.” A couple of days later, Pearce complained, “We are being constantly besieged by the Irish.” He was determined, nevertheless, to “begin a campaign of education.”75

Gregg admired Bigger, who was given a traveling fellowship in the fall of 1929. “He is the only man in Dublin with an open mind and a desire to learn what is being done elsewhere,” Gregg said. He was not, however, beyond criticism. When the bacteriologist suggested that the foundation should allot equal sums to Trinity and the National, letting them decide what they would do with the funds, Gregg, to whom the imposition of conditions was an essential ritual, reserved comment for his diary: “This proposition is characteristic of Dublin.” He also called the campaign against the National Public Health Laboratory “political back-knifing.”

Bigger told Gregg in July 1930 that Galway was “flickering out.” The College of Surgeons was “futile . . . continuing entirely on students’ fees. Very inadequate teaching but not doing much harm.” He regarded Coffey, who had opposed certain of Bigger’s proposals, as a “hard man to deal with.”76 This was not a whit harder, one suspects, than the philanthropists whose endless funds placed them in an unholy position of supremacy, enabling them to bend any argument in the direction of their choice. However rational the officials’ decision to close schools regarded as supernumerary, each of the condemned institutes incorporated a chapter of history fervently supported by its own adherents.

THE RENEWED APPEAL

Within some months of the implementation in 1928 of his plan for assistantships, Gregg received TCD’s request for $1 million for buildings, soon to be followed by a similar proposal from UCD. At a meeting held in June 1929, Gregg responded by speaking disapprovingly of the number of schools in Ireland and regretfully of the government’s failure to establish a commission on medical education. He pointed out that the Rockefeller Foundation did not usually undertake a building program without considerable local cooperation; besides, personnel was more important than buildings. This was countered by Moorhead, who said that the present accommodation was too small for increased staff, and little was to be gained by a commission. They were familiar with what was being done in England. Diplomatically, Gregg used the neutral tone appropriate to an official, rather than asserting bluntly, as he did in his report and when speaking privately with individuals, that “their position was untenable and that the Foundation would certainly not be interested in the proposals.”77
In 1933, as the date for cessation of five-year developmental aid approached, the DLGPH finally suggested setting up a committee to study medical education. Rather than being taken as a concession, this belated acceptance of the Commission on Education was seen by the Americans as a means of maneuvering the foundation into a position in which it would be obliged to continue discussions. Gregg, however, declined to participate and appeared to be weary of the negotiations and of the “undercurrent of distrust, competition and religious and political antipathies between the two leading schools.” Privately he described the importance of Ireland in medical education as “small quantitatively, smaller qualitatively, and very near nil in its research work.” He was irked, too, by “the proven tendency of the Irish to assume and publicly discuss the disposition of the RF to aid Irish medical education on the most liberal terms.”78 For example, shortly after Gregg’s survey, an anonymous contributor to the *Irish Statesman* pointed out that Norway had received a million gold crowns and asked, “When are we going to get for Dublin some money from the Rockefeller Institute, to start needed research and incidentally to provide wages for laborers and masons to build the necessary laboratories?”79

At the termination of the developmental aid scheme, Bigger thanked Gregg, saying that although the loss of the fellows’ services was a blow to his department, he was glad to have had them for five years, which had been an active period. “I hope some time in the future,” he concluded, “I may have the pleasure of seeing you in Dublin in your private capacity.”80 Acknowledging this letter on 26 October 1933, Gregg expressed satisfaction that the foundation had been of assistance. He added, “Quite naturally I am watching with much interest to learn whether the cause of investigative work will enjoy any benefits from the funds derived from the Sweepstakes.”

This cordial exchange marked the close of this chapter of the Irish appeal to the Rockefeller Foundation. The relationship between donor and recipient included an exasperating paternalism, shortsighted bickering, and differing viewpoints, which culminated in unfulfilled expectations. Retrospectively, we see how little common ground they shared: the Irish approaching a financial crisis and rather desperate—ill-prepared to seek grants (nowadays an art form) and competing one with another; the Americans comfortable, confident, and buttressed by ruling principles not to be flouted.

The meager awards must have disappointed, not to say angered, the petitioners, accustomed to having the whip hand in their day-to-day dealings. Professor Barry of Cork, a tormented soul, must have heard “No Irish need apply” echoing in his subconscious. Yet if the willful Irish played their cards badly, may not then the Americans have overlooked a situation actually meriting more generous support? In his personal recollection titled
“Demitasse,” which described the “giants” of the Rockefeller Foundation, Gregg invests philanthropy with robes of nobility when describing Frederick Gates, J. D. Rockefeller’s adviser, as “an intense man . . . who envisioned the life of a foundation as inevitably lonely, austere and isolated in judicial aloofness and Olympian impartiality.”81 The postulated abnegation of the decision-makers with their “burden” of giving, had the Irish negotiators sensed it, would hardly have mitigated their frustration. Fortunately, the Irish Hospitals Sweepstakes, a lottery on major horse races, was soon to supply the funds that were so badly needed.

There have been later chapters, with more satisfactory endings, in Ireland’s long association with the Rockefeller Foundation. Within our own times, indeed, numerous Irish doctors have been assisted, but the exigencies of space permit only the briefest postscript in this respect. The quality of research pursued in the 1950s by E. J. Conway (1894–1968), professor of biochemistry at UCD, was recognized and supported. W. J. E. Jessop (1903–1980) made a favorable impression; he was seen “as being one of the few people in Ireland acceptable in both camps who may have some permanent effect on the quality of Medical Education in Eire.”82 James Deeny (1906–1994) enjoyed a friendly relationship with the foundation professionally and socially. In the course of his correspondence with a Rockefeller representative, the latter remarked, “It seems a long time since you last visited us in New York. I believe some of your friends on Third Avenue would join me in urging that you return soon.”83

Cordial relationships obtain nowadays, throughout the profession, and sectarian divisions have been abolished. The medical schools that the DME wished to abolish continue to fulfill their undergraduate and postgraduate functions. All possess well-equipped laboratories and are active and successful in research. Foreign students are welcome; the halls of the Royal College of Surgeons in Ireland constitute a veritable Tower of Babel.

Two nonmedical events can help, in conclusion, to put the relationship between the Irish and the Rockefeller Foundation in perspective. The first relates to £300 given in 1931 to James Hamilton Delargy, professor of folklore at UCD, who talked and behaved, a Rockefeller diarist noted, “a little too much like a script-writer’s conception of an Irishman.” In 1972 Delargy gratefully recalled his invaluable grant: “I wish the Rockefeller Foundation of today to know what its members of 40 years ago did for international scholarship.”84

The second concerns James Joyce, author of *Ulysses*, with whom O’Brien of the foundation’s Paris office was friendly. Early in World War II the Paris Rockefeller personnel moved to La Baule, a town on the coast of France, where Joyce was visiting his schizophrenic daughter. O’Brien and his colleagues dined with Joyce in a busy restaurant patronized by soldiers from neighboring camps. At the end of the evening someone started to sing
La Marseillaise. When Joyce joined the chorus, his soaring tenor voice attracted general attention. Nothing would do for the soldiers but that he should stand on a table and sing for the assembled audience. It was a tiny triumph for Rockefeller—and for Ireland.85

NOTES

2. For Dublin University, see T. P. C. Kirkpatrick, History of the Medical Teaching in Trinity College Dublin (Dublin: Hanna and Neale, 1912); for the RCSI, see J. D. H. Wedd, The Royal College of Surgeons in Ireland and Its Medical School 1784–1984 (Dublin: RCSI, 1984); for UCD, see D. McCartney, A National Idea: UCD (Dublin: Gill and Macmillan, 1999); see also F. O. Meenan, Cecilia Street: The Catholic University School of Medicine, 1855–1931 (Dublin: Gill and Macmillan, 1987).
4. Ibid., 69.
10. Survey by Selskar M. Gunn and George Bevier, folder 3, box 24, series 403K, RG 1.1, Rockefeller Foundation Archives, RAC.
11. Ibid., 184.
12. Ibid., 187.
13. Ibid., 10.
14. Ibid., 46.
15. Ibid., 77
16. Ibid., 92.
17. Ibid., 123.
18. Folder 1, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.
20. Rev. J. H. Bernard to Wickliffe Rose, 24 April 1924, folder 5, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.
21. S. M. Gunn to R. M. Pearce, folder 5, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.
22. Sir E. Coey Bigger to R. M. Pearce, September 1924, folder 5, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.
23. D. J. Coffey to R. M. Pearce, 20 November 1924, folder 5, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.


26. H. Moore to R. M. Pearce, 12 December 1924, folder 5, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

27. H. Moore to G. E. Vincent, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

28. The issues involved are discussed by Jones, “The Rockefeller Foundation.”

29. R. M. Pearce to A. Gregg, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

30. J. H. Bernard to A. Gregg, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

31. Folder 4, box 1, series 403A, RG 1.1, Rockefeller Foundation Archives, RAC.

32. A. Gregg, “Medical Education in Ireland,” 7, folder 4, box 1, series 403A, RG 1.1, Rockefeller Foundation Archives, RAC.


34. A. Gregg officer’s diary, 117, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

35. Gregg, “Medical Education in Ireland,” 269.

36. Ibid., 270.


38. Gregg, “Medical Education in Ireland,” 261.

39. A. Gregg to G. E. Vincent, 3 February 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

40. A. Gregg to R. M. Pearce, 2, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

41. D. O’Brien to R. M. Pearce, 24 August 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

42. D. T. Barry to G. E. Vincent, 23 January 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

43. P. J. Merriman’s submission to the Rockefeller Foundation, 6 March 1928, folder 24, box 3, series 403K, RG 1.1, Rockefeller Foundation Archives, RAC. See also correspondence PJM to G. K. Strode, March 1928.


45. Memorandum from Collis, 14 March 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

46. Ibid.

47. “Medical Education in Ireland,” March 14, 1928, 1, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

48. Ibid. 3.

49. R. M. Pearce diary excerpt, April 3, 1928; R. Collis to R. M. Pearce, April 5, 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

50. G. E. Vincent diary excerpt, April 18, 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

51. Quote from “a rough draft of George Russell’s (A.E.) speech,” sent to Pearce by Collis. R. Collis to R. M. Pearce, April 10, 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

52. G. E. Vincent diary excerpt, April 18, 1928, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

54. G. E. Vincent to R. M. Pearce, June 24, 1928, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

55. R. Collis to G. E. Vincent, August 14, 1928, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC. See also G. E. Vincent to R. M. Pearce, June 24, 1928, and Russell to Vincent, August 14, 1928, ibid.

56. G. Russell to G. E. Vincent, August 14, 1928, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

57. D. P. O’Brien to R. M., August 24, 1928, 2, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

58. D. P. O’Brien to R. M. Pearce, August 24, 1928, 4, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

59. G. E. Vincent to G. Russell, September 11, 1928, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

60. G. Russell to G. E. Vincent, September 14, 1928, 1-2, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

61. G. E. Vincent to G. Russell, October 3, 1928, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

62. A. Gregg to R. M. Pearce, October 23, 1928, 2, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

63. Ibid.

64. A. Gregg to D. Coffey and E. Gwynn, October 25, 1928, 1-2; A. Gregg to R. M. Pearce, October 23, 1928, Folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

65. A. Landsborough Thomson to A. Gregg, May 11, 1928; A. Gregg to R. M. Pearce, October 23, 1928, folder 635, box 49, Series 401, RG 1.1, Rockefeller Foundation Archives, RAC.

66. R. M. Pearce to The Secretary, Medical Research Council, May 18, 1928, 1-2, folder 635, box 49, Series 401, RG 1.1, Rockefeller Foundation Archives, RAC.


68. J. W. Bigger to D. O’Brien, folder 25, box 3, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

69. R. M. Taylor officer’s diary, 19 January 1932, folder 25, box 3, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

70. A. Gregg officer’s diary, folder 8, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.


72. F. W. O’Connor to R. M. Pearce, folder 5, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

73. William Doolin, review of *Medical Education: A Comparative Study* by Abraham Flexner, *Studies* 14 (1925): 408–424; A. Gregg to R. M. Pearce, 12 October 1926, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

74. R. Cole to F. W. O’Connor, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

75. R. M. Pearce to A. Gregg, 15 August 1925; 17 August 1925, folder 6, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

76. A. Gregg officer’s diary, 22 July 1930.

77. A. Gregg to R. M. Pearce, 8, folder 8, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.

78. A. Gregg memorandum, folder 8, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.
79. Irish Statesman 7 (1926): 84.
80. J. W. Bigger to A. Gregg, October 1933, folder 7, box 2, series 403, RG 1.1, Rockefeller Foundation Archives, RAC.
82. R. R. Struthers officer’s diary, folder 2, box 1, series 402, RG 1.2, Rockefeller Foundation Archives, RAC. J. B. Lyons, ed., Years of Irish Medicine (Dublin: Eireann Health Publications, 1999), 75.
83. H. Smith to J. Deeny, folder 2, box 1, series 403, RG 1.1, Rockefeller Foundation Archives, RAC. See also J. Deeny, To Cure and to Care (Dublin: Glendale Press, 1971).
I
n the 1920s Wickliffe Rose, the most powerful official in the Rockefeller philanthropies, summarized his principles of financial assistance in one sentence: “Make the peaks higher.” The Rockefeller Foundation, however, also contributed to the establishment of entirely new scientific institutions, some of which had not much hope to become peaks.\(^1\) The practices were obviously more complex than could be described by one short sentence. One case that illustrates this was a project at Szeged University in Hungary, where an entirely new and quickly successful biochemistry institute was organized mostly with Rockefeller money in the late 1920s and early 1930s. Its location was literally on the Hungarian plain and figuratively at an institution with no profile in the scientific world. The most dramatic proof of the rapid rise of the project to the pinnacle of scientific recognition was when Albert Szent-Györgyi, the head of this institute, received the Nobel Prize in 1937 for the research conducted with his associates in Szeged.

The history of the Rockefeller Szeged project shows that the business-derived notion of return on investment that guided Rockefeller science policy was abandoned as early as the beginning of the 1930s. The slogan “make the peaks higher” meant that the grants should go to institutions and laboratories that were already very strong in their fields (“peaks”), to make them even stronger. It was assumed that there would be a better return on investment and that the market competition between these institutes would force the weaker ones to improve or face elimination. A strict interpretation of competition would, therefore, have automatically excluded laboratories with less brilliant records or even promising beginners such as the researchers at Szeged University.\(^2\)

This approach ran counter to the principle upon which the foundation was established, *pro bono humano generis* (for the welfare of mankind), an idea that implied help for the small and the weak, including relief activi-
ties. Indeed, Rockefeller policy followed another principle besides “making the peaks higher,” which stipulated that only institutions, not individuals, were eligible for support; the strength of the institutes had to be measured by regional or national standards, not necessarily by global standards. The reason for these conflicting approaches was that by the early 1930s both the principles and the process of the Rockefeller Foundation administration had gone through a significant change. After Warren Weaver became head of the new Natural Sciences division, which succeeded Rose’s International Education Board (IEB), grants for scientific research became more frequent than before, and the principle of supporting only institutions was supplanted by the preference for smaller projects and even support for individual scientists.

The central question to be answered in this paper is why the Rockefeller Foundation funneled significant funds to a new and not very promising institute. What were the motives, and how were the goals realized? The answers to these questions require an understanding of the Rockefeller activity in Hungary following the First World War and the history of the Szeged project. The scientific results achieved in Szeged and the Rockefeller Foundation’s changing relationship with the project revolve around the key figure of the story, Szent-Györgyi, from the mid-1920s through the early 1950s.

ROCKEFELLER ACTIVITIES IN HUNGARY IN THE 1920S

The first steps taken by the Rockefeller philanthropies in Hungary were part of general relief operations in Eastern Europe after the First World War. The main concern was public health, a policy in harmony with the Rockefeller strategic goals at that time. Because of a lack of contacts, the Rockefeller Foundation approached Hungary in 1921 through the American Relief Administration of the European Children’s Fund, which had an office in Budapest. Soon the foundation established a wide network of Hungarians who were eager to promote its goals, primarily in science, health, and medicine.

Travel grants and fellowships were first awarded in Hungary by the IEB in 1923; by 1956 more than 200 Hungarians had received grants, most of them between 1925 and 1935. This group of people became leading figures in their own fields and formed a local base for subsequent Rockefeller philanthropic activities.

The focus of the foundation’s early activity was the State Hygienic Institute (SHI), opened in Budapest in 1927. Rockefeller played the most significant role in establishing, building, and furnishing it. The first director, Béla Johann, a former foundation fellow, became Rockefeller’s most reliable collaborator in Hungary and the most important expert in public health.
When he left his office to become undersecretary of health in the Ministry of Home Affairs, József Tomcsik, another former fellow, succeeded him.

Originally, the SHI had two tasks: to apply scientific results to health problems and to train public health officers. Its fields included bacteriology, serology, pathology, parasitology, chemical diagnostics, and control of pharmaceutical preparations. Later, in the 1930s, these tasks were supplemented by research, public health administration, and nursing education. The SHI success became a model for the Rockefeller officers who visited Hungary and neighboring countries. According to a report published in 1933, the Budapest SHI was the best of a number of similar institutions in the region, including Austria, Czechoslovakia, Poland, and Yugoslavia.

The SHI also became the base for other important Rockefeller projects in Hungary, such as the reorganization of nurse training schools. According to an initial foundation survey, the level of knowledge attained both by public health and bedside nurses was far behind the requirements, although nurses occupied a crucial position in the public health systems. To improve this situation, the Budapest Nursing School was attached to the SHI and was provided with well-trained instructors; this type of training was later extended to areas farther from Budapest, beginning with Debrecen, Eastern Hungary.

Public health demonstrations constituted another area of foundation activity. In this program, small health stations equipped with simple instruments, sometimes also with X-ray apparatus, were built in rural areas. The population was screened for epidemic diseases (mostly tuberculosis) and was lectured about sanitary issues, such as baby care, school hygiene, the importance of regular health screening, and the advantage of unpolluted wells. The locations of the stations were carefully chosen to serve as health centers of larger territories. Gradually, a network of sanitary stations was built up, although the project could not be finished to the point of embracing the whole country because of the worsening economic conditions in the 1930s. Rockefeller philanthropies, besides contributing significantly to the improvement of public health in Hungary, supported certain fields of natural science using a method of science administration and policy making that was unknown in Hungary before the interwar period.

THE BEGINNING OF THE SZEGED PROJECT

In the course of this extensive and intensive activity, the foundation established contacts with successive Hungarian governments. In spite of the nongovernmental character of the Rockefeller philanthropies and their intended political neutrality, the foundation recognized in the early 1920s that projects could not work without ministerial support because the pri-
vate nonprofit sector was not strong enough to be a reliable partner. One of the closest and most cooperative contacts was with Kuno Klebelsberg, minister of home affairs in 1921–22 and minister of religion and public instruction in 1922–31. Klebelsberg, a controversial politician, aimed at raising the cultural level of the country in the name of so-called cultural superiority. This principle was meant to give spiritual compensation to the Hungarian nation for the lost war and subsequent loss of territory and population.9 Under this flag, Klebelsberg successfully extended and strengthened the school system, convinced the government to invest in universities and in science, and established a network of Hungarian Institutes in several European cities, such as Berlin, Rome, and Vienna, for Hungarian scholars working abroad.

Klebelsberg was elected to Parliament in Szeged, the second largest city at that time, situated in the southern part of the country on the Hungarian plain. He promoted the establishment of a university in Szeged, an age-old desire, both in his capacity as a minister and as the representative of the city. It was to be a new university born under the constraints of the lost war. After Kolozsvár, an old Hungarian city in Transylvania (now Cluj, Romania) and home to the second university in Hungary, was occupied by the Romanian army in 1919, the professors of the university fled the town for Budapest; after this, Kolozsvár University began operating as a Romanian university. After some debate, it was decided to relocate the former Hungarian University from Kolozsvár to Szeged. This caused some difficulties for a city that had no buildings for classrooms, laboratories, or clinics, or to house professors and students. Old school buildings were taken over for the purpose, and hotel owners let their rooms out to professors at extremely low prices in exchange for additional compensation from the city’s government. As a result of these extraordinary efforts, by the fall of 1921 the university was opened, albeit under very modest circumstances. It took a long time of gradual development until conditions became at least adequate. In particular, the faculties of medicine and science suffered from the lack of adequate buildings and laboratory equipment.10

After about a decade of successful cooperation, Klebelsberg turned to the Rockefeller Foundation with the request that the foundation extend its support to the University of Szeged. He sent a long letter to New York in March 1930 in which he detailed the Hungarian nation’s heroic efforts in culture and science and the universal value of the small nation’s scientific efforts. Hungarian scientists, he explained, should join the international “working community” to help solve the most important problems of mankind. This endeavor needed new organizational forms, which the Rockefeller Foundation could promote. After the description of the past and continuing harsh situation in Szeged, Klebelsberg said that the Hungarian state and the city had already spent around $3.8 million on the university.
He then requested $180,000 from the Rockefeller Foundation, mainly for establishing institutes of hygiene and psychology. In the closing paragraph, he said, “By granting it you will have acted upon a resolution keeping with the leading principles of the vast scheme for the propagation of general culture, initiated by the Foundation.”

The dramatic appeal did not immediately convince the foundation’s officers, but they sent Lauder W. Jones, associate director of the foundation’s European Office in Paris, to Szeged to visit with Klebelsberg, who showed him the university and introduced its professors. Klebelsberg repeated his request to Jones for support of the establishment of hygiene and medical research institutes. The correspondence between Klebelsberg and the foundation throughout 1930 indicates that despite Klebelsberg’s warnings about the worsening economic situation in Hungary, the foundation ignored his appeals.

Finally, in December 1930, Jones paid another visit to Szeged to meet with twelve professors. He explained to Klebelsberg that his request was missing some crucial information, such as details about the state’s financial contribution and more information about the equipment and supplies to be purchased. The foundation needed precise reasons for the costs, a survey of the necessary equipment with their purposes, and a list of other expenditures. The participants agreed to set up a committee for preparing the application. At the end of the meeting Professor Albert Szent-Györgyi, a former Rockefeller fellow, explained the specific importance of establishing an institute of biochemistry.

ALBERT SZENT-GYÖRGYI IN SZEGED

Szent-Györgyi proved to be the key person in the success of the Szeged project, which was similar to pre-1930s projects in that it was a major appropriation given to a large institution, rather than a grant to support a fixed-term research project or a specific person. Eventually, Szent-Györgyi’s role and his institute became so important that they received successive grants for so long that the project also resembled support for one individual’s research center. In this way, it represented a transition in the foundation’s policy from the early large institutional grants to the small grants of the 1930s.

Szent-Györgyi (1893–1986) graduated as a physician in Budapest in 1917. He then worked in Prague, Berlin (with L. Michaelis), Hamburg, and Leiden before moving to Gröningen in 1923. In Gröningen he began to study the energetic aspects of biological processes, namely, the oxidation of the foodstuff in the living organism. His most important contribution while at Gröningen was to reconcile the controversial views of Heinrich Wieland and Otto Warburg by showing that the activation of hydrogen or,
in turn, of oxygen is the fundamental process in biological combustion. Szent-Györgyi proved experimentally the presence of both processes. Following these experiments, he tried to isolate the substance influencing the oxidation of some fruits that change color in air after they have been cut. This line led him to a human disease of the adrenal gland called Addison’s disease, a disorder that produces a characteristic change in the skin color of the patients. He hypothesized that the color changes in plants were related to those in human skin.

Since the equipment in Gröningen was not suitable for isolating the substance supposedly responsible for the change in skin color, Szent-Györgyi turned for help to H. H. Dale in London, where he opted for a visiting position to do his work. In 1925 Szent-Györgyi received a grant for the research, but his experiments failed and he returned to Gröningen. The next year, he became an associate of F. G. Hopkins at Cambridge, where he found a scientific home with which he always identified himself.

This was also the starting point of Szent-Györgyi’s long relationship with the Rockefeller Foundation. At Hopkins’s request, Szent-Györgyi received another one-year fellowship in 1927 to enable him “to isolate an active principle from the cortex of the adrenal gland.” His grant was extended to 1928 because his “work has been of outstanding significance.” Szent-Györgyi succeeded in isolating the material, which he called hexuronic acid, but the quantity at his disposal was not enough to establish its chemical structure. In 1929 he obtained a small Rockefeller travel grant of $400 to work for a short term under more favorable circumstances at the Mayo Clinic in the U.S. with E. C. Kendall to try to obtain a larger quantity of his substance. Szent-Györgyi assumed that hexuronic acid was a hormone and that it must play some important role in cellular oxidation.

Although Szent-Györgyi was establishing his reputation as a first-rate researcher, Cambridge University could not employ him. At the same time, Hopkins could only retain Szent-Györgyi in the framework of Rockefeller grants. Although this began a long-term relationship between the foundation and Szent-Györgyi, it did not secure him a permanent position. Klebelsberg, having been informed about Szent-Györgyi’s success, offered him a position in Szeged and persuaded the university to invite him back to Hungary. He became professor at Szeged University in 1928 but only took up his work in 1930 after completing his research in Cambridge under another Rockefeller grant.

THE ORGANIZATION OF THE ROCKEFELLER FOUNDATION’S SZEGED PROJECT

In the last days of 1930 Szent-Györgyi visited the Rockefeller Paris office to repeat the request made earlier that month, when Jones was in Szeged,
for foundation support to build up the university’s laboratories, including his biochemistry institute. In addition, as the head of a committee taking care of the university’s instrumentation, he asked Jones and Alan Gregg to forgo the requirement of a detailed preliminary list of equipment to be bought with future Rockefeller money. Instead, he requested a financial framework, which, he argued, would serve the goals of the university much better. Because there was practically no equipment in Szeged, both the research and teaching needs would be satisfied by some elementary devices for general purposes that were difficult to characterize. His arguments were not accepted, however, because the foundation officials thought that this blanket grant would initiate endless fights for money between the professors in Szeged. With no alternative, the professors prepared an application with a detailed description of all items they intended to buy with the Rockefeller funds. After receiving the proposal in an appropriate form, the foundation decided to grant Szeged $155,000 “for the purchase of research equipment and for maintenance of the departments of medical and natural science.”

Experiences with western science in general and with the Rockefeller Foundation in particular made Szent-Györgyi instrumental in the negotiations between the foundation and Szeged University. The foundation also could rely on some other former Rockefeller fellows employed in Szeged: József Baló, Károly Burger, András Gál, György Ivánovics, Dezsö Miskolczy, József Tomcsik (later director of the SHI), and Károly Waltner. Szent-Györgyi became particularly important in the university’s relationship with the foundation, often reporting with shock the lack of even the basic instruments in his new Institute for Medical Chemistry.

From the Rockefeller grant, $119,000 was provided for equipment and $36,000 for maintenance over a period of four years. Out of the $119,000, $50,000 was allocated to the medical and $69,000 to the natural science departments, while the maintenance sum was divided equally. At the same time, the Hungarian state was required to provide $80,000 for remodeling the buildings of the science departments and $36,000 for maintenance. Because of the Hungarian economic problems, a tapering scheme of appropriation was set up. Accordingly, the fund for maintenance was divided into four equal parts of 100,000 pengő (Hungarian currency) per year. In the first year the foundation provided 80,000 pengő and the Hungarian state, 20,000. The foundation’s share then diminished and the Hungarian share increased every year, so that by the fourth year the Hungarian government’s share was 80,000 pengő and the foundation’s, 20,000. After the four-year period expired, the Hungarian state was expected to pay for all of the maintenance.

In addition, Klebelsberg proposed the establishment of a Natural Science Research Council of the University of Szeged composed of delegates
from the Ministry of Religion and Public Instruction and Szeged University. This council would “act as trustee for the money appropriated by the Foundation.”20 Accordingly, in June 1931 Klebelsberg informed the leaders of Szeged University about this decision, made by the Ministry and the Rockefeller Foundation. The research council was set up, and Szent-Györgyi was assigned to be its head.21

The reasoning behind the foundation’s decision to support the project at Szeged was most obviously related to the fact that seven professorships were held by former IEB and foundation fellows. In the words of one foundation officer, the assistance was meant “as service to these young scientists and as a stimulation to scientific interest in Hungary, and not because Szeged can be considered as an established center of research or as possessing older scientists of established reputation although some of these young men have already become internationally known.”22 This statement implicitly admits a departure from the “make the peaks higher” principle.

As the Szeged project moved into full implementation, its visibility was raised by an article in Science magazine.23 At the same time, Szent-Györgyi became increasingly active both in the research committee and in organizing his own institute. In a letter to Gregg, then director of the foundation’s Medical Sciences division, he wrote, “I was always very deeply interested in the theory of research and research administration and it is an extremely interesting experience to run a lab and get a really good idea of what it means to be a Prof. . . . It is most interesting to me to test all my theories about running labs.”24 In practice, this meant that Szent-Györgyi became increasingly influential.

As a chairman of the Natural Science Research Council which holds most of the further developments in hand, I also have some influence outside my Lab and herewith the means to test my theories on a bigger scale. I was aided up to the present in this also by my friendship to Count Klebelsberg and had this way also some influence on appointments. . . . To be short I can summarise by saying that I am very happy and find my job very fascinating.25

Szent-Györgyi’s situation did not change even after Klebelsberg left office in 1931 and Bálint Hóman, a supporter of the extreme right, German-oriented politics, became his successor in the Ministry. Because of his later participation in the Nazi governments of Hungary during the war, Hóman was tried as a war criminal and sentenced to life imprisonment after the Second World War. Szent-Györgyi, on the other hand, took an active and strong stand against the coming Nazi wave. As a result, it is not surprising that after 1934 Hóman became reluctant to pay the state’s share of the
project, giving the economic crisis as the reason. The Rockefeller Foundation, referring to the breach of the contract, thought to cancel its contribution, but Szent-Györgyi made conciliatory steps, and the foundation agreed to accept other temporary financial arrangements.26

Meanwhile, Szent-Györgyi conscientiously built up his laboratory. For example, he dismissed people employed by his predecessor who were unsuited for the new tasks and recruited new associates, many of whom soon became well-known scientists. These included new privatdozents Ernő Annau, Ilona Banga, Mihály Gerendás, Kálmán Laki, and Bruno F. Straub. He hired as assistants Béla Gözsy, Ferenc Guba, István Huszák, Tibor Maros, Kálmán Mihalik, Ida Sófalvi, and Kálmán Vietorisz. These new people, plus the coming and going of graduate students, created an exceptionally lively intellectual atmosphere that suited well Szent-Györgyi’s colorful, eccentric personality. His professorial colleagues saw with resentment that Szent-Györgyi played volleyball with his subordinates, that on hot days the whole group went to swim together, that he organized a student theater, and that he did many things that did not fit the picture of a dignified traditional Hungarian professor. He obviously enjoyed it very much, as indicated by the following remarks in a letter to Gregg:27 “Now we are planning and working in the highest spirits. . . . A small school of Biochemistry has crystallised out. . . . On the whole I am very glad to have come home. Being a Hungarian myself I think I can do more for science here than anywhere else, without giving up my own research.”28 The next year Szent-Györgyi proudly reported that, besides research and administration, he was improving his teaching. Previously he had some difficulties in reconciling these divergent activities.29

In 1932 Szent-Györgyi began to publish the first of his remarkable scientific results achieved in Szeged. At the time he said in another letter to Gregg, “My lab is a very fine place as well regarding its spirit as its equipment and I hope still to improve it.” He went on, “The baby seems most healthy and vigorous and there are some very fine results also in other departments.”30 In addition to his financial reports to the foundation, Szent-Györgyi began to submit articles to various publications, which by 1933 amounted to four volumes. In these, he never forgot to emphasize that without the Rockefeller Foundation’s assistance, it all would have been impossible.31 In his famous vitamin C papers, however, Szent-Györgyi expressed his gratitude not for the Rockefeller assistance but to the Josiah Macy Jr. Foundation, which also supported him substantially.32 This was noted in the diary of Rockefeller officer H. M. Miller, who wrote in 1936 that Szent-Györgyi “has been receiving $3000 a year from the Macy Foundation, which sum has made all the difference in the world in his research possibilities.”33
Almost as soon as Szent-Györgyi organized scientific life in his institute, he achieved his first great scientific success. In collaboration with Joseph Svirbely, a young Hungarian-born American visiting researcher who was an assistant of Professor Charles King in Pittsburgh in vitamin research, Szent-Györgyi was able to identify his remnant of hexuronic acid as vitamin C. After publication of the results in 1932, a bitter priority debate broke out between Szent-Györgyi and King. The next summer Szent-Györgyi was able to obtain a large quantity of pure vitamin C from paprika, the national fruit of Szeged. As a result, he was able to describe the chemical nature of the substance. Moreover, in paprika he found another compound that diminished bleeding. With his Szeged colleagues Professor István Rusznyák, Dr. Aladár Bencsáth, and István Huszák, Szent-Györgyi demonstrated the impact of this substance on the permeability and resistance of capillary vessels. They called it vitamin P and proved that chemically it belonged to the flavones.

Although the work on vitamin C is usually cited as the reason for his Nobel Prize, Szent-Györgyi achieved an even more important breakthrough from systematic research on cellular oxidation. The most significant publication of these discoveries appeared in an unusual form: a collection of articles published in a single volume. They were all separate papers with their own titles and authors. Szent-Györgyi explained the basic ideas in an introductory paper and drew the conclusions from the studies. The methodological and experimental parts were written by his young associates.

The most significant results concerning biological oxidation achieved by Szent-Györgyi’s group appeared between 1934 and 1936. For example, they developed a new method of studying oxidation based on the use of pigeon breast muscle. The idea originated from the fact that most muscles can work without oxygen for a while because they can rely on the energy originating from the anaerobic degradation of their carbohydrates into lactic acid. A significant difference exists between different types of muscles in their ability to work this way. Those muscles that are used for short, abrupt work can rely entirely on anaerobic processes, while others, used for long, persistent work, cannot operate without oxygen. Szent-Györgyi recognized that the breast muscle of birds like the pigeon is a typical example of this latter type; it burns carbohydrates very intensively, providing extremely good material for studying cellular oxidation.

Another new method developed by the Szent-Györgyi group was the addition of chemicals to a system to observe how the system works with or without these substances rather than trying to isolate compounds that are
supposedly intermediate in the process of respiratory oxidation. The Szent-Györgyi group published the first results using this new method in 1934. They found that muscle tissue, after having been removed from the living organism, could continue to oxidize for a while but quite soon lost this ability even though carbohydrates and oxygen remained. To explore this phenomenon, they added various substances to the system and found that a small amount of succinic acid could restore the oxidation of the cell. From this and from the structural difference existing between succinic acid and the foodstuff components, they concluded that succinic acid could not be an intermediate in metabolism, i.e., a fuel; rather, it had a catalytic effect. Szent-Györgyi showed that succinic acid formed a catalytic system with fumaric acid, which influenced the hydrogenation/dehydrogenation process in the combustion.

The next year members of the Szeged group published a paper indicating that they had found the link between the Atmungsferment-cytochrome system, the Wieland-Keilin system, and foodstuffs. They concluded that some four-carbon dicarboxylic acids enter between the foodstuffs and the Wieland-Keilin system as a series of catalytic reactions. In this paper they described a cyclic process consisting of succinate, fumarate, and oxaloacetic acid. In 1936 Szent-Györgyi and his associates published another voluminous paper supplementing their findings. They reported a number of new observations that described a sequence of the C₄ dicarboxylic acids’ reactions. In 1937 an article by Szent-Györgyi appeared in a Hungarian journal describing the sequence reaction of succinate, fumarate, malate, and oxaloacetate.

The crowning achievement of this work came in 1937, when Szent-Györgyi won the Nobel Prize in medicine “for his discoveries in connection with the biological combustion process with special reference to vitamin C and the catalysis of fumaric acid.” In the same year, relying on Szent-Györgyi’s results and those of Carl Martius and Franz Knoop, Hans Krebs recognized the significance of citric acid in the process and completed the description of the reactions of what was subsequently called the citric acid cycle. For these epochal results, Krebs received the 1953 Nobel Prize.

There were other discoveries in the years following at the Szeged laboratory. For example, in the field of muscle research, Szent-Györgyi found another very useful model material: the internal loin muscle of a rabbit. Taking its lead from the experiments made by two Russian researchers, the Szeged group contributed to the understanding of the role of adenosine triphosphosphate (ATP) in living organisms in general and muscles in particular. They found that there were two types of myosin, a fibrous muscle protein. One of these types contained an unknown protein, which was named actin by Straub, who isolated and described the role of this compound. He
also found two forms of actin, the globular (G) and the fibrous (F), which combine with myosin. Straub also studied the F–G transformation, the change of one form to the other. Actin, myosin, ATP, plus some salts and ions proved to be the fundamental system operating in muscle biochemistry.42

It was previously known that myosin was a protein that caused the contraction of muscle movements. The phenomenon could not be produced in vitro, however, because the biochemical mechanism was still unknown. The Szeged group was able to discover the mechanism by combining actin and myosin (actomyosin, as they called it) in a test tube and adding boiled muscle juice to it. They observed by microscope that the threads contracted. They then proved that ATP, an ingredient in the muscle juice, was the necessary component in the mixture for causing contraction. “To see them contract for the first time, and to have reproduced in vitro one of the oldest signs of life, motion, was perhaps the most thrilling moment of my life,” Szent-Györgyi recounted afterward.43 Indeed, these results became the starting point of a whole new line of research on the biochemistry of muscles, which arguably outshone Szent-Györgyi’s previous achievements.

The Rockefeller Foundation’s project at Szeged lasted only until 1935. Besides the appropriations detailed in the 1931 agreement, however, the foundation supported other research projects there, such as one in the Institute of Anatomy and Histology in 1931–32 ($2,730) and, more substantially, in the Medical School between 1926 and 1940 ($76,917).44 In addition, several researchers from the Szeged staff received travel grants,45 although some of Szent-Györgyi’s special research requests were turned down.46 The main problem was that he continued to resist the Rockefeller Foundation’s requirement of detailed planning about the use of funds. According to his biographer, “S-G argues that foundations should have such confidence in the men aided that grants should be unrestricted.”47

The genius of the Szeged group was that they conducted unusually low cost research with exceptionally brilliant scientific ideas and obtained spectacular results. In hindsight, this was only possible because they worked in the early period in the history of biochemistry. They did not need huge investments in equipment or large devices. Straub depicted the circumstances this way:

We did not have such tools of research as spectrophotometry, for example. Ion-exchange was not in use; the ultracentrifuge had just been evolved; electron microscopy did not exist; gel electrophoresis was unknown; chromatography was applied only to dyes; trace methods had not yet been worked out; there were no cold rooms or refrigerated centrifuges; there were no commercially available biochemicals; and there were practically no trained technicians.48
The Szeged research required only test tubes, some common chemicals, microscopes, a Latapie grinder, and other simple devices.

THE AFTERLIFE OF THE SZEGED PROJECT

During and after the Second World War, Szent-Györgyi became very active in politics. He moved to Budapest, and the foundation’s contacts with Szeged came to an end. Nevertheless, the impact of the project survived many historical changes and produced many lasting scientific results. One legacy was the very existence of the University of Szeged and a whole cadre of the former fellows who remained. Baló, Csík, Ivánovics, Karády, Miskolczy, Rauss, and Waltner became renowned professors in Hungary. István Rusznyák, one of Szent-Györgyi’s Szeged collaborators, became a highly respected communist scientist who served as president of the Hungarian Academy of Sciences between 1949 and 1970. Another scientist of high regard was Straub, Szent-Györgyi’s successor in the Szeged institute. Besides holding a number of leading scientific positions, Straub was elected a member of Parliament and served as the last president of Hungary in the socialist system before it collapsed in 1989.

When Szent-Györgyi left Szeged and moved to Budapest, some of his associates followed him. Budapest began a new chapter in his relationship with the Rockefeller Foundation, a period that lasted until the mid-1950s. This was something like an afterlife for the Szeged project, since the relationship took on an entirely new and complicated form from both Szent-Györgyi’s and the foundation’s point of view.

To be sure, it was Szent-Györgyi who approached Rockefeller in 1945 to reestablish old contacts and request support to start new research after the war. For political reasons, Gerald Pomerat, the Rockefeller field officer, could not obtain a visa to enter Hungary to discuss the situation. Szent-Györgyi soon understood that, despite his loyal behavior toward Hungary’s new political leaders, there would be difficulties in reestablishing Western contacts, which would limit his political and scientific future. In 1947 he decided to emigrate to the U.S.

This was an unexpected decision, because Szent-Györgyi had earlier declined a number of invitations to various American universities beginning in the 1930s, including invitations from Harvard and the Massachusetts Institute of Technology (MIT). He had always made it clear that this was for patriotic reasons. Even after his American immigration Szent-Györgyi refused to join any university on a regular academic appointment. Rather, he wanted to continue the independence he had enjoyed in Szeged. To this end, he settled at the Marine Biological Laboratory at Woods Hole, using his entrepreneurial skills to obtain support from a combination of private donations, private foundations, and industrial contracts.
With some political and undercover diplomatic skills, Szent-Györgyi smuggled his team out of Hungary and reestablished the working group that had proved so successful at Szeged. To keep this group together required significant funding, which proved more difficult to raise than he expected. He turned for help, therefore, to the Rockefeller Foundation from time to time. Although in 1949 the foundation gave Szent-Györgyi $5,000 for equipment, to his surprise, the next year his request for a modest travel grant was refused. After this, the foundation was unwilling to support him at all unless he took a position either at a university or in a research institute—in short, unless he adapted himself to the American scientific system. Disappointed, Szent-Györgyi wrote to Warren Weaver, head of the foundation’s Natural Sciences division:

You told me plainly that RF is not interested helping me until I am at Woods Hole and not at a university. So if I would be a Gentleman [sic] I would leave it at that. I am not a gentleman. . . . In 1947 I came over and in order to avoid loss of time brought my group (the major half, 12 people) over with me. I settled at Woods Hole working partly also at the Nat. Health Inst. in order to make the financial burden easier. During the last year this group was gradually disbanded, financial difficulties seeming unsurmountable. At the moment I still have the kernel of this group at Woods Hole, 3 senior research workers and 1 assistant.

In his reply, Weaver explained that since the 1930s many European immigrant scientists had come to the U.S., but now younger American scholars also needed opportunities. In addition, some European scholars “were unreasonable in their expectations.” They were especially unable to adapt to the American departmental system, where groups of researchers worked together on general problems and shared resources.

Because of his stubbornness, Szent-Györgyi and his group became a headache for Weaver and other foundation officials, leading to strong feelings on both sides. According to a 1950 diary entry, Weaver said of Szent-Györgyi, “It is necessary for him to consider the necessity for being absorbed into American academic and scientific life in a somewhat more natural and, to be very frank, in a somewhat more modest fashion. . . . S-G takes this all very well, but bounces back in a somewhat ridiculous fashion by continuing to argue that the character of his work is such that it is absolutely essential to have a minimum group of trained and experienced persons.” In 1952 the foundation approved another $5,000 as a grant-in-aid to Szent-Györgyi for some new equipment, but it proved to be the epilogue of the long relationship.

Of the associates Szent-Györgyi brought to the U.S., János Gergely became the most prominent as a professor at Harvard University. Kálmán
Laki went to Bethesda, Maryland, where he eventually became head of the Biophysical Chemistry Laboratory at the National Institutes of Health (NIH). Ernő Annau went to Brazil, then moved to Canada and worked as professor of animal diseases. Szent-Györgyi gradually became more adaptable in the coming years, although the Rockefeller Foundation gave him no more grants. He retained his independence and continued his research with his old enthusiasm and originality. His research on cancer led to compounds isolated from the thymus gland that suggested a healing power. This attracted some attention from the press, which hoped he could repeat his vitamin C success, but he failed to obtain a pure compound. During his American period Szent-Györgyi never obtained the spectacular results that he had in Szeged.

CONCLUSIONS

The foundation’s Szeged project helped to produce an exceptional biochemistry institute. The reasons for this extraordinary success can be explained by the combination of the support for the University of Szeged plus an unusual individual—Albert Szent-Györgyi. Of the two, the circumstances and nature of the institution played a more significant role in determining the outcome. The Rockefeller decision to give its support was based on its experience with former Rockefeller fellows and its political contacts plus almost a decade of experience with other projects in Hungary mainly in the area of public health. Thus, despite the high visibility of Szent-Györgyi, the grant was to an institution, and in the end it was the team of researchers Szent-Györgyi assembled that made the discoveries.

In a few years, besides helping to operate the University of Szeged at a very difficult time in its history, the Rockefeller Foundation contributed to the establishment of a laboratory in which results of high importance were produced, including the identification of vitamin C, the discovery of some basic steps in the citric acid cycle, and the role of myosin and actin in muscle contractions. Szent-Györgyi’s receipt of the 1937 Nobel Prize in medicine recognized the fundamental importance of these scientific achievements.

The Szeged project was not a safe investment for the foundation, yet, under the circumstances, it was worth taking the risk, even without the benefit of hindsight. In a country with much better scientific and economic conditions, the relatively small foundation appropriation would not have meant as much as it did for Hungary, which was near total bankruptcy. Looking back, to build a peak on a plain seems to have been a more reasonable strategy than to make an existing peak higher, because enhancing the production of a well-established center would have been more expensive than starting a new one, especially in an inexpensive setting. Other strategic
interests served by the project explain why the Rockefeller Foundation took a chance on it, even without intending to build a peak or any significant scientific basis. These included the relief of difficult conditions in the country and the follow-up assistance it gave to former IEB fellows. The question of motive is tied to the larger question of the foundation’s interest in extending its activity to Eastern Europe.

Whatever the foundation’s underlying intentions, the success of the Szeged institute ceased after the revolutionary changes brought by the Second World War. Neither the University of Szeged nor Albert Szent-Györgyi, the great scientist, occupied the same position in either the foundation’s or the Hungarian government’s eyes as they previously did. In the postwar period of “big science” and huge governmental foundations, Rockefeller turned its attention from science toward other philanthropic fields that were in need of its support.

Still, the tradition of high-level biological research that had formed in Szeged with the Rockefeller grants survived. The Hungarian Academy of Sciences established a large biological research institute in Szeged in 1970, the most successful scientific institution in Hungary even today. The first director was Bruno F. Straub, former Rockefeller fellow and a disciple of Albert Szent-Györgyi.

NOTES


5. On the Rockefeller Foundation’s public health efforts in Hungary, see G. Palló, “Rescue and Cordon Sanitaire: The Rockefeller Foundation in Hungary in the Interwar

6. Gardner Richardson to Mrs. Vernon, 1920 (the exact date is missing), folder 27, box 1, series 750, Record Group 1.2, Rockefeller Foundation Archives, Rockefeller Archive Center, Sleepy Hollow, New York (hereafter designated RAC).


8. For a survey of the Rockefeller Foundation’s whole East European project, see Weindling, “Public Health and Political Stabilization.”

9. Hungary lost more than two-thirds of its territory and almost the same proportion of its population as a consequence of the Treaty of Trianon in 1920.


11. K. Klebelsberg to the president of the Rockefeller Foundation, folder 11, box 2, series 750, RG 1.1 Projects, Rockefeller Foundation Archives, RAC.

12. Lauder W. Jones officer’s diary, 5 December 1930, folder 11, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.


15. This story was told by Szent-Györgyi in “Oxidation, Energy Transfer, and Vitamins,” in *Nobel Lectures, Physiology or Medicine 1922–1941* (Amsterdam: Elsevier, 1965).


17. Memorandum, 31 December 1930, folder 11, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

18. Memorandum, Szeged Project, 15 April 1931, folder 11, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.


20. Memorandum, Szeged Project, 15 April 1931, folder 11, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

21. The documents have been published in Szabó and Zallár, *Szent-Györgyi Albert Szegeden*, 118–119.

22. Memorandum, Szeged Project, 15 April 1931, folder 11, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.


24. A. Szent-Györgyi to A. Gregg, 18 January 1932, folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

25. Ibid.

26. The correspondence about the issue can be found in folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

27. Hungarian journals and books are full of anecdotes about Szent-Györgyi’s unusual behavior. Some of them were collected at the end of the volume, Albert Szent-Györgyi, *Válogatott Tanulmányok* (Selected Papers) (Budapest: Gondolat Kiadó, 1983).
28. A. Szent-Györgyi to A. Gregg, 22 June 1931, folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.
29. A. Szent-Györgyi to A. Gregg, 6 December 1931, folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.
30. A. Szent-Györgyi to A. Gregg, 24 March 1932, folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.
31. A. Szent-Györgyi to Rockefeller Foundation, 31 May 1933, folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.
32. Szent-Györgyi was supported by the Josiah Macy Jr. Foundation from 1932 to 1948. According to a letter from the current president, June E. Osborn, the total sum of support given to Szent-Györgyi amounted to $21,800, which consisted of grants in the range of $300 to $5,000. The details of this connection are unknown because the records of the Josiah Macy Jr. Foundation are not open to research. I am indebted to President Osborn for this valuable information.
33. DME Fellowship records, RAC RF RG10, F/s, MNS-Hungary, Albert Szent-Györgyi.
38. Annau et al., “Über die Bedeutung.”
41. The logic of this progress has been described in Hans Krebs, Reminiscences and Reflections (Oxford: Clarendon Press, 1981), 105–118.
42. The publications became known only after the war. They appeared in Albert Szent-Györgyi, ed., Studies from the Institute of Medical Chemistry University Szeged, Vols. I–IV (Basel and Budapest: Kerger, Gergely, 1941–1944).
44. These data are contained in a document sent to an American Hungarian newspaper (Amerikai Magyar Népszava) in 1955 by W. C. Cobb, Rockefeller Foundation Office of Publications. Since the document did not include the details of the usage, it is not clear how these sums are related to the contracted project. Amerikai Magyar Népszava, 8 March 1955, folder 376, box 59, series 750, RG 2, Rockefeller Foundation Archives, RAC.
46. Szent-Györgyi suggested that the foundation give a salary grant to Professor Dezső Miskolczy, a brain researcher (correspondence, folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC) and asked for a travel grant in 1932, but both requests were rejected. See Moss, Free Radical, 71–72.

47. Moss, Free Radical, 72.


50. Folder 10, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

51. The postwar Rockefeller Hungarian contacts and Szent-Györgyi’s correspondence with the foundation can be found in folder 10, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

52. See notes in DME Fellowship records, RAC RF RG10, F/s, MNS-Hungary. For example, Albert Szent-Györgyi wrote, “1/30/35. K. T. Compton, MIT to MM: MIT would like to have S-G on their staff. Think that he would do a great deal to promote research in biochemistry at MIT.”

Another note of 29 July 1940 commented on the impossibility of a Rockefeller grant if Szent-Györgyi emigrated to the U.S. because “it would strain our relations with Hungarians if we were to facilitate his emigration.”

53. According to a foundation officer, “He [Szent-Györgyi] said that in a small country like Hungary scientists of some renown should be patriotic enough not to expatriate themselves, otherwise the country would rapidly be depleted.” Memorandum, 1 May 1933, folder 12, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

54. Szent-Györgyi described his situation and political views in a meeting with Rockefeller officials. On 26 November 1947 he confided in Weaver that he wanted “to bring his staff of 17 people here.” Folder 10, box 2, series 750, RG 1.1, Rockefeller Foundation Archives, RAC.

55. A. Szent-Györgyi to W. Weaver, 12 October 1950, folder 3259, box 487, series 200, RG 2-1950, Rockefeller Foundation Archives, RAC.

56. W. Weaver to A. Szent-Györgyi, 20 October 1950, folder 3259, box 487, series 200, RG 2-1950, Rockefeller Foundation Archives, RAC.

57. Weaver officer’s diary, 25 May 1950, folder 3259, box 487, series 200, RG 2-1950, Rockefeller Foundation Archives, RAC.

58. See folder 179, box 24, series G, RG 2, Rockefeller Foundation Archives, RAC, for all of the correspondence about the usage of the grant. The date of Szent-Györgyi’s request was 26 December 1952, and the favorable decision was 31 December 1952.


60. See Kohler, Partners, 255.
The term *biomedicine* was invented in the United States after the Second World War to describe the confluence of medicine—whose purpose was traditionally healing—with biology—which by then was primarily concerned with mechanisms of living organisms at the cellular and molecular level. To achieve this merger, it was necessary to overcome the insularity of clinicians as well as the pretensions of biologists, who thought that they alone could understand the “keys” to the vital mechanisms of life. This convergence occurred at different times in different countries: in Germany at the end of the nineteenth century, then in the U.S. at the beginning of the twentieth century, and much later in France. The question examined by this paper is the American influence on the introduction of biomedicine in France.¹

It is well known that France played a key role in the development of scientific medicine at the beginning of the nineteenth century. With the invention of the stethoscope by Laënnec and the development of pathological anatomy, French hospitals became a “natural laboratory” for medical research as well as the place to educate practitioners, including the establishment of an examination to select interns (*concours d'internat*). As a result, from the beginning of the nineteenth century hospital clinical teaching played the key role in training the French medical elite, pushing into the background the medical schools or *Facultés de médecine*, whose teaching staffs were generally slow to adopt new scientific knowledge. Foreigners (notably Americans) as well as French students came in large numbers to study at the great Paris hospitals, but the emphasis on anatomy and pathology overshadowed the emerging new disciplines in scientific medicine such as physiology and bacteriology.²
The work of Claude Bernard is a reminder that French scientists participated in the advance of medical research, but by the time he published his famous *Introduction to the Study of Experimental Medicine* in 1865, it was clear his work was better appreciated outside his own country than within it. This was especially true of the medical establishment, which openly expressed its deep skepticism about the benefits of Bernard’s new experimental approach to therapeutic research.3 French clinicians’ lack of interest in physiology was evident in the fact that it took almost another hundred years before physio-pathology laboratories were routinely included in the hospitals, and then thanks only to the establishment of the Association Claude Bernard by the Paris hospitals in 1954.

Louis Pasteur is another example of French leadership in a new field—bacteriology—which was incorporated less into medical research and practice by doctors in his own country than elsewhere. France was well behind Germany and the U.S. in establishing such public health measures as mandatory immunization or declaration of infectious diseases. Whether the result of doctors protecting their privileges or the weakness of the government of the Third Republic, the difficulty in passing public health legislation in France resulted in persistently higher disease rates there.4 Resistance to mandatory vaccination hindered the work of Gaston Ramon, who became director of the Pasteur Institute during the First World War. A veterinarian by training, Ramon discovered antitoxins for vaccines against diphtheria and tetanus in the postwar years. At the end of the 1930s, however, he complained in a letter to the directors of the Pasteur Institute,

> Jealousy and enmity that previously had been silent, were suddenly revealed during the vote in the French Parliament on mandatory vaccination against diphtheria, in the form of a pernicious campaign of defamation. . . . The reason? Being a veterinarian, my right was questioned to work in the field of medicine or to have any role in medical matters.5

Medicine in Germany took a very different path during the nineteenth century. Rudolf Virchow, professor of pathology at Würzburg and Berlin during the last half of the 1800s, embodied the integration of physiology into medical education. A key feature was teaching by science faculty who were based outside the medical schools, thus adding to their credibility and inclusion of the latest discoveries. Robert Koch’s Institute for Infectious Diseases, established in 1891, was much better integrated into German medicine than its French counterpart, the Pasteur Institute, was into French medicine. Koch’s institute received government funding and was located in a Berlin hospital. Another reflection of German medical success was its attraction to foreign medical students, especially those from the United States. Whereas before 1850 France was by far the favored destination of
choice, by 1900 American students went overwhelmingly to study at Ger-
man medical schools.6

Among the many foreign observers of French medicine after the begin-
nung of the twentieth century, two North Americans are worth mention-
ing. William Osler was born and trained in Canada but gained fame as one
of the founding faculty of the Johns Hopkins Medical School, where he
taught from 1889 to 1905. He finished his career at Oxford, and in 1909
while on leave he visited Paris and wrote a series of articles published in the
Journal of the American Medical Association describing his “impressions of
Paris” and French medicine.7 As one of the preeminent contributors to
American medicine, Osler paid due respect to the French doctors who had
exercised so much influence on the generation of American physicians that
preceded him, making special note of his visit to the gravesite of Pierre
Louis at the Montparnasse cemetery. Although Osler noted that there were
Frenchmen who continued that tradition, he was less impressed with the
current system of training and practice. “There are no professional pathol-
gists in France,” he pointed out, thanks to the system that classified and
dispersed individuals with expertise to different hospitals.8 Osler also criti-
cized the overemphasis on the exams (concours) and political connections
that weighed most heavily in advancement, rather than the accumulation
of scientific achievement.

Finally, although Osler appreciated medical students’ access to clinical
training at hospitals, he decried the French overemphasis on this practice.
“The hospital is everything; the medical school is—well, quite a secondary
consideration.”9 Given his experience both as a teacher of bedside care and
as a proponent of scientific medicine, Osler appreciated the value of having
students see the practical side of their profession: “Is there not an unfortu-
nate cleavage between the scientific and the practical (i.e., hospital) side of
the student life, and has there not arisen in some quarters an antagonism
between the science and the art?” But given the vast amount that students
needed to learn, Osler doubted that adhering to the old apprentice system
was the best way to foster “an orderly intellectual development” in the edu-
cation of a modern physician. “A more excellent way is in a due sequence of
studies which reserves the complicated problems of disease until after the
scientific branches have been mastered.” This was, of course, one of the
features of the reformed medical curriculum that Osler had implemented
at Johns Hopkins, and although he heard that there was a movement in
France in this direction, it was not a strong one. Beyond the theoretical
problem, the French overindulgence in ward teaching also had the practical
disadvantage of causing overcrowding. According to Osler, the limit on size
for effective teaching was twenty students at bedside, yet he counted fifty-
five one morning at the Hôtel-Dieu Hospital.10
In 1910 Abraham Flexner visited Europe to study medical education in Great Britain, Germany, and France, following the publication of his report on North American medical schools. The comparisons with the United States reinforced his observations about the superiority of German medical education. Most important, as he recalled in his autobiography, was the fundamental importance attached to the combination of teaching and research within clinics as well as within laboratories. Flexner proposed modernizing American medicine by joining the scientific medicine of the Germans with the clinical tradition of the French and British. Inspired by the scheme of Osler and his colleague William Welch at Johns Hopkins University (both of whom had studied in Germany), and using the resources of the newly established Rockefeller Foundation, Flexner became the apostle of the creed, “bedside teaching by full-time practitioners.” In summary, this involved bringing together in one place the functions of care (the hospital), teaching (university professors), and research (laboratories). The “healing–teaching–research” triad (later known as Flexner’s trilogy) allowed medical teaching to modernize and become a full-time scientific discipline.

FRANCE AND ROCKEFELLER
MEDICINE MEN BETWEEN THE WARS

With the exception of Britain, which established the Haldane Commission on medical education reform in 1913, no European country attempted these changes urged by Flexner along the German and American models. France was particularly conspicuous in not following these trends in Anglo-Saxon countries. The only French medical school between the world wars with a program that approached the Flexner model was at Strasbourg, and that was a result of reforms implemented while the Germans controlled Alsace from 1870 to 1918. In fact, recent scholarship points to a decline of French medicine by the 1930s, explained by the devastation of the country during the First World War, not only in physical terms but in the psychological blow that war dealt to rational civilization. The impact at least undermined the argument for including more scientific training in the education of doctors and the allocation of more resources for medical research.

French medical decline was also evident in the delays and difficulties in introducing new clinical specialties. This was true even in pediatrics, which was surprising in a country so concerned about demographic stagnation. For example, in 1924 the Paris Faculty of Medicine refused to create a Chair of Pediatrics for Benjamin Weill-Hallé, son-in-law of the founder of French puericulture, Adolphe Pinard. In 1933, when the well-known pediatrician Robert Debré was named a professor, it was in the Chair of Bacteriology, an action that prompted one Rockefeller officer, Selskar Gunn, to comment on the perversity of a system that first names a professor to a
chair, then debates the specialty. Debré’s chair was changed to one in his specialty of pediatrics only in 1940.

The first concerted effort at reforming French medicine along American lines came shortly after the First World War. It was inspired by the Rockefeller Foundation as part of its worldwide program to reform medical education in the 1920s. The foundation was created in 1913; by 1920 it had made medicine and health its focus, thanks to the work of related Rockefeller philanthropies such as the Rockefeller Institute for Medical Research (RIMR) and the International Health Board (IHB). Although the U.S. government retreated into isolationism after the world war, the Rockefeller Foundation was determined to extend its work in promoting “scientific” medicine as it was doing in the U.S. The most effective means to this end was through medical education reform.

In the 1920s the Rockefeller Foundation officers assumed that London would be the model for the new medical education in the English-speaking world, but they also saw the need to support a comparable model for the Latin world. Paris was the obvious choice, but the foundation officers were well aware of the lack of receptivity in France to medical reforms. As a result, the foundation first supported reforms in Belgium because of the reticence of the Parisian medical faculty. When an approach was finally made, it came through a strategy of “encirclement,” that is, grants for medical education reforms first in Strasbourg (1922), then in Lyon (1924), before beginning negotiations with the Paris Medical School in the late 1920s.

As early as May 1922 Richard Pearce, director of the new Division of Medical Education (DME), reported to the foundation’s trustees that a major goal of his division was “to assist the development, if possible, of Latin medicine.” The first order of business, according to Rockefeller practice, was to survey French medical education; indeed, Pearce launched a survey of all countries in Europe in the early 1920s. Partly because of this distraction and also because of the size of the undertaking, he delayed the survey in France, much to the frustration of the Rockefeller trustees. Pearce went to Europe in the winter of 1923–24, but he spent most of his time in France working out the administrative changes in the Paris office for his new associate director, Alan Gregg, who was scheduled to move there later in 1924. Pearce returned to Europe for a tour from November 1924 to April 1925, during which time he worked on his study of France. By the end of spring 1925 Pearce completed his study of French medical education and was better prepared to offer a limited means of implementing the Latin strategy.

Pearce’s report outlined the medical education system for France with schools classified in five categories. These included the eight medical schools, or Facultés de médecine (excluding Algiers), three other schools of-
ferring full coursework but without the authority to grant degrees, a number of schools with only the first years of coursework, the private Catholic medical school at Lille, and seven schools offering medical education at various levels in the colonies. The report focused on the eight government-supported medical schools plus Lille, and Pearce’s findings differed little from what Osler and Flexner had reported in their earlier visits to France. Despite the teaching of appropriate course subjects, there was an overwhelming emphasis in French medical education on clinical training, to the exclusion of practical laboratory work. With the exception of Strasbourg, Pearce found that no school gave students more than a dozen exercises requiring laboratory work. Clinical work, on the other hand, began in the first year of study and increased with the externship and internship in subsequent years. This produced graduates with excellent training in bedside observation and care of patients but very weak knowledge of laboratory science.

Another important feature of the French system that ran counter to the Rockefeller Foundation model of medical education was that professors usually maintained a medical practice, often as heads of clinics in hospitals. The only exception, again, was the Strasbourg Medical School, which continued to follow the German model. When the province was returned to France in 1918, the laboratory departments were kept, with full-time staff and the requirement that students complete their preclinical subjects before beginning their clinical externships. In contrast, the University of Paris Medical School had only one laboratory department with a full-time staff member. Finally, in addition to finding problems of overcrowding, especially in Paris, Pearce reported that with only a few exceptions, buildings were out of date.

In sum, France was a prime candidate for medical reform according to the Flexner model of instruction by full-time faculty, with increased emphasis on laboratory science and hospitals in the service of university teaching. The medical school of the University of Paris was the obvious place to serve as the model for reform, not just in France but the whole Latin medical world. The problem, of course, was that the French did not generally feel the need for reform, and Pearce found very few French medical leaders who saw the need for significant reform. His hope, therefore, was to offer support to a limited number of those interested, to convince others of the value of reform. As a result, until the French were ready, Pearce recommended aid to a few individuals in laboratory fields who might be willing to convert their departments to full-time teaching and research. For the Rockefeller Foundation this required creating a level of funding between junior fellowships and large-scale institutional projects. At the end of 1925 the trustees approved a new “Development Program” for Italy as well as France and later extended it to Ireland.
Pearce had some candidates in mind, beginning with Emile Brumpt, full-time head of the Department of Parasitology at the University of Paris Medical School. After Gregg finished his survey of Italy, he settled into his new job in Paris overseeing the work of the DME in Europe. In the process he became more familiar with French medicine, and in 1926 he wrote to Pearce, “I would certainly prefer to limit the possible applications of the development program to Strasbourg, Lyon and Paris for two or three years. I don’t think France could absorb more than the product of chosen individuals in those three places—at least absorb them into significant places.”¹⁹ As a result, there were only two other awards made in 1926 besides the one to Brumpt. These went to Albert Policard in histology and Louis Hugouneq in biology at Lyon in conjunction with negotiations for a larger institutional grant. In 1927, aid was extended to two other professors at Paris: Marc Tiffeneau in pharmacology and Léon Bernard in hygiene, and two at Strasbourg: Maurice Nicloux in biological chemistry and Paul Bouin in histology. When Bernard retired the following year, Gustave Roussy’s Department of Pathological Anatomy in Paris was added, but that was the last award made under the program in France.

The Developmental Program did not last long, in part because of the reorganization of the Rockefeller Foundation in 1928. Even without the reorganization, however, the Developmental Program in France was soon overshadowed by the growing attention paid to the possibility of major grants to the Lyon and Paris medical schools, which for a while appeared finally to vindicate the long-held Latin strategy of the Rockefeller Foundation. Prospects at Lyon picked up shortly after a disappointing visit there by Pearce in December 1924. In fact, before Pearce returned to New York, the dean of the Lyon Medical School, Jean Lépine, came to visit him in Paris, where they discussed a strategy of moving the Lyon Medical School to the site of a new municipal hospital on the outskirts of the city. To Pearce this offered the prospect not only of closer university and hospital cooperation but also Reforming and strengthening laboratory facilities for the preclinical sciences.²⁰ Pearce was cautious and suggested that Lépine and some faculty from Lyon visit sites of previous Rockefeller-funded medical reforms. In early June 1925 a French delegation visited University College London, Oxford, and Cambridge. Then Lépine, Policard, and a French architect toured the U.S. under the foundation’s auspices in April and May 1926. The crisis of the French franc in the fall of 1926 delayed further negotiations, but prospects improved shortly thereafter with Lépine’s reelection as medical school dean plus the good fortune that the mayor of Lyon, Edouard Herriot, was appointed minister of public instruction, thus assuring the French national government’s financial support for the project.
The breakthrough came in the spring of 1927, when the Lyon Medical School changed its curriculum to require a first year of preclinical sciences before students began their clinical work. This permitted Gregg and Pearce to persuade the Rockefeller Foundation trustees to authorize negotiations for up to 50 million francs to support construction of the new medical school. Discussions moved quickly. Herriot secured authorization of a French government match of 15 million francs, and at its 4 November 1927 meeting the Rockefeller Foundation trustees approved a contribution of 41,206,000 francs ($1,625,000) for the project. Ground was broken on 16 March 1928, and the move of the medical school began in the fall of 1930, with the hospital opening two years later.

 Shortly after the foundation’s approval of the Lyon project in November 1927, the dean of the Paris Medical School asked Gregg and Gunn, the IHB’s director for Europe, if they could meet with Pearce when he visited Paris in January 1928. In one sense, the meeting continued discussions about an Institut d’hygiène that had been under consideration by the Rockefeller Foundation since 1920. Léon Bernard, who held the Chair of Hygiène at the Paris Medical School, first approached the IHB in February 1920 with a “Memorandum on the Creation of an Institute of Hygiene.” The proposal made little progress, however, while the foundation’s strategy for Latin medicine was stalled.

 Several things made the meeting on 17 January 1928 and a subsequent one three days later, in the opinion of the Rockefeller officers, “the first real approach for advice and aid” for medical reform in Paris. First was a change at the foundation in 1927 whereby the matter of the hygiene institute was transferred to the DME. Second, the Paris Medical School had been offered a gift by an anonymous donor of 25 million francs to construct new laboratories for experimental medicine and physiology; and the dean was interested in consolidating and expanding the faculty of hygiene (parasitology, bacteriology, etc.) under the direction of Brumpt at a new site on the rue Vaugirard. He was sure that the city, departmental, and national governments would cooperate in the purchase of land, as had been done in Lyon. Finally, when Pearce suggested the benefits of unifying all medical science laboratories at the new site, there was general agreement, but he made clear that the Rockefeller Foundation would need an official request to investigate the matter. When Pearce, Gregg, and Gunn met with their French counterparts three days later to tour the Vaugirard site, Sebastian Charléty, the rector of the University of Paris, presented Pearce with a written memorandum requesting assistance.

 In Pearce’s report of the meeting back to the foundation’s president, George Vincent, in New York, he admitted his “intense satisfaction” that the foundation’s policy toward France was about to bear fruit. Vincent went
even further in a letter responding to Gunn’s report of the same meeting, stating that he had trouble controlling his enthusiasm. “I hope a plan which will make a clear sweep of the Vaugirard site can be worked out. What a magnificent opportunity there would be then to create a modern medical teaching and research center in the capital of the Latin empire of the world! But I must stop here before I begin making a speech.”25 As to the likelihood of support, Vincent assured Gunn, “I am sure that our trustees who have been looking forward to making a large contribution to the University of Paris medical school if a chance to do this under the right conditions ever developed would be willing to stand by handsomely.”

In the course of the next five years the hopes of the foundation’s officers came close to being realized, albeit not without complicated and long negotiations, before ending in failure. Initially, Gregg talked with sympathetic faculty about expanding the scope of the initial proposal; then in the fall of 1928 interest shifted to a new site between the Seine and the rue Jussieu occupied by the Halle aux Vins, where the markets of the Parisian wine merchants were located. Its advantage was a more central location that was also large enough to house new facilities for the sciences, including biology. In addition, it was adjacent to the Jardin des Plantes, which had constructed new facilities thanks in part to funding from the Rockefeller International Education Board (IEB). Thus, it offered the possibility of grouping in one location even more resources to support the scientific medicine advocated by the Rockefeller Foundation. Pearce was so impressed with the possibilities that he asked for and received authorization from the trustees at their 19 November 1928 meeting “to formulate plans of cooperation with the University of Paris in the development of its work in the medical and biological sciences.”26

By the following spring Gunn persuaded Charléty, apparently with little difficulty, of the advantages of the new site for an expanded project. Indeed, the rector’s enthusiasm persuaded Gregg and Pearce of his sincere support not just for the move of the medical faculty but also for the need to centralize laboratories, cooperate with hospitals, and add full-time staff to the medical school. It was a more complicated plan because it involved more parties, but Charléty reported a favorable response by government officials to the idea. So when the rector asked for a more formal expression of Rockefeller support, Pearce and Gregg agreed, and at the November 1929 meeting of the trustees $6 million was committed for the acquisition of land and construction of buildings, with another $6 million earmarked for possible development of revised medical instruction.27

Charléty was delighted and optimistic, claiming that the Prefect of the Seine already had identified a site at Bercy in the eastern part of the city along the Seine for the move of the wine merchants. Then late in December 1929 news of the plans leaked, which gave the wine merchants a chance
to organize opposition unless they were adequately compensated.\textsuperscript{28} More
discouraging was the reaction of individual medical faculty with whom Gunn and Gregg talked in early 1930. Although expressing their personal
support for the idea, such figures as the current dean Henri Roger; the on-
cologist Roussy, who was rumored (correctly) to be the successor as medical
school dean; Léon Bernard; and André Mayer all predicted resistance by the
other faculty. Even more disappointing to Gregg was that none of them
seemed equal to the task of leading the effort to overcome the opposition
that would be required for the project to succeed.\textsuperscript{29} In subsequent months a
combination of political changes (the fall of the national government), a
dispute between the city and national governments over the amount and
who would pay for the planned moves, plus the wine merchants’ stance of
unqualified opposition to the idea prompted Roussy to tell Gregg that the
Halle aux Vins site was hopeless.

Charléty continued to be optimistic, but during the remainder of 1930
and throughout 1931 all attempts at progress were stymied. Although in
1932 there was some hope for change, each effort was met by effective op-
position or bad luck, such as the assassination in May 1932 of Paul Dou-
mer, the president of the French Republic, who supported the proposal.
The idea was floated for an alternative site to accommodate the new med-
ical facilities on the grounds of the St. Anne Hospital, but the Rockefeller
Foundation officers were unimpressed with the possibilities because it was
smaller and could not accommodate the science facilities, nor was it close to
the Jardin des Plantes. Moreover, they suspected that it would only produce
other problems.

In February 1933 Charléty forced the issue by appointing a committee
to study the alternative site. When he formally proposed a plan to use the St.
Anne location, the Rockefeller trustees voted to reject the French proposal
for the new site and rescinded their offer of November 1929 to assist devel-
opment of the site at the Halle aux Vins. In his \textit{Reminiscences} Gregg called
the Paris project nothing less than “a tragic failure.”\textsuperscript{30}

ROBERT DEBRÉ AND
FRENCH MEDICAL REFORM AFTER 1945

The second concerted effort at reforming French medicine, which was ulti-
mately successful, came twenty-five years later. It differed from the first in
that the immediate impetus came from within France, although the leaders
were in many ways outside the French medical establishment. Moreover,
they had indirect inspiration from the American reforms, specifically those
supported by the Rockefeller Foundation.

One French clinician who had taken advantage of the Rockefeller fel-
lowships to introduce laboratories in his \textit{services hospitaliers} was Robert
Debré, a central figure in the history of French medicine in the twentieth century. Archetype of the great clinician, he had an advantage over the majority of his countrymen because of his travels. He visited the U.S. as a child, and he wrote a thesis on the treatment of cerebral-spinal meningitis with the serum discovered by Simon Flexner at the RIMR, which Debré visited. He worked in public health programs after the First World War, including infantile tuberculosis, which led him to a specialty in pediatrics. Debré became chef de clinique at the Hôpital des enfants malades at the beginning of the 1920s, where he decided to help make up for French backwardness in medicine by encouraging research. He worked with Gaston Calmette of the Pasteur Institute on the first trials of the Calmette-Guérin bacillus (BCG) vaccine as a test for tuberculosis.

In the beginning of the 1930s, after he became one of the directors of the Assistance publique in Paris, Debré worked on developing the pediatric service of the Hôpital des enfants malades. To achieve this he sought the support of American foundations to add research laboratories, and in 1934 he received $25,000 from the Josiah Macy Jr. Foundation. In subsequent years several of his assistants were Rockefeller fellows, including Maurice Lamy, one of the first French doctors to work in medical genetics. On the eve of the Second World War Debré discussed with the European office of the Rockefeller Foundation in Paris the establishment of an ambitious public health project, including a hygiene institute and a school of public health. D. P. O’Brien of the Rockefeller Division of Medical Sciences wrote a lengthy report to New York, indicating that Debré would be the key person in the plans, but the project was shelved for a variety of reasons, not the least of which was the French defeat in 1940.

The Vichy regime left a mixed legacy in medical and health policy. On the one hand, in 1941 it created an Institut national d’hygiène (INH), which later became the Institut national de la santé et de la recherche médicale (INSERM). On the other hand, several French medical faculty of Jewish ancestry, such as the hematologist Jean Bernard, had their privileges revoked, although Debré kept his despite being the descedent of Alsatian rabbis. The anti-Semitism of Vichy, therefore, pushed these clinicians into the Resistance, where they could combat both the political and scientific conservatism of the French medical establishment. In 1944 Debré joined the Medical Committee of the Resistance, to shape the future of the medical profession. He proposed a plan for reforming medical studies, which he said was necessary because

the place of French medicine in the world is not what it should be, and there is no doubt that our system is bad. The teaching faculty should be dedicated to their task; the medical professor and his assistants should spend the majority of their time in the hospital and in the laboratory. . . .
practitioners must have good instruction in science. We must reduce the
time spent on anatomy in our teaching to give more priority to semiological
clinic, bacteriology, and immunology which should be taught after the sec-
ond year to complete hospital teaching. . . . These additions will not result
in the loss of clinical acumen in French medicine, but they will permit it to
be modernized.33

In 1944 French medicine was, as Debré admitted, in bad condition, es-
pecially compared to the American system and that of the British, which
had undergone reforms for twenty-five years. There was one research insti-
tution in France, however, that had managed to keep up with the latest
medical discoveries around the world: the Pasteur Institute. In fact, the bi-
ologists there, with André Lwoff as their spokesman, offered to lead French
medicine out of its stagnation literally by taking medical research out of the
hands of doctors.

Lwoff could make this offer because of the great transformation that
had taken place in basic biological research thanks to new contacts between
the Pasteur Institute, the Centre nationale de la recherche scientifique
(CNRS), and scientific institutions in the Anglo-Saxon countries. Late in
1945 biochemist Louis Rapkine established a French scientific mission in
London to coordinate visits by Pasteurians to British laboratories. Among
the French researchers who participated were Jacques Tréfouël, head of the
Pasteur Institute (blood plasma), Israel Marszak and Pierre Lepine (peni-
cillin), and Jacques Le Beau (neurosurgery). Rapkine obtained penicillin
cultures for the Pasteur Institute from the British Medical Research Coun-
cil (MRC), which also sent additional researchers in subsequent years. As a
result of these developments in the rest of the world, the biologists at the
Pasteur Institute and the CNRS seriously questioned the direction of future
French biomedical research and whether physicians or biologists would lead
it. Rapkine suggested to the CNRS that it should follow the MRC model in
Britain, where there were three biologists for every physician.

Lwoff also gave reasons why he thought it would be wise to “de-med-
cialize” medical research:

What we call microbiology includes the study of viruses, which for a long
time were considered invisible forms of bacteria but now are thought to be
similar to genes, the factors of Mendelian heredity. It might seem reasonable
to associate each of these branches with its corresponding discipline, such as
botany, biochemistry, etc. But it would be out of the question, for practical
reasons, to consider the scientific study of agents of infectious diseases as
branches of medicine, just as it would be so to classify milk creation as tech-
nology, or to place the work on penicillin under mycology, or the bacterio-
logical campaign against insects under entomology. Microbiology will only
develop effectively in laboratories or in institutes. The fact that microbiology
is not taught by science faculty but rather by medical professors who are not specialists, has brought French microbiology to a very grave crisis.34

Naturally, French clinicians opposed the biologists’ point of view. Debré, for example, could in no way imagine the revival of French medical research without involving the clinic. In 1946 he was appointed head of the newly created INH, with Louis Bugnard as managing director. Both men wanted to increase research by French physicians. Debré set up an INH program inspired by his own work in pediatrics and justified it by the fact that infant mortality had increased in France from eight per thousand before the war to thirty-six per thousand in 1945. He also called for the INH to play an active role in preventive medicine. He complained, “Vaccines exist but they are ignored by our doctors. Take the case of tetanus. We have 1000 deaths per year in France because of this infection, while the U.S. Army had no one die from tetanus during its whole military campaign in Europe.”35

Fortunately, Debré could still count on American aid. In October 1945 he met with Gregg, head of the Medical Sciences division of the Rockefeller Foundation, who was making his first tour of Europe after the conflict. The subject of discussion was how best to recommence American aid. Gregg suggested the establishment of a pediatric hospital in the Calvados or Moselle region to be devoted to war orphans and wounded French children. “The sentimental appeal of crippled children is considerable and, if some war orphans were to be included, one or more hospitals could be organized in such a way as to be able to reach out into the surrounding population and accomplish some valuable preventive work through liaison with schools.” Debré agreed about the need, but he had other ideas and asked if the foundation would recommence its system of fellowships. Gregg recorded these hopes of Debré in his diary:

> The most effective procedure he could imagine would be to pick out of the best young men in medicine—perhaps some of those now on fellowships—some individuals whom we were prepared to back with salaries large enough to enable them to do full-time scientific work for a period of five years, and this aid should include grants for apparatus analogous to what we have done with some of our returned fellows.36

Three years later Debré was more realistic in describing to Gregg the practical value of the fellowship program. Speaking of the fellows, Debré admitted, in addition to what they learned technically, “their sympathy for reform is essential for reform to take place here.”37 Gregg said that he “saw no reason why candidates could not be proposed . . . [and] hoped they would be candidates returning to teaching positions.”38
Rockefeller fellowships went to four pediatrics protégés of Debré: Alice Doumic, René Alloiteau, Alexandre Minkowski (who became head of perinatal obstetrics at the Baudelocque Clinic) and Georges Schapira, head of the Biochemistry Laboratory at the Hôpital des enfants malades. Debré was by no means the only one to benefit from American support. The Rockefeller Foundation provided considerable funding for French medicine after the Second World War. This was all the more remarkable because the foundation was phasing out its general program in medicine at the time in favor of agricultural development in poorer countries. Among the medical specialties that benefited from this support in France were anesthesia in Paris, Lyon, and Toulouse; the development of pediatrics and obstetrics in Paris and Strasbourg; and neurophysiology in Marseille, which had been provided little support between the wars but after 1945 became one of the most successful fields of French medicine.

There were other areas of more general Rockefeller support for science in France, but the French themselves developed some of their own resources to enable young researchers to study American advances in medicine. Debré took advantage of contacts with French émigré scientists in the United States, the most prominent of whom were René Dubos, a biochemist at the Rockefeller Institute who had worked with Debré earlier on BCG, and André Cournand, a cardiologist who had interned with Debré in Paris but who made his career at Bellevue Hospital in New York City, ultimately receiving a Nobel Prize. They developed an ambitious program that was put at the disposal of Bugnard, the INH director. Bugnard, who was a faculty member himself at the medical school of Toulouse and a former Rockefeller fellow, had trained in medical biophysics in the laboratory of A. V. Hill before the war. With the aid of Cournand, the cultural services of the Quai d’Orsay in Paris, and the Rothschild Bank in New York, Bugnard created a Fond de soutien pour la recherche médicale française aux États-Unis (see Table 5.1). With $50,000 at its disposal, the INH was able to send the best interns from French public hospitals to the U.S.

In a letter from Cournand to Debré, the cardiologist gave Bugnard most of the credit for the success of the programs:

The head of the INH has the knack of discovering young, talented doctors who are interested in research. Moreover, on each of his trips [to the U.S.] he persuades new sponsors to help his “Young People.” Also, and this point should be underscored, he does not abandon those he has funded after their return to France. He continues to help them get established in such a way as to take advantage of the experience they have acquired here.

In addition to advances in fundamental research, medical progress also required the use of increasingly complicated and expensive equipment. The
Natural Sciences division of the Rockefeller Foundation assisted with the purchase of the necessary equipment for hospital services and medical research laboratories. For example, it provided funds to purchase an RCA electron microscope for Charles Oberling’s Institut de recherches sur le cancer, and it gave an important subvention for the purchase of an Allis-Chalmers betatron for the anticancer center at Villejuif.42 The foundation also funded the purchase of electro-encephalographic apparatus for the medical schools at Marseille and Toulouse and helped supply radioisotopes (phosphorus 32 and cobalt 60) and a mass spectrometer for Jean Cour-saget’s work in biochemistry at the INH.

In January 1953, when Bugnard presented his development program to the Conseil économique et social de Paris, he stressed the importance of American aid in the renewal of French medicine by contrasting the differences between the art and science of medicine:

It is clear that fifty years ago France flourished in the area of the medical arts, that is, the époque when intelligent observation undertaken by means of our senses played a primary role in medicine. Since then, there has been an evolution which has taken advantage of progress in physical and chemical sciences to produce new techniques of increasing importance such that there is no doubt that one can talk of “medical science.” It is in the United States in particular that our young workers have learned such techniques as the use of radio-isotopes in the laboratory and hospital, new procedures of electro-encephalography and neurophysiology, methods to explore cardiovascular functions, recent techniques of biochemistry, etc.43

The final stage in the modernization of French medicine involved hospital reform led by Debré and Jean Dausset, an immunologist whose work was recognized by a Nobel Prize in 1980.44 With the creation of the Fifth French Republic in 1958 and the nomination of Debré’s son, Michel, as

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TABLE 5.1
French Medical Researchers Supported by “Fonds de soutien” through the INH

<table>
<thead>
<tr>
<th>Name</th>
<th>Specialty</th>
<th>Host Institution</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jean Dausset</td>
<td>Hematology</td>
<td>Boston Children’s Hospital</td>
<td>Nobel laureate</td>
</tr>
<tr>
<td>Jean-Pierre Soulier</td>
<td>Hematology</td>
<td>Harvard</td>
<td>Head of French transfusion service</td>
</tr>
<tr>
<td>Jean Scherrrer</td>
<td>Neurophysiology</td>
<td>U. of Illinois</td>
<td></td>
</tr>
<tr>
<td>Gabriel Nahas</td>
<td>Neuropharmacology</td>
<td>Cornell</td>
<td></td>
</tr>
<tr>
<td>Maurice Tubiana</td>
<td>Oncology</td>
<td>Columbia and U. of Calif.</td>
<td></td>
</tr>
</tbody>
</table>

(Berkeley)
prime minister, it was possible to pass the ordinance of December 1958, which integrated the medical faculties and hospitals into Centres hospitalo-universitaires (CHU), thus following a plan directly inspired by the Flexner program of the 1920s and outlined by Debré in 1944. A crucial point of the reform was the establishment in France of a system of “full-time” doctor-instructors based in hospitals, thus finally bridging the gap in medical teaching that had existed for so long in France between the clinic and the medical school. Medical research was subsequently tied financially to a national biomedical research program in a new ministry for scientific research (DGRST). In 1964 INSERM replaced the INH and was given a new scientific agenda that emphasized research in cellular and molecular pathology, fundamental immunology, and medical genetics, thus solidifying the merger of fundamental biology with clinical research.45

CONCLUSION

In a conference organized by the World Health Organization in 1968 on the subject of “science policy and biomedical research,” the French clinician Jean Bernard (a former Debré intern) took issue with the use of the term *biomedicine*.

> It is useless to replace the honorable and classic term “medical research” by the recently adopted “biomedical research,” which has the inconvenience of being an etymological barbarism with its Greek head and Latin tail, and offers no advantages since one cannot conceive of medical research except on living things. . . . The language used belittles the seminal importance of clinical data for basic research, the inspiration, the substance offered by facts observed in humans for theoretical research.46

Bernard’s criticism came not from opposition but because he saw no need to state the obvious. Like his eponymous countryman a century before (Claude Bernard), he saw no division between biology and medicine, or between the clinic and research.

At the end of the nineteenth century and the first half of the twentieth century, the majority of those in French medicine resisted this “scientific” approach to medicine, favoring instead an emphasis on the clinic. Because of political circumstances, not to mention a certain chauvinism, the German paradigm of medical science was only introduced into France by the indirect route of American biomedicine. French interpretations of this development have stressed the essential role that French clinicians played in the process, thus prompting use of the term “modernization” rather than “Americanization.” It would be wrong, however, to ignore the material as well as intellectual aid of France’s transatlantic ally, both directly and indi-
rectly. Whatever the attribution of responsibility, the creation of INSERM completed the rehabilitation of French medicine to the ranks it enjoyed in the preceding century during the convergence of medicine and biology.

NOTES

Another version of this essay appeared in Giuliana Gemelli, ed., American Foundations and Large-Scale Research: Construction and Transfer of Knowledge (Bologna: CLUEB, 2001), 91–114. The authors wish to thank the publishers for permission to include it in this volume.

1. The amount of scholarship on Americanization has grown along with the rise of American influence in the world. Besides the more obvious political and military analyses, the primary focus has been on economic and cultural influences. See, for example, Richard Pells, Not Like Us: How Europeans Have Loved, Hated, and Transformed American Culture since World War II (New York: Basic Books, 1997); and Mary Nolan, Visions of Modernity: American Business and the Modernization of Germany (New York: Oxford University Press, 1994). A recent important work about France has been Richard F. Kuisel’s Seducing the French: The Dilemma of Americanization (Berkeley: University of California Press, 1993), which was translated into French as Le miroir Américain (Paris: J.C. Lattès, 1996).


8. Ibid., 702.

9. Ibid., 771.

10. Ibid., 772.

11. The two resulting studies were Abraham Flexner, Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching (New York: Carnegie Foundation, 1910); and Medical Education in Europe (New York: Carnegie Foundation, 1912).


15. For background, see chapter 2, by William Schneider, in this volume, and Picard, La Fondation Rockefeller.
16. Minutes of Rockefeller Foundation trustees meeting (hereafter cited as RF trustees minutes), 24 May 1922, folder 1, box 1, ser. 906, RG 3, Rockefeller Foundation Archives, RAC.


18. RF trustees minutes, 6 November 1925, folder 1, box 1, ser. 906, RG 3, Rockefeller Foundation Archives, RAC.

19. A. Gregg to R. Pearce, 10 June 1926, box 24, MSC 190, Alan Gregg Papers, National Library of Medicine (hereafter cited as AGP NLM).


22. In a subtle but telling difference of perspectives, the Rockefeller Foundation records referred to it as the “French School of Public Health.” The obvious reference was to the new London and Johns Hopkins schools of public health, which the foundation supported. See folder 53, box 5, ser. 500, RG 1.1, Rockefeller Foundation Archives, RAC.

23. R. Pearce to G. Vincent, 17 January 1928; A. Gregg, “Conference on Paris Faculty problems,” 17 January 1928; and Pearce officer’s diary excerpt, 17 and 20 January 1928, folder 5, box 5, ser. 500, RG 1.1, Rockefeller Foundation Archives, RAC.

24. S. Charléty to R. Pearce, 23 February 1928, folder 5, box 5, ser. 500, RG 1.1, Rockefeller Foundation Archives, RAC.

25. S. Vincent to S. Gunn, 2 February 1928, folder 5, box 5, ser. 500, RG 1.1, Rockefeller Foundation Archives, RAC.


27. RF trustees minutes, 13 November 1929, 29442–29443, as cited in “Source Book,” 4661–4662.

28. New York Sun, 26 December 1929, clipping, in R. Pearce to A. Gregg, 27 December 1929, box 24 AGP, NLM. The article quoted Dean Roger of the medical school announcing that John D. Rockefeller Jr. had offered $6 million to the Paris Faculty of Medicine to build a new school. Pearce's note to Gregg began, “God bless you in your efforts with Roger.”

29. Gregg officer's diary, 6–18 January 1930, RG 12.1, Rockefeller Foundation Archives, RAC.


31. Until a scholarly biography appears, the best work on Debré is his autobiography, Robert Debré, L'honneur de vivre (Paris: Stock Hermann, 1974).

32. D. P. O'Brien to S. Gunn, “Teaching and Research in Pediatrics at the University of Paris and Their Relation to Child and Maternal Welfare and to Social Medicine in France,” 20 December 1939, folder 72, box 7, ser. 500A, RG 1.1, Rockefeller Foundation Archives, RAC.

34. Lwoff memo, Comité directeur (undated, probably end of 1944), folder 212, AN 80284, CNRS archives, Paris.
35. R. Debré to the INH board, 2 April 1946, Procès Verbaux du conseil d’administration, archives of INSERM, Paris.
36. Gregg officer’s diary excerpt, 25 October 1945, folder 72, ser. 500A, RG 1.1, Rockefeller Foundation Archives, RAC.
37. Gregg officer’s diary excerpt, 23 March 1948, folder 72, ser. 500A, RG 1.1, Rockefeller Foundation Archives, RAC.
38. Gregg officer’s diary excerpt, 29 July 1948, folder 72, ser. 500A, RG 1.1, Rockefeller Foundation Archives, RAC.
40. In an effort to reconnect those working in French laboratories with colleagues in other countries from whom they had been cut off, the CNRS received $350,000 to hold a series of conferences and purchase critical laboratory equipment. The majority of the scientific fields supported were in physiology, biophysics, biochemistry, and microbiology. It proved especially valuable in achieving its goal of restarting and stimulating French research. See Doris T. Zallen, “Louis Rapkine and the Restoration of French Science after the Second World War,” *French Historical Studies* 17 (1991): 5–37; and “Le cycle Rapkine et la mission Rapkine, le developpement de la recherche médicale en France,” *Sciences sociales et santé* 10 (1992): 11–23.
41. A. Cournand to R. Debré, 10 September 1949, in Bugnard private papers, Paris.
42. AN 760215, INSERM Archives.
43. L. Bugnard, Conseil economique et sociale, January 1953, Bugnard file, INH/INSERM Archives.
From the Great Famine and sweeping epidemics of 1921–23 until Stalin’s hegemony over the Communist Party was nearly complete in late 1927, American medical philanthropy for Russia was simultaneously sought and discouraged by different elements within the Soviet bureaucracy. While the medical administrators and scientists assiduously solicited materials and money from abroad, the more xenophobic Politburo members sought to block assistance by charitable groups in the bourgeois West. Despite Russia’s immense needs in 1921, these Bolsheviks, remembering the recent Allied intervention, warned that large numbers of foreign personnel on Russian soil would endanger the young government’s internal security. When Lenin’s acceptance of the Riga agreement\(^1\) in late July 1921 allowed the American Relief Administration (ARA)\(^2\) to establish its own distribution centers in Russian famine zones, apprehensive Soviet leaders subjected representatives of the ARA and other foreign charities to extensive surveillance and harassment, forcing them to pass through a metaphoric “eye of the needle” in order to enter Russia and bring relief to its suffering citizenry.\(^3\)

This essay focuses on one small part of American medical philanthropy\(^4\)—direct aid to institutions and individuals involved in Russian medical science—to determine where and how the Soviet medical administration used this assistance and to examine what actual impact the foreign medical materials and accompanying personnel had on Soviet medical research in the 1920s. Close attention is paid to the correlation between events in the Soviet political arena and changes taking place within the Soviet medical administration and research community.
MEDICAL RESEARCH IN LATE TSARIST RUSSIA

Russian medicine in the late nineteenth and early twentieth centuries exhibited several distinctive traits that had a direct bearing on the nature and development of Soviet medical research in the 1920s. Topping the list was the pervasive feeling of inferiority that came from knowing that Russia lagged greatly behind Germany, France, and Britain in its ability to care for the health of its citizens. This perception of backwardness vis-à-vis the West affected members of the medical profession in various ways. Some became idealistic zemstvo physicians who served the long-neglected peasantry, while others pushed for health reform through organizations like the Pirogov Society. Many simply left Russia to study or practice medicine abroad. The majority of those who stayed supported a variety of international professional organizations with great enthusiasm. One can imagine that such memberships helped to compensate for the low esteem in which the profession was held by Russians of all classes.

Within the aristocratically supported St. Petersburg medical science community, the desire to keep up with research in Western Europe led to the establishment in 1890 of one of the world’s finest medical science facilities, the Institute of Experimental Medicine. An assortment of physiological and bacteriological research labs and clinics quickly developed at the nearby Military-Medical Academy. The international prestige of the institute was greatly enhanced in 1904 when I. P. Pavlov, who then headed the physiology department, received the Nobel Prize in medicine and physiology. Pavlov was both the first physiologist and the first Russian to receive such an award; he became an immediate hero at home, the object of both professional acclaim and public adulation. A desire for similar accolades from the international scientific community may have encouraged his St. Petersburg colleagues to choose grandly abstract research topics rather than those in the applied sciences or technology. In the early years of the twentieth century very little medical research done in the capital served immediate practical ends.

Research at the University of Moscow presented a striking contrast to that in St. Petersburg. Scientists there, strongly influenced by the liberal Moscow Zemstvo’s efforts to improve sanitation and promote preventive medicine in the bustling metropolis, initiated a number of practical research projects in hygiene and epidemiology in the last years before the 1905 Revolution polarized the medical profession politically and provoked a brutal government crackdown. Although a few researchers—gifted microbiologist D. K. Zabolotnyi was the most notable—supported radical agitation, most retreated to their laboratories when political turbulence threatened.
They continued to attend international medical congresses and to visit research facilities abroad whenever permitted by the state.

Russia’s medical scientists, like their European colleagues, were surprised by the outbreak of war in 1914 and immediately felt its consequences. In the Institute of Experimental Medicine’s annual report for 1914, editor V. L. Omelianskii noted that when the war began, the Institute’s German and Austrian researchers left at once, and most normal activities except for teaching ceased. “All our energy went into war work, and we became as if part of the army,” he wrote. With the German connection severed by war, researchers lost their access to up-to-date medical literature, chemicals, and laboratory equipment.

Two other outstanding characteristics of Russian medical science at this time were the fragmentation of its administration among various state agencies and its near total financial and administrative dependence on the state. A final trait exhibited was, in Loren Graham’s words, a kind of “chaotic, disorganized quality.” In the late 1920s and 1930s this reputation for disorganization would give Soviet politicians the rationale they needed to reform scientific institutions “along socialist lines.” Graham writes:

Management and coordination of scientific research may have been more seriously needed in Russia than in any other state with a modern scientific program, a condition explainable, no doubt, by the fact that no other state as backward as Russia attempted to maintain a completely modern scientific program.

**REVOLUTION AND CIVIL WAR**

Despite outstanding Russian accomplishments in blood chemistry, serology, and physiology by Pavlov and others, the vast majority of people living in the Empire were still untouched by modern medicine when the revolution broke out. Even before the war, the average life expectancy was a mere thirty-two years, the lowest in Europe. Russia’s medical profession was shattered by the war, demoralized by the worsening health situation, and frustrated by the state’s continuing refusal to allow it a role in reforming medical administration and public health programs. Therefore, when the Provisional Government replaced Nicholas II in March 1917, medical professionals looked forward with enthusiasm to the reform process that lay ahead. Physicians envisioned leading modern public health reform efforts, while researchers anticipated resuming their studies in an atmosphere of material sufficiency and intellectual freedom. In those heady days of unfettered democracy, they were elated that the twin clouds of censorship and state interference in their work had at last been lifted.
The disastrous Russian involvement in the World War continued, and, following a pattern well established in tsarist times, the would-be medical reformers thwarted their own dreams by quarreling among themselves. Barely seven months later, the Bolshevik Revolution closed their brief window of opportunity, leaving the few radical socialists among them to try their hand at reforming Russian medicine. Although some professionals fled the country and others signed petitions objecting to Bolshevik rule, most simply took their time before beginning to cooperate with the new Soviet medical establishment. After the government moved to Moscow in March 1918, increasing numbers of sanitary experts, epidemiologists, medical statisticians, and former zemstvo physicians joined their socialist colleagues to combat cholera and typhus epidemics and the terrible 1918 influenza pandemic.

Through years of arrest and exile under tsarist rule, the small cadre of socialist professionals—few among them were yet Bolsheviks—had also harbored dreams of improving Russia’s health through preventive medicine, sanitary enlightenment, and useful medical research conducted in well-equipped laboratories. Lenin, who shared their public health concerns, opened the Eighth Congress of Soviets in March 1919 by warning that “either socialism must defeat the louse, or the louse will defeat socialism.” In July 1918 he led the Council of People’s Commissars (Sovnarkom) to create the Commissariat of Public Health (Narkomzdrav), an administrative organ designed to supervise all aspects of medical work throughout the nation (see Table 6.1). The Narkomzdrav was directed to put the latest Western technologies to use in constructing a new centralized Soviet medicine to be professionally delivered, preventive in nature, and free to all citizens. Although in the short term medical research under the Narkomzdrav aided and abetted the achievement of public health goals by finding ways to combat rampaging epidemics, the required emphasis for scientists under socialist medicine was to explore the linkage between disease and changing social conditions and, ultimately, to conduct research supportive of socialist tenets.

It took persistence, coercion, and the exigencies of the Civil War period before Narkomzdrav, headed by Bolshevik physician N. A. Semashko, managed to “gather in” (sobirat’) the dozen or so tsarist medical institutions under its authority. By mid-1920 its control over the profession was complete except for the university faculties of medical education, which remained the responsibility of V. E. Bronner in the Commissariat of Education (Narkompros) until 1929. To extend his control over the nation’s medical research projects, Semashko created the State Institutes of People’s Health (GINZ) in Moscow in 1920. This administrative body coordinated the work of a mix of old and new research centers, including the Institutes of Tropical Medicine, Serum and Vaccine Control, and Microbiology. By
<table>
<thead>
<tr>
<th>Name</th>
<th>Acronym</th>
<th>Dates of Service</th>
<th>Nature of Organization</th>
<th>Description of Medical Philanthropy</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Friends Service Committee</td>
<td>AFSC</td>
<td>7/20–1927</td>
<td>Private apolitical Quaker service organization</td>
<td>Distributed supplies through British-American Quaker (Friends International Service) center in Moscow; medical relief in Buzuluk region of Samara; medical aid to children's homes</td>
</tr>
<tr>
<td>American Jewish Joint Distribution Committee</td>
<td>JDC</td>
<td>7/20–4/24</td>
<td>Distribution agency for various Jewish charities</td>
<td>Some medical relief through ARA; $500,000 in medical supplies and medical education programs for Narkomzdrav, in 1923–24</td>
</tr>
<tr>
<td>American Medical Aid to Russia (became AFSC Medical Section in 3/23)</td>
<td>AMAR</td>
<td>11/20–3/25</td>
<td>Private secular medical charity until 1923</td>
<td>Medical supplies and literature to Narkomzdrav; equipping of Old Catherine Hospital in Moscow</td>
</tr>
<tr>
<td>American Red Cross</td>
<td>ARC</td>
<td>12/20–7/23</td>
<td>Public secular medical charity</td>
<td>Some $25,000 in medical goods for Narkomzdrav (via Quakers) in 1920–21; nearly $4 million in medical supplies to ARA</td>
</tr>
<tr>
<td>American Relief Administration</td>
<td>ARA</td>
<td>8/21–7/23</td>
<td>Quasi-official secular famine relief organization headed by Herbert Hoover</td>
<td>Sought to consolidate and manage distribution of all American philanthropy to famine-stricken Russia; distributed $8 million in supplies to medical institutions</td>
</tr>
<tr>
<td>Laura Spelman Rockefeller Memorial</td>
<td>LSRM</td>
<td>12/21–3/25</td>
<td>Private philanthropic foundation</td>
<td>$300,000 to ARA for medical supplies and shipment of U.S. Army medical surplus; $165,000 to ARA for relief for medical professionals; $265,000 to Student Friendship Fund (SFF) for food and medical aid for professors and students</td>
</tr>
<tr>
<td>Rockefeller Foundation U.S. Congress</td>
<td>RF</td>
<td>1/21–1934</td>
<td>Private philanthropic foundation</td>
<td>Medical literature program; fellowships for medical professionals</td>
</tr>
<tr>
<td>U.S. Congress</td>
<td></td>
<td>12/21</td>
<td>Government</td>
<td>Donated $4 million worth of Army medical surplus to ARA</td>
</tr>
</tbody>
</table>
the mid-1920s the old Institute of Experimental Medicine in Petrograd
(now Leningrad) and the State Pasteur Institute of Public Health and Insti-
tute of Biological Physics, both in Moscow, were considered by Bronner to
be the most important. Narkomzdrav also established the Central Library
of Medicine in Moscow in 1920.14

In spite of the state’s diplomatic isolation and ideological aversion to
“bourgeois charity” in 1920, Semashko initiated a cautious campaign to
procure medical literature and supplies from around the world; he began by
cultivating a connection with the small Quaker mission opened in Moscow
by British and American Friends that July.15 His methods also included es-
tablishing Narkomzdrav representations in Berlin, Paris, Rome, and New
York, to gather valuable supplies and up-to-date medical information. Dur-
ing 1921–23, for example, M. S. Sheftel, then Narkomzdrav representative
in Rome, coordinated two Italian Communist Party relief campaigns for
hungry Russian children, represented Russia at international medical
congresses, and on one occasion procured 1,000 kilograms of quinine
for Soviet hospitals.16 The Soviet Red Cross often shared space in these
Narkomzdrav offices; it too sought contributions of foreign medical sup-
plies, at least some of which went directly to the Red Army.17 While indi-
vidual physicians within the Narkomzdrav structure were encouraged to
write former acquaintances in the West for assistance, Semashko, along with
Vera Lebedeva of the Department for Protection of Motherhood and In-
fancy and A. N. Sysin, who headed Soviet anti-epidemic campaigns, sub-
mitted detailed plans to the Rockefeller Foundation about how its proposed
largesse might be used. One consummate opportunist in the Leningrad
medical establishment even requested that the foundation supply him with
“one copy of every book and periodical already published or which will be
published on medicine, veterinary medicine, pharmacy, as well as disci-
plines relating to those subjects.”18

In the first Bolshevik years the state seldom had money to pay its re-
searchers, but Semashko, who made certain that all medical personnel were
assigned to the highest food ration category, encouraged scientists to con-
tinue experimenting and publishing.19 In 1920 very few medical researchers
were able to publish results of their work although L. N. Zhdanov and K. P.
Ivanov of Zabolotnyi’s Epidemiology Department at the Institute of Ex-
perimental Medicine did manage to produce a short article on characteris-
tics of typhus bacteria in the human blood and brain.20 The Russian
scientists had been isolated from their international colleagues for six years
without up-to-date medical reference materials, lab supplies, or even the
paper on which to write up experiments. As an unnamed “well known phys-
iologist” told ARA physician W. H. Gantt in 1923, “When I was diagnosed
with hunger oedema [sic] in 1920, my work kept me alive.” From 1918 to
1920 the scientists lived “half-starved beggarly existences,” waiting in endless lines for their scant rations of bread or potatoes. Yet, as Gantt observed:

Notwithstanding all the terrors, scientific life did not cease altogether. During the most difficult periods one could see men of science working in their overcoats, fur caps, and snow-shoes. Half-starved men continued to carry out their experiments on half-starved animals. Dead animals were cooked and fed to the living. After an operation the animal was often taken home for the night to be kept near the stove with the investigator.21

THE ARA MEDICAL DIVISION
AND THE FAMINE OF 1921–23

The terrible famine of 1921–23 was the result of several interrelated factors, only one of which was drought. Although famine conditions had been reported in some areas as early as December 1917,22 various political and geographic factors prevented substantive foreign assistance for the next three and a half years. By summer 1921 Fridtjof Nansen, League of Nations High Commissioner for Refugees, estimated that in spite of the best efforts of the Soviet Central Commission for Relief of the Starving (Pomgol), twenty to thirty million Russians faced death from starvation and disease.

On 13 July 1921 Lenin finally authorized publication of an international appeal for help. The Bolshevik leader, who was by then often too ill to attend Politburo meetings,23 anticipated receiving most famine aid from international labor, with little expected from bourgeois elements in the West. That same week in July he met with German Comintern official Willi Münzenberg to urge creation of the International Workers’ Relief (Mezhrabpom); Lenin’s exhortation to the international proletariat to come to the immediate aid of the “Soviet republic of workers and peasants” appeared shortly thereafter.24 Foreign Minister G. V. Chicherin, whose aristocratic background caused him to doubt the proletariat’s ability to mount a massive enough relief effort, placed greater faith in organizations like Herbert Hoover’s ARA, which recently had been so effective in eliminating starvation in postwar Europe. Toward that end, Chicherin begged heads of government around the world to “present no obstacles to public bodies and individual citizens of your countries desirous to help famine-stricken Russian citizens.” While a good deal of assistance did come from the international workers’ organization as well as Nansen’s League of Nations–sponsored International Committee for Russian Relief, once the Riga agreement had defined the terms of the aid, Chicherin was proved correct, and the ARA quickly moved in to establish the longest and most complete relief effort in history (see Table 6.2).25
<table>
<thead>
<tr>
<th>Name</th>
<th>Acronym</th>
<th>Dates</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Commission for Relief of the Starving</td>
<td>Pomgol</td>
<td>7/21–10/22</td>
<td>Coordination of Soviet relief efforts during the Great Famine</td>
</tr>
<tr>
<td>(Центра́льная коми́ссия помощи голодающим)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Commission for Struggle against the Consequences of the Famine</td>
<td>Posledgol</td>
<td>10/22–8/23</td>
<td>Reconstruction of Soviet health and welfare institutions in the wake of the famine</td>
</tr>
<tr>
<td>(Центра́льная коми́ссия по борьбе с последствиями голода)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commission for Foreign Relief</td>
<td>KZP</td>
<td>8/23–7/25</td>
<td>Coordination of surveillance and communications for foreign relief workers in Russia</td>
</tr>
<tr>
<td>(Коми́сси́я загра́ницней по́мощи)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Council of People's Commissars</td>
<td>Sovnarkom</td>
<td>10/17–3/46</td>
<td>Soviet executive body; became Council of Ministers in 1946</td>
</tr>
<tr>
<td>(Сове́т народных коми́саров)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Workers' Relief</td>
<td>Mezhrabpom</td>
<td>7/21–1930</td>
<td>Coordination of famine relief efforts by labor unions around the world</td>
</tr>
<tr>
<td>(Межра́бочий коми́тет рабочей по́мощи)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People's Commissariat of Education</td>
<td>Narkompros</td>
<td>Formed in 1918</td>
<td>Centralized administration of Soviet education, including medical education</td>
</tr>
<tr>
<td>(Народный коми́сariat просвещения)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People's Commissariat of Public Health</td>
<td>Narkomzdrav</td>
<td>Formed in 1918</td>
<td>Centralized administration of Soviet public health</td>
</tr>
<tr>
<td>(Народный коми́сariat здравоохранения)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Institutes of People's Health</td>
<td>GINZ</td>
<td>Formed in 1920</td>
<td>Coordination of medical research under Narkomzdrav; link between medical science and Communist Party</td>
</tr>
</tbody>
</table>
The three major activities of the ARA’s Medical Division that affected medical scientists directly or indirectly were supplying Russian medical institutions (hospitals, dispensaries, laboratories, and others) with medicines, equipment, and sanitary supplies; delivering food and clothing relief to Russian medical personnel; and distributing up-to-date medical literature to universities and other institutions. Medical Director Henry J. Beeuwkes arrived in Moscow with the ARA advance party on 27 August 1921, vowing to “employ all of our resources in improving sanitary conditions, reducing disease and relieving the poverty of medical institutions.” He conferred with Semashko about the extent of the “medical famine” before dividing Russia into seventeen medical relief districts and equipping two sanitary trains to extend service beyond and between the districts. Between September 1921 and June 1923 his American staff—thirty doctors and fifteen “medical property men”—supervised the distribution of some $8 million worth of medical supplies to 16,437 Russian institutions. In October 1921 the Medical Division instituted its program of delivering pharmaceuticals, equipment, and assorted sanitary supplies to Soviet medical facilities. According to its monthly summaries, no scientific institutions received this assistance directly until January 1922; although they benefited from increased deliveries over the following year, the dollar value of aid to these scientific facilities was never large relative to that given to critical care institutions.

Beeuwkes was unable to channel more significant aid to university research laboratories, teaching clinics, and the Narkomzdrav institutes until the ARA’s final four months in Russia, when famine was abating and the organization could shift its focus from emergency aid to reconstruction. Because ARA reports include these scientific facilities under the nebulous “Other Institutions” category, it is difficult either to ferret out which of them benefited most or to arrive at some kind of total value for this direct philanthropy to Soviet medical research. Nevertheless, two examples provided by the Moscow District ARA Medical Office at least illustrate the nature of the ARA’s assistance to research institutions. According to the Moscow District July 1922 report, ARA workers from November 1921 through June 1922 delivered medicines, equipment, and expendable goods to more than one hundred area laboratories—many of them engaged in bacteriological research that supported Soviet anti-epidemic campaigns—and to the three local university hospitals with their sixty associated teaching clinics. Equipment donated included “microscopes, radiographic apparatus, operating tables . . . all variety of surgical apparatus, ophthalmoscopes, cystoscopes, . . . and many other items of a permanent nature.” On 1 April 1923 the same office, noting that more than one hundred Moscow guberniia residents were bitten by rabid dogs in March alone, reported that the Soviet
Pasteur Institute had requested and received supplies of inoculant for protection against rabies.29 Meanwhile, Petrograd ARA medical officer Gantt was assigned to visit laboratories and clinics of the Institute of Experimental Medicine and the Military-Medical Academy, to determine their most important needs and establish delivery schedules accordingly. His visits with physiologists Pavlov and L. A. Orbeli, among others, resulted in their receipt of valuable research supplies and literature and in a growing friendship between Pavlov and Gantt. Gantt spoke positively of the relations between Soviet officials and the ARA medical office in Petrograd, citing excellent cooperation once the Americans were no longer “considered as enemies and a sort of tool to overthrow the Soviet government.” He added, “We always got probably more cooperation from a Soviet office than some of the Soviet offices could get from each other.”30

Among the ARA Medical Division’s other responsibilities was administration of the remittance program, which gave food and clothing packets from donors in the United States to Russian medical professionals. Although seemingly simple, this program proved to be politically very sensitive. In the words of William Haskell, director of ARA Russian Operations:

The system of food remittances was established under the terms of an agreement with the Soviet Government which I signed on October 19, 1921. . . . This agreement was difficult to negotiate, for the reason that it was evident it would operate to the benefit of those classes in which the Soviet Government had the least interest—the bourgeoisie and intelligentsia—and to whom they were openly hostile.31

Throughout the ARA’s tenure in Russia, the food remittance program, which delivered more than 1,250,000 individual packets by May 1923, remained the most hotly contested part of American aid. In the Soviet view, not only were most packets given to the lichentsy, or “former people,”32 as the Soviets termed disenfranchised members of the old bourgeois intelligentsia, but the ARA violated socialist ideology by dealing directly with individuals rather than with collectivities like the proletariat or the peasantry. There were two different types of food remittance packets: those purchased in America for specific individuals in Russia and those distributed by ARA to the neediest members of professional groups like the physicians and educators. Each packet contained flour, rice, tea, fats, sugar, and preserved milk “of sufficient caloric value” to sustain an average family for about one month.33 Donors supplied the ARA with $10 plus the name and latest address of the intended recipient; in exchange, they received the ARA’s
promise that a refund would be forthcoming if the packet could not be delivered within ninety days. The most important source of funding for the “intelligentsia relief” packets was the Laura Spelman Rockefeller Memorial (LSRM); requesting anonymity, the philanthropic foundation donated a total of $830,000 to the ARA for relief of starving intellectuals. Medical professionals received roughly 20 percent of these packets in 1922 and early 1923.34 Without question, the program saved the lives of a number of skilled scientists and thus, indirectly, was of great benefit to Soviet medical research in the early and mid-1920s, as a wire sent on 6 April 1922 from the Odessa ARA office to Moscow indicates:

Odessa wiring thanks for the allocation of 125 general relief packages for distribution among doctors and University professors. Cannot overemphasize the serious condition existing among these groups and the greatest possible benefit of relief for University professors in direct need. According to reliable information three members of the University faculty died in the last three weeks of starvation.35

In March 1923, after months of pressure from the Soviet government and elements within the American political structure, the ARA began its preparations for withdrawal from Russia. Beeuwkes, responding to Semashko’s request for information about how he had organized the ARA’s medical relief program, wrote a cordial letter detailing his district organization, distribution methods, and types of institutions aided. He concluded, “I am very glad to report . . . that our balances on hand [of supplies and equipment] in all districts are large and that our final allocations to institutions will place them in position to continue to operate for a considerable period.”36

Thus, the final gift from the ARA’s Medical Division to Russian medical research was the accumulation of equipment and supplies left in ARA stocks. Meanwhile, in the weeks prior to the lavish farewell dinner thrown for departing ARA administrators by high-level Soviet officials on 18 July 1923, less visible Russian bureaucrats busied themselves to make certain that the ARA took no supplies back home, to ensure, as government liaison Olga Kameneva wrote, that “all possible loopholes in the process of liquidating the foreign relief [from the ARA] are closed.”37

PRIVATE AMERICAN PHILANTHROPY: AMAR AND THE JDC

ARA director Herbert Hoover also served as U.S. secretary of commerce in 1921. As a result, although it had no overt ties to the American government, the ARA had more political and economic clout than other relief organiza-
tions enjoyed. This fact, combined with Soviet Russia’s tremendous need for famine relief and desire for political recognition and renewed economic ties with the West, forced the Soviet state to accede to tough conditions at Riga. As a result, the ARA became the only Western charity organization with the right to establish and control its own relief distribution points throughout Russia.

The initial ARA agreement brought the American Friends Service Committee (AFSC) under the same “umbrella” with other American charities; AFSC relief operations in Samara guberniia now fell under ARA jurisdiction. However, because the combined AFSC–British Friends’ unit in Moscow had already established a working agreement with the Soviet government prior to the ARA’s arrival, it remained independent. Much to Hoover’s annoyance, this Quaker facility continued to allow charities an alternative method of sending supplies to Semashko in Moscow. One American charity group using this direct AFSC-Semashko connection was Medical Relief for Russia, an organization started in autumn 1920 by several liberal Boston doctors. The organization’s literature told of the great “dearth of anaesthetics, . . . surgical instruments, rubber syringes, and clinical thermometers.” Donations, its pamphlet advertised, would be distributed in Russia through the AFSC.

Did any of this private philanthropy get beyond the government hospitals and orphanages to reach Soviet research institutions in 1920? Most probably, for that was the year in which Semashko created the GINZ and opened several new institutes, including the Institute of Roentgenology. In his autobiography Semashko speaks of locating that institute in an old cavalry stable that had to be mucked out before the “fine equipment” he had obtained could be put in place. “When we installed the . . . marble distributing board with the copper lever,” he wrote, “we rejoiced like children.” It is plausible to believe that the equipment was of American origin, for the Treaty of Rapallo (April 1922) had not yet reopened Russia’s trade connection with Germany. Some medical donations of that period no doubt went to Petrograd institutions as well; even in the years of greatest deprivation, Semashko tried to protect the laboratories of Pavlov and Bolshevik scientist Zabolotnyi at the Institute of Experimental Medicine. Rockefeller official Alan Gregg later reported that physiologist Lina Shtern confided that Pavlov was especially favored because “it was believed that his work would obviate the necessity for God in the minds of intelligent people, since life could be entirely interpreted in terms of reflexes. Hence the Party was anxious to get on with the substantiation of this view. Pavlov, it might be said, draws exactly the opposite conclusion from his work, and hence is anxious to get on with it.”

The Medical Relief for Russia organization expanded its Boston base in 1921 to New York, Philadelphia, and beyond under the leadership of Allen
Wardwell, former American Red Cross director in Russia, and Rabbi Judah Magnes of the Jewish Joint Distribution Committee (JDC). Its liberal directors, well aware of Hoover’s conservative politics, continued to bypass the ARA and distribute through the Quaker office in Moscow. By April 1922 the charity had more or less merged with a larger organization, American Medical Aid for Russia (AMAR), which also used the Quaker-Semashko connection. AMAR’s executive committee roster listed some of the nation’s most prominent medical men: Charles H. Mayo, William H. Welch, Hideyo Noguchi, Emerson Haven, and Adolph Meyer. One among them, a physician of Russian origin named Michael Michailovsky, was more aware than the rest that when AMAR sent its contributions directly to Semashko at Narkomzdrav it completely bypassed any Russian medical professionals not currently employed by—or in the good graces of—the Soviet state.

Michailovsky, a moderate socialist who was then Semashko’s Narkomzdrav representative in America, successfully solicited medical aid at the highest levels of U.S. society. He guided the AMAR board to accept the task of running the Old Catherine Hospital in Moscow and even located a Dr. I. Kotzva to coordinate renovation efforts with the Soviet authorities. Later that year Semashko suggested through Kotzva that the hospital might soon be incorporated under the GINZ as “the new Diagnostic Institute of Medicine and Surgery in Russia.” It would be a model for other institutes and an integral part of Narkomzdrav’s “Postgraduating Medical School” but only, Kotzva maintained, after sufficient time had passed for AMAR to build it up by means of a $5 per month subscription scheme.

The plan devised by Semashko and his cohorts to modernize research and teaching facilities at the old hospital illustrates the thorny complexities of international aid in the 1920s. Letters in the AFSC Archives indicate that the dilapidated hospital, parts of which dated from the early nineteenth century, was being re-equipped, not with American goods but with state-of-the-art German medical equipment purchased with AMAR subscription funds by Dr. Ia. R. Goldenberg, who was then Semashko’s representative in Berlin. His letter of 12 February 1923 pleaded for yet more funds from America:

But dear friends, you are forgetting that the later plans developed by us [for expansion of the hospital] were ten times broader than our modest beginnings, and only . . . the exceptional state of the German market made it possible for us to accomplish our enlarged plans.

At this point, public knowledge of Michailovsky’s coincident involvement with the Friends of Soviet Russia and the American Committee for Russian Famine Relief—both considered by the State Department to be
Communist front organizations—caused AMAR contributions to drop off sharply, elicited another angry letter to the Quakers from Hoover, and brought considerable embarrassment to the AMAR board. Their embarrassment might have been greater yet had the donors realized that their gifts supported German rather than U.S. domestic industry. AMAR, which already had invested some $70,000 in the Old Catherine Hospital, declared bankruptcy and was picked up by the AFSC and promptly renamed the “AFSC Medical Section.” With confidence restored, the American Women’s Hospitals Service (AWHS) agreed to contribute $20,000 per year for salaries and supplies for two American doctors to run the hospital until such time as it was turned over to Narkomzdrav.47 Not until March 1925 did the Narkomzdrav assume complete responsibility for the hospital.

By that time, the AFSC–British Quaker (Friends International Service) office was the only channel remaining open in Moscow through which American medical charity could reach Soviet research institutions. Russian operations of the League-sponsored Nansen Mission, which had switched from food to medical relief in late 1922, were terminated in November 1923, and those of the American Baptist Mission, Catholic and Lutheran Welfare Leagues, and Jewish JDC were forcibly closed during 1924. Of these, the activities of the JDC were of direct benefit to Russian medical scientists in several important ways.

The JDC—Dzhoint to Soviet officials—had limited most of its operations to food and clothing relief in the Ukraine and Byelorussia until the ARA’s departure in 1923 but then expanded its offices across those Republics and began to concentrate on medical aid. As specified in the new contract drawn up with the Soviet government after the ARA pulled out, the JDC opened its own Medical Commission in Moscow and began to work closely with Narkomzdrav. Under the direction of Drs. Boris Bogen and Joseph Rosen, the JDC donated nearly $500,000 in cash and medical goods and services to Narkomzdrav by February 1924. Particular purchases included large amounts of pharmaceuticals and operating room and x-ray equipment. A major contribution, one that addressed Semashko’s frequent complaints about poorly trained young Soviet doctors, was the establishment of a series of refresher courses for research assistants and physicians in thirty-two cities. The JDC designed the curricula, equipped labs and classrooms, and paid the salaries of Russian doctors who instructed the courses.48

PRIVATE AMERICAN PHILANTHROPY: THE ROCKEFELLER FOUNDATION

Beyond the medical aid sent through the ARA in 1921–23, the boards of the Rockefeller Foundation and its sister foundation, the Laura Spelman
Rockefeller Memorial, continued to donate circumspect amounts to Soviet Russia throughout the decade. The LSRM, which remained separate from the Rockefeller Foundation until 1929, based its international program on public health, welfare of women and children, and, in the early 1920s, emergency relief. After the ARA’s departure from Russia, it continued to support intellectual relief by providing over $250,000 to the Student Friendship Fund (SFF) for food and medical aid to university professors and students in ten Russian cities.49 Long after most of the world—including the Soviet government—believed that the time for emergency relief had passed, university professors continued to need supplemental food and medicines. Although the Rockefeller Foundation itself preferred to support long-term commitments in the post-ARA years, foundation trustee R. S. Greene sent the SFF a generous one-time personal gift.50

Just before World War I, Rockefeller officials, convinced that advances in epidemiology, communications, and transportation could pave the way toward eventual elimination of disease, embarked on an ambitious plan to improve public health education worldwide. Two major insufficiencies seemed to stand in the way of achieving this noble goal: the dearth of trained medical personnel who would stay the course with foundation-sponsored public health programs in recipient countries, and the substantial gaps in scientific knowledge about disease, which hindered efforts at eradication. Led by International Education Board (IEB) director Wickliffe Rose and Richard Pearce of the Division of Medical Education (DME), after the war the Rockefeller philanthropies began to support teaching and research at carefully chosen university medical schools around the world and to award international fellowships to promising medical leaders.51 IEB grants and fellowships focused on the natural sciences, while those from the DME furthered education in the medical sciences; recipients agreed in advance to return to their home countries and further the cause of science after the fellowships ended. Relatively little of the philanthropy expended under these programs reached inside Soviet Russia.

Although Rockefeller officials began to send modest amounts of medical literature to Semashko at Narkomzdrav in early 1921, throughout the 1920s they wrestled over the advisability of offering assistance on a larger scale, of perhaps aiding in the development of a new Institute of Hygiene in Moscow, as Semashko requested in 1923. They remained alert to changing conditions and continued to question whether more extensive aid would fit with foundation principles of avoiding potentially political situations while, in Rose’s words, “aiding state . . . officials to awaken public opinion and . . . encouraging the establishment of permanent agencies for public health work.”52 After Rose’s 1920 tour of the East European epidemic zones, foundation officials frequently discussed sending representatives to study the situation first hand, to facilitate their philanthropic
decision-making. In 1922–23 the reports sent from famine-stricken Russia by Henry O. Eversole of the National Information Bureau—he would soon join the DME staff in Paris—led the IEB’s Selskar Gunn to make plans to visit Moscow in the near future. Pearce’s assistant, Alan Gregg, also expected to visit medical facilities at Russian universities as part of the DME’s survey of medical institutions around the world. 53

Neither trip materialized, but in early 1926 the IEB, using an emergency plan designed “only as a last resort . . . to keep the status of medicine from slipping too rapidly,” extended a few foreign fellowships to “the best and most devoted” medical scientists and contributed toward the “rehabilitation of laboratory supplies” for one university medical faculty in Moscow and one in Petrograd.54 Rose’s succinct note along the edge of one of Narkomzdrav epidemiologist Sysin’s frequent aid requests expressed the current foundation wisdom on more substantial aid to Russian science in the mid-1920s: “There’s no hurry, be conservative.”55

Gregg finally reached Russia in December 1927. Coincidentally, his stay in Moscow occurred during the Fifteenth Party Congress, by which most historians consider Stalin to have achieved full power over the Communist Party. Gregg had several poignant interviews with research professors and Narkomzdrav staff members, among them Mark S. Sheftel, the physician in charge of the Commissariat’s Bureau of Foreign Information. When Gregg broached the subject of how the Rockefeller Foundation might help medical education, Sheftel’s apprehensive response spoke volumes. Their need and desire for equipment and good training was still enormous, but philanthropic aid, although gladly accepted, should no longer be identified as such. As Gregg noted in his diary:

Cheftel [sic] said that he wished to explain from a Russian point of view [what constituted] ideal help in terms of diagnostic Institutes, fellowships, and medical literature. I started to say that we [the RF] never worked rapidly in extending into a new field. He interrupted to say that never for a moment must you suppose I am asking for anything.56

On his return to the Paris office, Gregg recommended that the DME increase funding for rehabilitation of Russian medical faculties by $5,000 annually and expand its foreign fellowships “so that a few of the most able young medical scientists of a large but dangerously isolated country may be enabled to exchange information and acquire training.”57 Peter S. Kupalov, an assistant in Pavlov’s Petrograd laboratory, was one of two “able young scientists” to receive a Medical Sciences division fellowship (the name for the division that replaced the DME in 1928) for study abroad in 1928. Gregg praised Kupalov in his foundation diary, noting that the scientist “beamed with excitement” as he discussed potential applications for Pavlov’s
principles governing conditioned reflexes. Kupalov studied neuromuscular physiology with Professor A. V. Hill at University College London. When he was forced to cut his initial visit short and return home to assist his aging mentor, a second fellowship was granted for 1933. A year later, when the young scientist was still unable to leave Russia, the foundation regretfully rescinded this second study grant. Such rescission became the rule after 1931; in early 1935 the Medical Sciences division received word from Bronner that the Soviet state could now offer its own fellowships and no longer needed foreign ones from the Rockefeller Foundation. Table 6.3 outlines the brief chronology of Medical Sciences fellowships awarded to Russian scientists.

Table IIB at the end of the Foundation’s Directory of Fellowship Awards for the Years 1920–1950 indicates that fifteen Russian medical scientists completed courses of study abroad under the Rockefeller program of international fellowships, a number that is essentially corroborated by the fellowship cards at the Rockefeller Archive Center (although they indicate the existence of a sixteenth recipient). Cards are on file for twenty-eight Russian medical fellows, sixteen of whom received exit visas and reached their intended places of study. One of the sixteen apparently failed to complete the agreed-upon research course or else desired such complete anonymity that he or she was not included in the final totals. Because of foundation sensitivity to these fellows’ vulnerability under the Stalinist system of the
1930s and thereafter, none of them appear by name in the *Directory*’s alphabetic listing or in its country-of-origin roster. It is believed that two or more of the sixteen perished in the purges of the 1930s and that one, a female doctor studying experimental surgery, later settled in the West. In 1951, no doubt fearing reprisal against family members still in Russia, she asked the foundation to continue to protect her anonymity. The *Directory* does, however, list the names and positions of six Russian scholars who received IEB fellowships in the natural sciences in the U.S. between 1925 and 1931. At the time of publication (1951), all six occupied university posts outside of the Soviet Union.

As noted on the fellowship cards, the Medical Sciences division often gave small grants for laboratory equipment just before its fellows returned to Russia; similar grants were awarded to notable scientists within Soviet Russia, such as dean of the Moscow University Medical Faculty F. A. Rein and, of course, Pavlov. In 1923, at Rockefeller president George Vincent’s insistence, the foundation extended travel funds to Pavlov as well, despite foundation officials’ efforts to be meticulously consistent about aiding institutions rather than individuals and about avoiding potentially political situations. During the great scientist’s trip to America to visit several physiology laboratories, two thugs stole his wallet in New York’s Grand Central Station. The robbery insulted Pavlov’s dignity, and foundation officials had trouble convincing him to accept their check for $1,000 to continue his U.S. travels as scheduled. Toward the end of the visit he told friends that it was time for him “to return to Russia, where he would be safe.”

The evidence indicates that the small number of medical science grants and fellowships given to institutions and individuals in Soviet Russia in the 1920s had little real impact on Soviet medical research. After 1926, when the foundation began to make fellowships available in Russia, the country’s post-Locarno isolation and increasing ideological stultification meant that scientists, even grant and fellowship recipients, had little latitude within which to expand their knowledge. Nearly one-half of the twenty-eight medical science fellowship recipients were unable to take advantage of the opportunity; those who did study abroad returned home to become pawns of the state, subject to the vagaries of the Soviet scientific propaganda machine.

To conclude, Wickliffe Rose’s favorite slogans for describing Rockefeller Foundation methods of philanthropic giving in the sciences—i.e., “priming the pump” by supporting high-profile researchers in their quests for new knowledge and “making the peaks higher” through scientific patronage of a country’s best educational and research institutions—never really applied to the emergency situation that foundation officials found in Soviet Russia. Although its trustees in New York discussed establishing a school of public health in Moscow similar to the one in Warsaw, officials “on the ground” in
Europe perceived a combination of fellowships, grants, and medical literature—all considered emergency aid to medical science—to be more suitable. Such a limited program was also more comfortable because its administration did not require an official foundation presence in Soviet Russia. As Gunn indicated at a May 1926 conference, most officials found the prospect of living in Russia personally alarming. “From point of view of stability of government [and] being able to aid Russia, the time has probably come. From the political aspect, but more from RF financial implications and the point of view of personnel, . . . [the] time has not come.”

THE MEDICAL LITERATURE PROGRAM

The DME’s extensive and highly successful program of providing up-to-date medical literature to Soviet teaching and research institutions was more important to Russian medical science than any other Rockefeller program. The DME began to donate medical texts and journals to Central and East European medical facilities in 1920. Its Russian program did not get under way until January 1921, when urgent requests from the president of the Soviet Academy of Sciences and from the British Committee for Aiding Men of Letters and Science in Russia persuaded officials to ship modest quantities of journals and medical texts. The foundation’s medical literature program is illuminating because its changing methods of distribution over a decade (1921–31) highlight the crucial questions of Western philanthropy to Soviet medicine: Who would control its destiny once on Russian soil? Which facets of Soviet society would receive and benefit from the aid?

At first, the DME shipped journals, papers, reference materials, and current medical texts to London, where they were joined by gifts from the British Committee to Aid Men of Letters and sent directly to Semashko in Moscow. Despite the fact that scientists all over Russia were starved for up-to-date material, the vast majority of these early deliveries went to stock Narkomzdrav’s new Central Library, according to complaints by professors from Kazan and Odessa to the foundation offices in New York. The second phase of the distribution began in February 1922, when the DME bowed to pressure from the U.S. State Department and allowed the ARA Medical Division to manage the program. Beeuwkes apparently delivered the majority of literature to Narkomzdrav and institutions designated by Semashko, but he also circumvented government control by supplying precious books and journals to a few independent physicians and researchers who were not in the government’s good graces. When word of the impending liquidation of the ARA’s programs became known, Narkomzdrav officials were delighted to present DME representatives and Beeuwkes with their redesigned list of “acceptable” recipient institutions. Private physicians and clinics were once again excluded.
The medical literature program began in Russia rather modestly in early 1921 but grew rapidly after the ARA arrived and word of the Rockefeller philanthropy spread. The first shipment contained a few copies each of twenty-one titles of journals and texts; by 1928 the DME was shipping many tons of literature to Narkomzdrav and to Bronner at Narkompros at an annual total cost of $7,000.66 The quantities received by Soviet medical facilities were impressive, particularly when one considers that after 1922 publishers donated much of the material, leaving the DME responsible primarily for coordination and shipping. Other charities joined in the program as well. AMAR, for example, shipped nearly six tons of material by September 1922; it went directly to I. P. Kalina, who then headed the Narkomzdrav Bureau of Foreign Information.67 At first, in 1922 and early 1923, the foundation honored requests for specific items of literature, responding positively to men like Rein, bacteriologist N. F. Gamaleia, and, of course, Pavlov. When such individual petitions increased dramatically in 1923, occasional compliance turned to polite refusal.68 Filed along with the letters requesting Rockefeller help are a substantial number expressing deep gratitude, one indication of the many Russian scientists touched by the medical literature program.69

AN UNSCIENTIFIC CASE STUDY: ARKHIV BIOLOGICHESKIХ NAUK70 AND THE MEDICAL LITERATURE PROGRAM

When the Soviet era arrived, the Arkhiv biologicheskikh nauk, journal of the Institute of Experimental Medicine in Petrograd, had been published since 1892 and, until the First World War, provided a proud record of the institute’s growth and major research accomplishments through the decades. Although no separate editions appeared during the war years, department rosters and modest lists of completed research for 1914–15 and 1917 were included when the Arkhiv, still under the editorship of microbiologist Omelianskii, resumed publication in September 1918. Even a cursory examination of this journal during the 1920s provides tantalizing clues to the struggles going on within the institute as its medical researchers strove first to continue their scientific work despite great deprivation and then to make accommodation with the new socialist reality. Most important for this essay, such an examination also indicates the extent to which research scientists—at least those who published in the Arkhiv’s pages—may have benefited from the Rockefeller Foundation’s medical literature program.

Volume XXI of the Arkhiv biologicheskikh nauk presented the institute’s work from 1914 until mid-1922 and reflected the crises of those years. Nothing was included for 1916 or 1921, and many articles from the other years were simple descriptions of prewar studies. The few authors of cur-
rent research articles either cited old—although not necessarily obsolete—reference materials, most from 1890–1906, or failed to list any sources at all. The sole exception was a 1922 article by physiologist V. Savich, “The Role of Nerves in the Lower Intestines,” in which the author made use of a 1920 work by Orbeli, his colleague in the Physiology Department.

In volume XXII, which appeared in mid-1922, the transition to Soviet authority first became apparent, as it featured a new socialist logo, the declaration that it was “Printed on the authority of the State Institute of Experimental Medicine,” and the imprimatur of Gosizdat, the government publishing house. Omelianskii remained as the editor, and departmental leadership had changed little since 1914. Only one piece of current laboratory research—by Communist bacteriologist Zabolotnyi—was included, along with six articles written by Louis Pasteur in the 1880s and nine examples of prewar work. None was accompanied by a reference list.

Volume XXIII (1923) was the first in which researchers cited both DME-supplied literature and the contemporary German research reports entering the country in the wake of the 1922 Treaty of Rapallo. Many sources were still of prewar German origin, but at least three articles made use of a mixture of American and German medical research of the current decade, and nearly all articles concluded with reference lists. Volume XXIV (1924) exhibited three distinct trends: an increased use of contemporary English-language, French, and German sources; greater usage of the current research of Russian colleagues; and a decided shift toward studying practical subjects dealing with sanitation and disease control. Examples included an analysis of the blood chemistry of cholera victims and a descriptive piece on new proposals for gaining bacteriological control over Leningrad milk supplies. Worthy of special note was the work of A. I. Belousova on recent advances in diphtheria prevention; several of her sources were products of the League of Nations Health Organization (LNHO), and all were current. Although the Soviet Union did not belong to the league until 1934, Narkomzdrav participated in a number of LNHO activities in 1923–26, including regular contribution of health statistics to *International Health Yearbooks*, participation in league exchange programs for public health officers, and active involvement in the league’s Malaria Commission.

In the 1925 Arkhiv, volume XXV, the above trends became more pronounced. The typical article contained about twenty entries in its reference list, ten of them from old (prewar) Russian and German sources, three or four of recent American works, five of recent German research, plus one or two contemporary French, British, or Swiss sources. Reflecting the international tenor of the early interwar period, a number of these sources were collaborative efforts between scientists from different countries. The same remained true for the 1926 journal (volume XXVI), which also exhibited a
considerable increase in the use of works by Russian colleagues and a pronounced tendency for German references produced in the 1920s to outpace those of American or British origin.

By 1929 (volume XXIX), the last year considered here, two trends mirrored what was happening throughout educated Soviet society: the number of articles by new researchers increased, while the older established Russian scientists produced fewer research works. As the Soviet education system began to produce its own scholars, the old bourgeois specialists, no longer needed, fell from favor. N. N. Anichkov, long-time head of the institute’s Pathological Anatomy Department and an early beneficiary of German medical literature, became the journal’s editor, and some two-thirds of the Arkhiv’s new authors cited research by contemporary Russian and German scientists almost exclusively. Article titles in this volume indicated that young researchers again preferred to study the more esoteric areas of physiology and bacteriology, an indication that the epidemiological and bacteriological crises of the earlier 1920s had subsided. The Rockefeller Foundation was still shipping large quantities of medical literature in 1929; yet, if one can assume that the contents of the 1929 Arkhiv provided a reasonable gauge of current tendencies among the institute’s scientists, those researchers at the State Institute of Experimental Medicine were consulting far fewer American, British, and French sources at the end of the decade than they had been in the mid-1920s.

AMERICAN PHILANTHROPY AND SOVIET POLITICS

When the ARA left Soviet Russia in summer 1923, the number of state employees charged with monitoring and harassing the foreigners had grown considerably, a measure of the keen distrust of Westerners that permeated Soviet executive agencies since the Allied intervention and blockade of 1918–20. The massiveness of the ARA response and pervasive presence of American workers in Russia in 1921 divided the Politburo over how best to deal with the foreigners. Once Soviet Russia was forced to accede to the ARA’s demand for control over distribution of relief, some members of the Politburo deeply feared the foreigners’ potential to undermine party and state security. Some ARA workers might be spies, secret agents bent on gathering strategic information for would-be interventionists, while others could be planning to make common cause with members of the former bourgeois and intelligentsia classes in order to foment rebellion against the Bolshevik leadership. Despite the famine’s severity, Leon Trotsky, Nikolai Bukharin, Grigorii Zinoviev, and Stalin opposed American aid from the beginning. Lenin, who had long worried about the famine’s potential to “ruin the revolution,” was more sanguine about the ARA’s aims, as were Lev Kamenev, Mikhail Kalinin, and Aleksei Rykov. On the eve of Haskell’s
arrived in late August, however, even Lenin wished to “call the whole thing off,” as he wrote V. M. Molotov. His letter continued nervously, “Any would-be interventionists [among ARA personnel] must be caught . . . red-handed, seized during the relief. . . . The slightest meddling in internal affairs means arrest and deportation.”

Once he had initiated a program of “intensified surveillance” of ARA workers, Lenin relaxed and even became hopeful that the ARA’s presence might presage improved U.S.-Soviet economic relations and diplomatic recognition. During autumn 1921 the Politburo and Sovnarkom rather haltingly set the machinery in place for monitoring the ARA and the other foreign relief organizations. They appointed a “special plenipotentiary” to be both the liaison between ARA administrators and Soviet officialdom and an instrument of surveillance; a fleet of local sub-plenipotentiaries served similar functions in Petrograd and the countryside. The Soviet Famine Relief Commission (Pomgol) and each affected Commissariat instituted monitoring procedures in the affected localities. Narkomzdrav’s November 1921 directive to its outlying health departments, for example, ordered them to “keep ARA under constant surveillance at all times.” The Cheka began to accumulate dossiers on some of the 80,000 Russians employed by the ARA, and outgoing mail and wire traffic was inspected, as were the contents of all wastebaskets used by ARA personnel. In his memoirs, ARA director Haskell recalled an incident from these early days:

In a conference . . . with a high Communist official, what was my amaze-
ment to hear . . . that . . . anti-government political activity [was] going on
among the Russian employees in our head office, and he called upon me to
discharge certain Russian employees. . . . I agreed, . . . [assuming] guilt . . .
could be established. The official handed me a sheet of paper . . . retrieved
from a wastebasket . . . [and] pieced together by some Soviet Sherlock
Holmes, [on which] I read that famous phrase known to every one who has
ever laid finger on a typewriter: “Now is the time for all good men to come
to the aid of their party.”

Beyond such massive but petty supervision, the Soviets, in keeping with their tendency to establish temporary commissions like the Pomgol and its successor, the reconstruction-era Posledgol (see Table 6.2) to deal with each new emergency, made few real structural changes to the bureaucracy. When the ARA withdrew from Russia in July 1923, however, Soviet authorities replaced the last of the famine-era commissions with a new Commission for Foreign Relief (KZP). Ironically, this watchdog commission, which included representatives from each relevant Commissariat and commission plus the Cheka, came into being at a time when relatively few charity workers remained on Russian soil to be monitored. Its existence reflected
the fact that Lenin, the practical man who originally allowed American philanthropy into Russia, was dying, causing the power within the party leadership to shift in favor of the ever-suspicious Stalin.

The KZP\(^{81}\) was the brainchild of Olga Kameneva, who was Trotsky’s sister, the wife of Politburo member Kamenev, and former chief organizer of anti-ARA polemics in the Soviet press. Once the ARA was gone, her new organization replaced the earlier commissions and old special plenipotentiaries as the symbolic “eye of the needle.” During the KZP’s relatively brief life (1923–25), the commission—usually this meant Kameneva herself—had the blessing of top Soviet leaders as it attempted to regulate and then to liquidate the remaining foreign charities.

Why did this phobia about monitoring a handful of foreigners become even more institutionalized after the ARA left? When both the ARA and the Soviet government decided the time for emergency relief was over, several of the smaller charities chose to remain in Russia to help with reconstruction. By then the famine and epidemics were in check, and Soviet politicians desired to put centuries of feeling inferior behind them, to devote themselves to achieving technical and social parity with the West by means of a Marxist/Leninist program of proletarian socialism that must necessarily despise foreign charity as a symbol of bourgeois condescension. Wanting no more American help despite continued need, they set about ridding themselves of bourgeois foreigners.\(^{82}\) Although Narkomzdrav and Narkompros leaders in particular were concerned that little real progress had been made in public health or education, it was simply time to get on with their own system, to function without outside interference.\(^{83}\)

During the two years of the KZP’s existence Kameneva presided over the liquidation of nearly all foreign aid operations; remaining Red Cross Societies from neutral nations and the Nansen Mission went first, followed by the American Lutheran, Baptist, and Catholic missions and the JDC. The Soviet Union’s exclusion from the Locarno Conference in October of 1925 helped to solidify the official conviction that remaining connections with Western charities must be broken. By 1927 even the Quakers had turned over all facilities except for their small center in Moscow. It was this office that Gregg visited in December of 1927 while on his extensive tour of medical facilities. In the weeks that followed he wrote a comprehensive survey of the state of Soviet medical education for the DME. In it, he concluded that health professionals were more underpaid and demoralized than they had been in 1925 and that the public health service (Narkomzdrav) had thus far failed, not because of the quality of its administrators or programs but because the government continued to regard professional medical service as “one of the luxuries of the [former] middle class.”\(^{84}\)

Gregg had, of course, touched upon the supreme irony in the story of American philanthropy to medical research in Russia. The very people
most often targeted for aid—the professional intelligentsia, whose values most resembled those of their foreign benefactors—belonged to the group designated for extinction under the Soviet commitment to the dictatorship of the proletariat, particularly as that concept was to be applied by Stalin in the 1930s.

CONCLUSION

These theories aside, how and where did American philanthropy affect Soviet medical research in the 1920s? While it is obvious that the ARA accomplished its most conspicuous goals by saving the lives of millions of Russian children and adults and working through Narkomzdrav to stem the tide of epidemics, the effects of its donations on medical research are more difficult to assess. The battle against epidemic disease, waged not only in the American facilities in Russia but in freshly supplied Soviet research laboratories and restocked rural and urban health institutions, effected a substantial drop in disease morbidity and mortality beginning in 1923. Relief packets to intellectuals saved the lives of an indeterminate number of professors and medical researchers, while drugs, up-to-date literature, and medical supplies from the ARA Medical Division reached the Narkomzdrav research institutes as well as thousands of hospitals, dispensaries, and children’s institutions.

The Quakers’ long history of apolitical and egalitarian service made their Moscow headquarters a logical channel through which medical aid, including laboratory and surgical equipment from AMAR, reached Narkomzdrav institutions before, during, and after the ARA’s time in Russia. Their part in the transformation of the Old Catherine Hospital into a diagnostic center available to other Narkomzdrav institutes may also have benefited Soviet medical science. One promising Quaker plan seemed to buck the trend toward the liquidation of foreign influences. In 1925 Anna Haines, an AFSC social worker and nurse who had served intermittently in Russia since 1917, presented her scheme to establish a Nurses’ Training School in central Moscow. Trained nurses were virtually unknown in Russia, and Haines had received additional schooling in Philadelphia in order to serve as the new school’s director. By 1926 Semashko had enthusiastically secured approval for the plan and procured a suitable building for the school, when the proposal had to be abandoned for lack of American funding. Dorice White, in 1931 the last Quaker to leave Soviet Russia, wrote sadly of the final years of narrowing options and ideological ossification. She concluded that the overall impact of Quaker service had been small but that their best programs were probably those that benefited Russian children between 1920 and 1925.
Although the JDC originally came to Russia to serve its co-religionists in the Ukraine and Byelorussia in the early days of the famine, the organization underwent a kind of metamorphosis during and immediately after the “ARA era.” Prohibited by the Riga agreement from aiding any specific class or group, the JDC directors in Russia (Bogen and Rosen) began to work with Narkomzdrav officials to improve the caliber of physicians and enhance the equipment available to medical facilities. The $500,000 in medical philanthropy from the JDC, in particular the imported equipment, no doubt touched many within the medical research community in the mid-1920s.

The Rockefeller Foundation was the only major private American philanthropy to venture into the murky waters of Russian aid. As shown earlier, the great majority of RF and LSRM donations went to programs administered by the ARA and the Student Friendship Fund, where they provided emergency relief and improved the lives of professionals from the former intelligentsia. Some Rockefeller officials, who respected the dedication and reforming zeal of Semashko and other Narkomzdrav doctors during the famine, initially hoped that when the emergencies of 1921–23 were over they could establish in Moscow the kind of public health institute then under way in Warsaw, Prague, and Budapest. The Soviet situation, however, never met the qualifications for long-term institutional aid to medical education and research. In *The Story of the Rockefeller Foundation*, Raymond Fosdick mentioned several “negative factors” that prevented the foundation from giving serious consideration for institutional aid. Those relevant to Soviet Russia were its extreme poverty, the backwardness of pre-medical education, and “the grave uncertainty as to whether there existed in a given area sufficient conviction as to the value of medicine to insure the continuation of any school the Foundation might assist.”88 In his analysis of the position of medicine in Soviet Russia in 1927, Gregg spoke to this last factor when he wrote of the “great separation . . . between the medical administrators and the professional politicians,” who did not “understand the importance to the community of good doctors.”89

In November 1925 Pearce considered Russia and Ireland to be in a special “emergency program” category, destined to receive a limited number of resident fellowships, laboratory supply grants, and medical literature. He explained his rationale in a memo to Gregg:

> Emergency programs . . . should only be [a] last resort to save an important effort in medicine preferably of international value—for example one involving research and not merely the training of local men—when no other form of aid is applicable on account of difficult economic or political conditions. Its main object is to keep the status of medicine from slipping too rapidly.90
In spite of certain medical emphases it shared with the foundation, such as public health education, preventive medicine, use of hygienic and sanitary practices, and promotion of sound scientific and statistical bases for medical research, Soviet medicine was not eligible for further Rockefeller philanthropy in the near future.

Thus, the Rockefeller Foundation never extended the type of major assistance to Russia that it did to Poland, Czechoslovakia, and Hungary. Foundation philanthropy did, however, influence Soviet medical research in several ways. First and foremost, when it sent masses of scientific medical literature via the DME, the foundation lifted morale and provided solid research assistance to some world-class scientists. The fact that many perished or left the profession in the 1930s should not obscure the value of the beneficence in the 1920s. In addition, foundation-supplied literature joined research materials from Germany to form the nucleus of the Central Library of Medicine's collection in Moscow. By including Pearce's *Methods and Problems of Medical Education*, the DME provided detailed plans of the world's finest medical facilities. According to letters received by the foundation, some of these plans became models for new Soviet laboratories and university health centers. Finally, judging from the respectful tone of the countless communications that passed between foundation officers and members of the Russian medical research community, Rockefeller officials set an intangible but valuable standard of professionalism and courtesy that helped to validate the scientists as worthwhile individuals in a society that no longer believed in the value of the individual.

The impact of American medical philanthropy on Soviet medical science in the 1920s was shaped by extreme deprivation, socialist antipathy to charity, and Soviet politics. During the worst of the famine and epidemics, the need for medical help eclipsed Soviet ideological concerns, and aid to research was allowed to flow fairly freely. After 1923, however, three factors combined to hasten the removal of Americans providing aid: the amelioration of famine conditions and coincident decrease in disease mortality, which allowed Soviet medicine to embrace socialist ideology more fervently than before; the power shift within the Politburo, facilitated in part by Lenin's death, toward Stalin and other hard-liners who detested the foreign presence; and the improved availability of new medical supplies from Germany—that other pariah of the diplomatic community—after the Treaty of Rapallo was signed in April 1922.

Narkomzdrav nonetheless continued to desire and receive assistance from AMAR and the SFF until late 1925. By then Russia's exclusion from Locarno had intensified Soviet mistrust of the West, and Stalin had succeeded in discrediting that long-time friend of American aid, Kamenev. In 1926–27 Semashko continued to participate in League of Nations Health Organization projects, encouraged Haines's nursing school proposal, and
accepted Rockefeller Foundation literature, fellowships, and equipment grants in spite of an official chill toward such endeavors. Even after his dismissal as commissar of public health in 1929, limited amounts of Rockefeller philanthropy continued to “pass through the eye of the needle.” When the next Soviet famine occurred in 1932, however, American philanthropy to Soviet medicine was no longer an issue.

NOTES

Although other scholars deal with Soviet medicine (Field, Solomon) or some facet of Western philanthropy to Russia (Weissman, Patenaude, McFadden, Poliakov), none has yet capitalized on the rich insights into the inner workings of the evolving Soviet central apparatus and its medical establishment, which are to be gained by detailing their points of intersection with Western philanthropic organizations. This essay expands upon my doctoral dissertation, “Soviet Medicine and Western Medical Charity, 1917–1927” (University of Virginia, 1996), by focusing specifically on the impact of American aid on Soviet institutions and individuals engaged in medical research. Archives consulted include the State Archive of the Russian Federation (GARF) and the Center for the Preservation and Use of Documents of Contemporary History (RTsKhIDNI) in Moscow, the Hoover Institution Archive (HIA) at Stanford University, the Rockefeller Foundation Archive Center (RAC) in Sleepy Hollow, New York, and the American Friends Service Committee Archive (AFSC) in Philadelphia.

1. Salient terms of the 28 July 1921 agreement at Riga: distribution of food and medicine to the neediest, regardless of class, ethnicity, faith, or political persuasion; ARA agents to avoid political activity; Soviet government to provide free transportation, postal, and telegraphic services, plus storage and living accommodations for ARA workers; Russian personnel assisting the ARA to be paid by the Soviet state. GARF, f. 3385, op. 1, d. 1(2), 1–3. Prior to Riga itself, the Soviets had agreed to release imprisoned Americans, allow the ARA to set up its own distribution centers where most needed, and guarantee diplomatic immunity and freedom of movement for ARA personnel.

2. Herbert Hoover, in 1921 the U.S. secretary of commerce, first established the ARA during World War I to provide relief to the starving in Belgium. His initial attempts to set up ARA programs in Russia in 1919 and 1920 were rejected by the Soviets.

3. It remains an open question whether the “eye of the needle” metaphor in Mark 10:25 referred to the “Needle’s Eye,” a small pedestrian gate affording the sole nighttime entry into ancient Jerusalem. Regardless, the analogy aptly suggests the myriad difficulties experienced by foreign charity workers entering and operating in Russia in the 1920s, including passport difficulties and the danger of losing control over their goods while passing through the “eye.”

5. *Zemstvo* medicine was the unique rural public health institution that developed out of the Great Reforms of the 1860s. The Society of Russian Physicians in Memory of N. I. Pirogov formed shortly after the 1881 death of Russia’s most outstanding medical reformer.


8. *Arkhiiv biologicheskikh nauk (ABN)* XXI, nos. 1–2 (1918): *Predislovie.* The institute’s official journal, the *Arkhiiv* first came out in 1892. It was not printed in 1914–1917 but did list the institute’s departmental makeup for all but 1916 when it finally reappeared in 1918.


10. This 1913 statistic compares with fifty-two years in Sweden and forty-eight and forty-nine in Britain and the U.S., respectively. The huge wartime loss of life was made worse in 1915–16 by a typhus epidemic carried eastward into central Russia by refugees fleeing German aggression. Narodnyi komissariat zdravookhraneniia, *Statisticheskie materialy po sostoyaniyu narodnogo zdraviiia i organizatsii meditsinskoi pomoshchi v SSSR za 1913–23gg* (Moscow: Narkomzdrav, 1926), xxx–xxxviii.


12. From Lenin’s address to the Eighth Congress of Soviets in March 1919, as quoted in N. A. Semashko’s introduction to *Desiat’ let oktiabria i sovetskaia meditsina*, ed. N. A. Semashko (Moscow: Narkomzdrav, 1927), 5.


14. Like GINZ, the Central Library was administered through the Narkomzdrav Curative Medicine Department’s Commission of Medical Expertise. Nomenklatura records show that by 1922 the director of Curative Medicine provided the link that tied research agencies to the Communist Party. Trott, “Soviet Medicine,” 161, 233, 237. For the other GINZ institutes, see B. D. Petrov, ed., *Istoriiia meditsiny SSSR* (Moscow: Meditsina, 1964), 8–10, 88–99, 502–521, 587–595; and Semashko, ed., *Desiat’ let*, 30–45. Bronner’s rating of the institutes is noted in “Medical Education in Russia by Alan Gregg,” 85, folder 17, box 2, series 785, RG 1.1, Rockefeller Foundation Archives, RAC.

15. Lenin was aware of Semashko’s efforts to get medical aid from the West, for it was on his authority that the Quaker mission was allowed to open. When more massive international aid was pending a year later, Lenin teased Semashko for worrying that his lucrative Quaker supply channel would dry up. “My dear Semashko! . . . The Quakers are only for you.” Lenin to Semashko, 12 August 1921, *Leninskii sbornik* (1959; reprint, Nendeln, Liechtenstein: Kraus Reprint, 1966), XXXVI: 287.

17. RTsKhIDNI, f. 538, op. 2, d. 3, 199-121. Also see Trott, “Soviet Medicine,” 161; and Marguerite Harrison, The Russian Red Cross in America: What It Is, What It Does (New York: Russian Red Cross Commission in America, 1922).

18. Pearce to Vincent, 23 December 1922, folder 15, box 2, series 785A, RG 1.1, Rockefeller Foundation Archives, RAC; Gunn to Russell, April 1924, folder 2, box 1, series 785, RG 1.1, Rockefeller Foundation Archives, RAC; and Gregg to Liskier, 29 April 1924, folder 21, box 3, series 785A, RG 1.1, Rockefeller Foundation Archives, RAC. A number of letters from bourgeois specialist physicians requesting that the foundation send assistance are also in folder 21.

19. Those in the coveted Class I ration category received 200 grams of bread and some soup daily plus five or six herring and “varying amounts of tea, salt, and oil” each month. “Conditions in Soviet Russia, an interview of Eric Jorpes of the Commissariat of Health by Arthur Watts,” 23 November 1919, Friends House Library and Archive, London, Friends War Victims Relief Committee (hereafter FWVRC), box 7, parcel 2, folder 1.

20. ARA Bulletin, series 2, 3, no. 28 (September 1922): 2–8; and Henry J. Beeuwkes, “Medical and Sanitary Relief in the Russian Famine” in ARA Bulletin, series 2, 5, no. 45 (April 1926): 75–76. Major sources of support for the ARA's medical programs: $3.8 million from the American Red Cross (ARC), including leftover wartime stocks from the Paris depot; $4 million in surplus army medical supplies from the U.S. government; $500,000 from the LSRM to package and ship the above. Ibid., 73.

21. Ibid., v, 72–74, 94.

22. In May 1923 the Medical Division restocked each of the 16,437 Soviet medical institutions to have received aid during its twenty-one months in Russia, among them 5,764 hospitals and sanatoria, 4,123 ambulatories, 4,760 children's homes, and 987 “Other Institutions.” Ibid., 94.

23. Lenin may never have fully recovered from the assassination attempt by Fanny Kaplan in August 1918, after which his physicians decided to leave the two bullets in his body. One was finally removed in early 1922, not long before his first stroke that May.


25. Ibid., 28. Chicherin's repudiation of his aristocratic heritage led him first to Menshevism; not until early 1918 did he join the Bolsheviks. Little of Mezhrabpom's aid was medical, although a few American and Swedish labor unions did send medicines. A summary of some 8 million German marks in aid received from the labor community appears in RTsKhIDNI, f. 538, op. 2, d. 15, 3-5.

26. Ibid., series 2, 3, no. 28 (September 1922): 2–8; and Henry J. Beeuwkes, “Medical and Sanitary Relief in the Russian Famine” in ARA Bulletin, series 2, 5, no. 45 (April 1926): 75–76. Major sources of support for the ARA's medical programs: $3.8 million from the American Red Cross (ARC), including leftover wartime stocks from the Paris depot; $4 million in surplus army medical supplies from the U.S. government; $500,000 from the LSRM to package and ship the above. Ibid., 73.

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29. Ibid., 11, 75. HIA, ARA Russian Operations, box 61, folder 2, “Moscow District Monthly Medical and Sanitary Report,” 1 April 1923.

30. W. Horsley Gantt Papers, Alan Mason Chesney Medical Archives, the Johns Hopkins Medical Institutions, box 112, 3–4. Gantt reported that the ARA required Pavlov and all other lab chiefs to write a complicated report about the conditions in his lab. Ibid., box 112, 17–18. Dr. Herschel Walker, the ARA district supervisor in Petrograd, who was forced to deal with much more than medical relief, seldom shared Gantt's rosy assessment of Soviet cooperation. Harold H. Fisher, The American Relief Administration in Russia, 1921–1923 (New York: Russell Sage Foundation, 1943), 13–14.
34. In addition to the LSRM, donations toward packets for medical professionals came from DME director Richard Pearce ($5,000), William Bingham II of Boston ($95,000), the JDC ($25,000), Henry Eversole of the National Information Bureau ($5,000), and the Rochester (New York) Community Chest ($5,000). Ibid., 112–113.
36. Beeuwkes to Semashko, 29 March 1923, GARF, f. 482, op. 16, d. 201, 97.
37. Kameneva to Lander, 30 May 1923, GARF, f. 3385, op. 1, d. 2, 34–39; and “Announcement on Closure of Medical Relief to 15,000 Establishments,” f. 482, op. 16, d. 201, 56 (r and v). See Margaret A. Trott, “The Brief Heyday of an Early Soviet Bureaucrat: Olga D. Kameneva and Foreign Famine Relief, 1922–1926,” presented at the Twenty-first Annual Great Lakes History Conference in Grand Rapids, Michigan, 5 October 1996.
38. Ultimately, fourteen groups, including the ARC, AFSC, JDC, American Mennonite Relief, Volga Relief Society, YMCA, and YWCA, contributed to the ARA through the European Relief Council; Roman Catholic, Lutheran, Baptist, and Christian Church representatives also sat on the ARA advisory board.
40. Medical Relief for Russia’s pamphlets are stored in box “AFSC Gen. Files 1920, Cmtes and Orgs . . . ,” folder 5.
41. N. A. Semashko, Prozhitoe i perezhitoe (Moscow: Politicheskoj literatury, 1960), 74.
42. “Medical Education in Russia by Alan Gregg,” 168.
43. Wardwell also headed the Russian Famine Fund, founded to coordinate donations by liberals who wished to avoid going through the ARA. Peter G. Filene, Americans and the Soviet Experiment, 1917–1933 (Cambridge, Mass.: Harvard University Press, 1967), 137. Americans now had five choices of distribution mechanisms: the ARA; the AFSC; the Nansen Mission (League of Nations); Friends of Soviet Russia, a Communist front organization reputed to divert occasional relief monies to finance their New York operations; and Mezhrabpom (see note 26).
44. See an AMAR letter asking aid from the RF International Health Board, 3 May 1922, folder 19, box 3, series 785A (USSR), RG 1.1, Rockefeller Foundation Archives, RAC.
47. Ibid., folder 4, on AMAR bankruptcy; folder 10 on American Women’s Hospitals Service contributions.
48. JDC work is summarized in GARF, f. 3385, op. 1, d. 81(1), 3–6, and d. 82(3), 150–165; Curti, American Philanthropy Abroad, 292–300; and Boris Bogen, Born a Jew (New York: Macmillan, 1930), 299–300. Bogen reported to the NKZ that 15–20 percent of its money was used for “supplies for scientific institutions and polyclinics, including x-ray and specific lab apparatuses.” GARF, f. 3385, op. 1, d. 81(1), 4.
49. The SFF monthly report filed with Soviet authorities shows that in August 1923, for example, $3,550 was spent on dispensary supplies at universities in Moscow, Petrograd,
Kiev, Odessa, Ekaterinburg, Kharkov, Rostov, Simferopol, Saratov, and Novocherkassk. Ibid., op. 1, d. 11, 2. LSRM support ended in December 1925.

50. Folders 112 and 113, box 10, series III (3), RG 1.1, Laura Spelman Rockefeller Memorial Archives, RAC; folder 1, box 1, series 785 (USSR), RG 1.1, Rockefeller Foundation Archives, RAC.

51. The International Education Board (IEB) was created by Rose in 1923 and continued under his direction until his retirement in 1928, when the entire foundation structure was revised. Raymond B. Fosdick, The Story of the Rockefeller Foundation (New Brunswick, N.J.: Transaction Publishers, 1989), chap. 9 and 11; and Jonas, The Circuit Riders, chap. 13.

52. The foundation board’s conclusion in 1923: It was “not an opportune time to consider other than emergency relief measures in Russia.” Minutes of the RF, 21 February 1923, 23021, folder 15, box 2, series 785A (USSR), RG 1.1, Rockefeller Foundation Archives, RAC. From a memo by Wickliffe Rose, “Principles of Administration of the IHB,” folder 21, box 4, series 908, RG 3.1, Rockefeller Foundation Archives, RAC. For background, see a recent article not available at the time of this writing: Susan Gross Solomon, “Through a Glass Darkly: The Rockefeller Foundation’s International Health Board and Soviet Public Health,” Studies in the History and Philosophy of the Biomedical Sciences 31 (2002): 409–418.

53. See Eversole to Gunn, 8 October 1922, folder 1, box 1, series 785, RG 1.1, Rockefeller Foundation Archives, RAC. Created in 1918, the NIB had as its mission to provide “accurate, impartial information as to the merit of national and international philanthropic appeals.” Its findings regarding the Russian famine in 1922 were paid for and endorsed by the ARA (although Hoover disliked some of its conclusions) and the AFSC, among others. National Information Bureau, Commission on Famine Relief, The Russian Famines: 1921–22, 1922–23 (New York: National Information Bureau, 1923), 3–4.

54. Minutes of the RF, 21 February 1923, 23022, folder 15, box 2, series 785A (USSR), RG 1.1, Rockefeller Foundation Archives, RAC. For the proposal to use emergency aid in Russia, see Pearce to Gregg, 17 November 1925, folder 124, box 17, series 700, RG 1.1, Rockefeller Foundation Archives, RAC.

55. See Russell to Gunn, 6 September 1923, folder 1, box 1, series 785, RG 1.1, Rockefeller Foundation Archives, RAC, in which Russell noted that if Gunn recommended it after his trip to Russia, the board would furnish fellowships and possibly laboratory supplies. Gregg and Gunn received permission to delay their trips in Pearce to Gunn, 2 September 1924, folder 15, box 2, series 785, RG 1.1, Rockefeller Foundation Archives, RAC. Rose’s note is also in folder 15.

56. “Medical Education in Russia,” 296.

57. Ibid., 103.

58. Ibid., 298. In 1960 Kupalov was a professor at the Academy of Medical Sciences (formerly the Institute of Experimental Medicine) in Leningrad. Record of Dr. Peter S. Kupalov, Fellowship Recorder Cards, Medical & Natural Sciences, USSR, RG 10, Rockefeller Foundation Archives, RAC.

59. Ibid., record of Dr. V. Roussinov.

60. Directory of Fellowship Awards for the Years 1917–1950 (New York: Rockefeller Foundation, 1951), Table IIb, “Medical Sciences Fellowships for the Years 1920–1950 by Fellow’s Country of Origin and Special Field of Interest.” Fellowship Recorder Cards, Rockefeller Foundation Archives, RAC.

61. Among them were Otto Struve, professor of astrophysics at Berkeley, and Theodosius Dobzhansky, zoology professor at Columbia.


64. Minutes of the 19 May 1926 conference on “Visits of Representatives to Russia,” folder 16, box 2, series 785A, RG 1.1 Projects, Rockefeller Foundation Archives, RAC.
65. Ibid., folder 15.
66. Ibid., box 3, folder 21.
67. The AMAR secretary commented, “No doubt the Soviets prefer to have it sent there so they can give it out to individual hospitals and doctors.” She added, “Do we know that it ever gets out of Dr. Kalina’s office?” AFSC, box 2, “General Files—Cmtes and Org.s—1923,” folder 10.
68. Pavlov was the notable exception, although the Rockefeller Foundation did not fill all of his requests. Windholz and Kuppers, “Pavlov and the RF,” 109–110.
69. Folder 15, box 2, series 785A, RG 1.1, Rockefeller Foundation Archives, RAC.
70. Volumes of *ABN* used: XXI (1914–June 1922), XXII (1922), XXIII (1923), XXIV (1924), XXV (1925), XXVI (1926), and XXIX (1929).
71. The Treaty of Rapallo, signed in secret between Russia and Germany in April 1922, definitively canceled the 1918 Treaty of Brest-Litovsk and sanctioned resumption of diplomatic, trade, and cultural relations between the two countries.
73. Material for this section comes from Trott, “Soviet Medicine and Western Charity,” particularly chap. 7; a paper, “Squabbles in the Walled City: Conflicts within Soviet Officidom over Western Medical Charity, 1919–1927,” presented at the November 1999 AAASS Convention in St. Louis; and conversations with David W. McFadden of Fairfield University, who is currently at work on a monograph entitled “The Spirit and Politics of Relief: Quakers in Russia 1916–1931.”
76. Lenin proposed that surveillance be coordinated between Foreign Affairs Commissar Chicherin, the Cheka, and Kamenev’s Famine Relief Commission (Pomgol). *CW* 45: 250.
77. In late 1922 Lenin conceived the scheme of inviting Hoover to Moscow to discuss trade issues. His note to the Politburo requesting a positive vote appears in *PSS*, 5th ed., 45: 458. Although Hoover would not have gone, he would not have ruled out expanded trade and possible recognition in 1922.
78. GARF, f. 482, op. 16, d. 99, 1–23.
81. See Trott, “Soviet Medicine,” 200–207. Beyond the relevant Commissariats, the KZP included representatives from Mezhrabpom, Soviet Red Cross, and Party Central Executive Committee (CEC) and kept close tabs on the scientific institutions most visited by foreigners. If the small number of KZP records in Russian archives is any indicator, the commission was probably more impressive on paper than in actuality.
82. Nonetheless, Narkomzdrav and Narkompros continued a low-key campaign for fellowships, literature, and diagnostic equipment until sometime in 1927.
83. The scheme of historical periods used by Russian historians of Soviet medicine, i.e., Civil War and Intervention, 1918–21; Reconstruction, 1921–25; and Construction of Socialist Medicine, 1925–29, reveals the extent to which ideology triumphed over actual occurrence well after the end of the Stalin era. Foreign philanthropy to Soviet medicine has been forgotten or ignored in “Getting Rid of the Sanitary Consequences of the Civil War (1921–1925)” in the Ministry of Public Health’s Sem’desiat let sovetskogo zdravookhraneniia (Seventy years of Soviet medicine) (Moscow: Meditsina, 1987), 12–36, as it has in A. N. Rubakin’s piece on “Soviet Medicine’s International Ties,” which appears in Istoriiia med-itsiny SSSR (The history of medicine in the U.S.S.R.), ed. B. D. Petrov (Moscow: Meditsina, 1964), 30–43.

84. “Medical Education in Russia,” 151–152.

85. The combined typhus, relapsing fever, and typhoid morbidity rates, already cut by two-thirds since 1921, dropped from 350,000 cases in 1924 to 190,000 in 1927; reported malaria cases dropped from 5.5 million to 3.5 million in the same period. International Health Yearbook (Geneva: League of Nations Health Organization), I (1924): 423, and IV (1927): 1017.

86. The Rockefeller Foundation’s Division of Studies, particularly staff member and public health nurse Mary Beard, showed some interest in the nursing school plan as presented by Haines. See Beard’s December 1926 interview with Haines and AFSC official Wilbur Thomas, folder 28, box 3, series 785C, RG 1.1, Rockefeller Foundation Archives, RAC. In Kameneva to Kalina, 6 January 1925, Kameneva suggested that Haines’s idea was “a stimulating question about which we need more information.” GARF, f. 3385, op. 1, d. 75(3), 159.


89. “Medical Education in Russia,” 289.

90. Pearce to Gregg, 17 November 1925, folder 124, box 17, series 700, RG 1.1, Rockefeller Foundation Archives, RAC.

91. Methods and Problems of Medical Education, 1st series (New York: Rockefeller Foundation DME, 1924). One example: Prof. M. Ivanitskii wrote that his new anatomical institution followed lines “described in your publications.” Ivanitskii to van Wesep, 2 April 1927, folder 17, box 2, series 785A (USSR), RG 1.1, Rockefeller Foundation Archives, RAC.
The Rockefeller Foundation held a special place in the development of modern medical education in early twentieth-century China. Immediately after its establishment in 1915, the foundation launched a most advanced medical project—the Peking Union Medical College (PUMC) in Peking (Beijing), China. At the same time, the foundation also established the China Medical Board (CMB) to direct the PUMC and to promote other medical and premedical programs in China and elsewhere in Asia. The PUMC soon became the leading medical center in the whole of Asia. Over the next thirty years the foundation gave the college, in grants and endowment, a total of $45 million, the largest contribution it ever made to a single international project. John D. Rockefeller Jr. proudly called the PUMC his adopted son. Raymond Fosdick, former president of the foundation, called it the bright jewel in the Rockefeller Foundation’s crown.

The Rockefeller Foundation’s involvement in China lasted for nearly four decades, until 1951, when the Chinese Communist Party took over the PUMC. Roughly speaking, this involvement can be divided into two periods. In the first period, with the establishment of the PUMC, the foundation sought to export to China the most advanced laboratory-based medical science in an up-to-date institution for education and research. Along with the emergence of a new generation of leaders in the late 1920s, the foundation changed its structure and policy. This reorientation marked the second period in its work in China. Not only were the CMB and the PUMC moved outside of the foundation’s direct authority in 1928, but in the early 1930s the foundation also launched a new and much broader initiative: the China Program.
Comparing the Rockefeller Foundation’s medical projects at home and in Europe with its experience in China provides a unique case study. This essay considers the PUMC’s different experiences during the two periods to analyze not only the Rockefeller Foundation’s early global perspectives but also the relationship between its domestic policies and international programs. In the first phase, with little knowledge of China’s history and current situation, the foundation nevertheless began its involvement in China at a date much earlier than its work in Europe. Why did the foundation have such an early interest in China? Why did it insist on launching a highly sophisticated medical school? Who influenced the foundation at the time, and what situations and consequences did it have to deal with? In the second phase, what happened to the foundation’s China policy during its redirection in the 1920s? Why did it switch its attention to China’s Rural Reconstruction Movement, and what significance did this change have for the foundation’s China work in general and for the PUMC in particular?

**THE ORIGINS OF THE PUMC**

The Rockefeller Foundation’s early promotion of medical philanthropy was, as Jean-François Picard and William Schneider have summarized, a threefold strategy: establish an institute for scientific medical research, support the reform of medical education, and help to improve public health. The establishment of the Rockefeller Institute of Medical Research (RIMR) was a direct and significant result of this policy. Following this institute’s creation, the PUMC soon became the international symbol of the foundation’s early commitment to medical research.

The Rockefeller family’s interest in China predated the PUMC project. As early as 1905 Frederick T. Gates, the architect of the Rockefeller philanthropy, urged John D. Rockefeller Sr. to turn his eye to the outside world, especially the Far East. In a six-page letter Gates argued that this was the first time in history that “all nations and all the islands of the sea are actually open and offer a free field for the light and the philanthropy of English speaking people.” He analyzed the religious, economic, and humanitarian reasons for Rockefeller to open his philanthropy as broadly as his business. Gates’ interest in China was, in fact, influenced by the surge of various American undertakings there since the end of the nineteenth century.

The late 1800s was a time when Americans, in Robert Divine’s words, “developed a romantic view of China.” Jerry Israel elaborates this view by linking the frontier thesis to the reform movement: “China was America’s great market and extension of the domestic frontier closed by decree of the census and Frederick Jackson Turner in the 1890s. . . . China was also to be a market for all types of early twentieth-century progressive American re-
form. It was this idea of China as a *tabula rasa* for American reform interests that provided a most revealing link between domestic and diplomatic attitudes.” American Protestant missionaries were the most active participants in this export of reform ideas. Arthur Smith, then president of the American Board of Commissioners for Foreign Missions and known in his days as “the American Statesman of China,” wrote that “the problem of China is to a large extent the problem of the world.”

The missionaries’ belief in the importance of China and its problems made a definite impression on Gates, who was an enthusiastic reader of Smith’s books. In a letter to Smith, Gates wrote, “Your ‘Chinese Characteristics’ and ‘Village Life in China’ have been recently read by my family and by myself with eager interest and with that sort of satisfaction which one feels in drinking from a pure, cold spring on a hot summer’s day.” By then Gates was transforming the Rockefeller family charity into a modern professional and institutional philanthropy. He wanted the Rockefeller philanthropy to join the mission to China and thus expand into an international enterprise. Roger S. Greene, the first resident director of the CMB, later said, “Mr. Rockefeller and his advisers have a long time been deeply interested in China as a country with not only a great past but also great possibilities for the future, and one in which a little help wisely applied from outside might set in motion internal forces that would themselves produce results of the greatest benefit, both to China herself and to the whole world.”

Starting in 1907 Gates began to contact Smith and other missionaries in China, telling them that the Rockefellers were interested in finding “the best methods of promoting the welfare of the Chinese” and asking for their help. The missionaries responded with enthusiasm. By then, they had pioneered modern education and medicine in China for almost a century, and their schools and hospitals had developed impressively. During the period when the foundation was searching for a China project of its own, the country already had more than twenty Western medical schools and more than two hundred hospitals mostly run by missionaries. The Missionary Medical Association told Gates that “China is awaking and she is wanting Western education, and especially does she want the Western science of medicine.”

But the missionaries did not want the foundation’s work to compete with their own. At that time, the missionaries were consolidating their efforts in China, and they hoped that the Rockefellers’ financial resources and experience in American medical reform would help to advance missionary work. Smith informed Gates quite frankly that the missionaries “have no wish to see new enterprises launched in China to the neglect and injury of others which have long been aiming at like results.” The Missionary Medical Association told Gates:
Should he [Rockefeller] be led to consider plans looking toward the strengthening of educational work in China, it might be done in a way so as to unify our work. . . . We have a number of medical schools. It is not more schools we need, but better schools. The schools we now have are well located for the most part. But we need some unifying power. So if any aid is to be given we hope it may be given in such a way as to unite our forces, and that too, in the large centers.\textsuperscript{13}

The missionaries’ views on promoting medical education in China accorded well with what the Rockefeller philanthropy had done at home. Certainly, this news encouraged Gates. Through the establishment of the RIMR in 1901, Gates had acquired close connections to a group of important figures in American medicine. Such relationships made him knowledgeable regarding the development of medical science and affected his perspective on the Rockefeller philanthropy. It is well known that Gates’ interest in medicine was inspired by William Osler’s \textit{Principles and Practices of Medicine} (1890). By the time he sought a China program, Gates had conceived what we might call a medical theology. For him, medical science was a modern theology and a scientific therapy for modern society.

Gates, a Baptist minister himself, described medical science in theological terms and looked on the RIMR as a kind of theological seminary. In his eyes, an intimate relationship existed between God and physicians: “In the sacred rooms He is whispering His secrets. To these men He is opening up the mysterious depths of His Being. . . . I say if God looks down on this world and has any favorites, it must be the men who are studying Him, who are working every day, with limited intelligence and in the darkness—for clouds and darkness are round about Him—and feeling their way into His heart.”\textsuperscript{14} Gates believed that medical research would discover and promulgate “new moral laws and social laws—definitions of what is right and wrong in our relations with each other.” Accordingly, medical science would “educate the human conscience in new directions and point out new duties.”\textsuperscript{15} Thus, medicine stood at the forefront of the scientific advancements rising to cultural and social prominence in America.

Gates presumed a universal value of scientific rationalism as he sought to promote Western medicine in a still very traditional Chinese society with medical practices deeply rooted for centuries. He believed that “the values of medical research are the most universal values on earth, and they are the most intimate and important values to every human being that lives.”\textsuperscript{16} For Gates, the evils of society were not fundamentally economic but physical and moral. “It is the multiplicity and fatality of diseases that are always with us which permanently lower that vitality and vigor of civilization.”\textsuperscript{17} The high status of medical research, as Gates saw it, stemmed from its idealistic ambition to “prevent sickness altogether, to usher humanity into a new
world, by banishing sickness from human life and bringing about universal health, an object never to be fully attained.”

Generally speaking, Gates’ vision of medical science and its social function was decisively influenced by the rapid and fascinating development of medical research in the progressive culture of early twentieth-century America. Gates’ liberal notions regarding religion and social progress had directly affected the Rockefeller philanthropy’s early strategies at home, and the same ideas led him to China. Indeed, since medical science carried such a universal value and had such a fundamental influence on social progress, it would make an ideal gift to the Chinese.

Although Rockefeller and Gates initially depended on the missionaries in China as important sources of information, they strongly felt a need for their own first-hand knowledge in the process of developing a program. For this reason, Dr. Henry P. Judson, then president of the University of Chicago, suggested to Gates a “comprehensive investigation of China’s situation” to attain “a point of view not merely from missionaries, but also of the economist, of the educator and of the statesman.” From 1908 to 1915 the Rockefeller philanthropies successively sent three investigative commissions to China. Ten years passed before the Rockefeller Foundation reached its final decision to establish a medical school in China with the most advanced teaching curriculum and research facilities. During those years a steady stream of studies had helped the foundation to design its strategy and develop an appropriate approach to East Asia. Educational and medical professionals ran the entire process, from project research to policy definition, and the foundation’s final decision reflected not only the professionals’ notions of science and education but also their critical opinions of missionaries’ work in the Far East. They finally convinced the foundation that an elite medical school designed and supported solely by it would be an ideal project.

The brain trust for the Rockefellers’ China crusade included, among others, Judson; Ernest D. Burton and Thomas T. Chamberlin, professors at the University of Chicago; Charles Eliot, president of Harvard University; William Welch, president of the Johns Hopkins Medical School; Simon Flexner, director of the RIMR; and Abraham Flexner, author of *Report on American Medical Education* and a champion of reforming American medical education. All were actively involved in planning the foundation’s China project. It did not take long before these luminaries concluded that the missionaries’ ideas on modern education and medicine were fundamentally different from their own viewpoints.

For the missionaries, modern medicine, as the president of Hangzhou University told Gates, was a means for producing a strong Chinese Christian leadership. By the end of the nineteenth century the missionaries had recognized the power of science and modern medicine, and quite a few
leading missionaries had advocated the adoption of science and education as the most effective ways to convert the Chinese.\textsuperscript{21} Discoveries in science, medical science in particular, during the last half of the nineteenth century further convinced them of the power of natural law and order created by God. From the missionaries’ perspective, medicine represented Christian benevolence, and the marriage of science and philanthropy could only be consummated under Christian auspices.\textsuperscript{22}

The medical missionaries described their profession as a call to counter the sins of moral weakness: “Medicine men have to do with diseases which men have brought upon themselves by immoral and impure practices, and the indulgence of the baser appetites, and they thus become familiar with the weakness and depravity of human nature, which bring so much disease, degradation and death of our race.”\textsuperscript{23} Gates, however, later described evangelism as a hindrance to the practice of scientific medicine: “The work of missionaries whether Catholic or Protestant had seemed to me to offer little promise. . . . China needs modern science but the missionary schools avoid science as leading to skepticism. China needs modern medicine but the hospitals and physicians of the missionaries are merely proselytizing agencies.”\textsuperscript{24}

For the Rockefeller Foundation, the development of science and education was vital to solving China’s problems and thus formed the heart of its program. This firm belief in the power of science to transform society drew from the mainstream culture of early twentieth-century America. Worship of modern science, modern medicine in particular, was the hallmark of this new culture: “Nothing was more important to that era than ‘science’ . . . for science seemed to promise the power to control both man and nature.”\textsuperscript{25} Riding this cultural tide, the medical professionals became the most powerful social elite among all middle-class professionals. As Paul Starr points out in his seminal \textit{Social Transformation of American Medicine}:

The rise of the professions was the outcome of a struggle for cultural authority as well as for social mobility. It needs to be understood not only in terms of the knowledge and ambitions of the medical profession, but also in the context of broader changes in culture and society that explain why Americans became willing to acknowledge and institutionalize their dependence on the professions. The acceptance of professional authority was, in a sense, America’s cultural revolution.\textsuperscript{26}

The cultural ascendance of the professions was the context in which the Rockefeller family’s charity became an institution of modern philanthropy. Against this background, the foundation launched its China medical program to develop scientific education and research. Such a goal could only be accomplished, the professionals concluded, by education with an emphasis
on the scientific method, especially the inductive method. Closely related to laboratory research, the inductive method had laid the foundations of Western modern science beginning in the seventeenth century. Professionals involved with the Rockefeller Foundation believed that the scientific method contained the power to reform the mentality of Chinese intellectuals and, through them, to change China. Eliot, in his report of his trip to Asia in 1912, wrote:

In the field of education, there is one specific gift which the West can make to the East that would gradually produce a great change in the working of the Oriental mind. The Oriental has been a student of the abstract. He has proceeded by intuition and meditation, and has accepted his philosophy and his religion largely from authorities. He has never practiced the inductive philosophy, and to this day knows very little about it.

Eliot then explained in detail how he thought education in the scientific method discovered in the West would transform China:

The West, which owes its astonishing progress within the last four hundred years chiefly to the inductive method of ascertaining truth, can impart to the East a knowledge of that method by showing the Eastern peoples how to teach the natural and physical sciences in schools of all grades, in such a way as to train in children and youth the powers of observation and the capacity for making an exact record of the facts, and then drawing the just, limited inference from the facts observed and compared. The best way to withdraw the Oriental mind in part from the region of literary imagination and speculative philosophy which is congenial to it, and to give it the means of making independent progress in the region of fact and truth, is to teach science, agriculture, trades, and economics in all Eastern schools by the experimental, laboratory method which within fifty years has come into vogue among the Western peoples. 27

In light of Eliot’s perspective, one can understand why professionals visiting China were so disturbed by the missionary education they witnessed. As Chamberlin complained, the Chinese government offered a classical education to the Chinese, while the mission schools offered Western classical education. The problem with both, he lamented, was that “scientific studies are not given an even chance in the Chinese schools, public or missionary, just as they were not in this country a little while ago.” Although those schools did offer science courses as new learning, they did not teach them “in the spirit of modern science.” Chamberlin found such an education lacking because it “does not involve the keen observation that constitutes the essential part of modern science, and . . . it does not involve induction on the basis of those observations.” 28
THE PUMC, SCIENCE, AND WESTERN CIVILIZATION

These reports finally pushed Gates and the foundation away from missionary education and medicine in China. Gates’ reaction to the Oriental Education Commission’s report (Rockefeller’s first investigation in China) reveals the deep, unbridgeable divide he saw between scientific and missionary approaches to analysis and understanding:

The differences between them [professionals] and the missionaries . . . were too profound for reconciliation. These differences go to the very root of things. They are not questions of tactics or even of strategy, but questions that reach even to the philosophy of the ends of life. . . . Drs. Burton and Chamberlin are Baconians in their theory of the ends of life and in the methods of arriving at those ends. The missionary boards are medievalists as to the ends of life and the methods of it. Their differences are irreconcilable. . . . But granted all this, I believe the truth is with them. . . . The wisest and deepest thing of many wise and deep things they have said in their reports is to me this—that what the Chinese need above all things, is the scientific method. This means that they need the Baconian philosophy out of which modern life has sprung [emphasis in original]. They need to get that bent of mind, that attitude toward national life which is first fully developed in Bacon’s great works, and which through these has created modern times. This is the last thing on earth the missionaries have any idea of giving to China and it is the first thing that China needs.29

For Gates, the scientific method was the key to opening China. He was convinced that modern science could disseminate among the Chinese a skepticism about their way of thinking and living; the teaching of medical science would sow the seeds of a real Western education in China. In this sense, the foundation’s medical programs in China would result in more fundamental change than its similar work in Europe.

Having rejected the missionaries, why, then, did the foundation choose to focus its resources on a single medical institution? Chamberlin once explained explicitly the necessity of a highly sophisticated program for the Chinese. The following comments reflect the foundation’s intention to transplant a Johns Hopkins model to China:

It is a fixed and unconcealed determination of the Chinese people to slough off foreign domination in every form, advisory or otherwise, just as soon as they are able. It is only their weakness, and their good sense in seeing their weakness, that makes them pliable now. The more superficial the foreign efforts, the sooner the Chinese will measure their depth and take over all that is worthwhile in them and slough off the rest. The more fundamental the
work and the more indispensable its nature the longer will they retain it. Far
and away the most fundamental and essential work that is possible among
the Chinese is the change from the old method and spirit of thought to the
new.30

Like Gates, Chamberlin envisioned the values and methods of science tak-
ing deep root in China and giving rise to a new worldview compatible with
that of the industrialized West.

An issue related to the foundation’s commitment to medical science was
the quality of medical education in China. From the beginning the foun-
dation faced a difficult dilemma: Should its program aim at China’s urgent
current needs and focus on introducing applied science subjects widely in
education, or should it concentrate on scientific research and an accompa-
nying education that would foster future leaders for China?31 Simon
Flexner believed, contrary to the view of the missionary boards, that “the
future of China is not associated with that of providing for the immediate
needs of missionary hospitals.” He pointed out that “all who have studied
the conditions recognize that it is impracticable for outsiders to train med-
ical practitioners for the whole vast Chinese people.” Only the Chinese
themselves could do it. What the foundation should supply, he argued, was
“a work that . . . will enable the Chinese to take modern medical education
into their own hands as soon as possible.”32 In other words, the foundation
should train China’s future leaders in education and medicine by offering
them advanced courses of study.

Of course, the missionary medical education did not and could not
match the Rockefeller Foundation’s expectations. The foundation’s 1914
investigation reported that “the present standard of medical education
maintained by the colleges under missionary and other auspices is, with in-
considerable acceptance, low.”33 The schools were staffed by missionaries
primarily interested in evangelical work; moreover, their hospitals were
“hopelessly inadequate” in medical staff and equipment.34 Medical mis-
sionaries seemed more concerned that their Chinese students gain enough
character and courage to fight immoral and impure practices in a heathen
land than that they receive sufficient training or learn to perform medical
research. Simon Flexner leveled a more fundamental criticism: “The men
who have come out as teachers were not teachers and were not trained for
the work.”35

Unlike some European countries where Western medicine had devel-
oped at the advanced level prior to Rockefeller involvement, what China
had at that time was, on the one hand, a deeply rooted and vast traditional
medical system and, on the other hand, a rather poorly operated missionary
type of medicine using limited Western medicine. It was quite clear to the
foundation that Western missionary medical education could not compete
with traditional Chinese medicine, nor could it convince the Chinese intellectuals of the superiority of Western civilization. The foundation was determined to make the PUMC comparable to the best medical schools in the West. It would present a striking contrast to missionary medical schools and to Chinese ones as well. The crucial elements in making the PUMC a success were, as its founders believed, strict, high-quality standards in education and research.

The PUMC emulated as closely as possible the Johns Hopkins Medical School, the model for American medical education reform in the early twentieth century. Its institutional principles, set by preeminent American medical people such as Simon Flexner and Welch, mandated “an excellent staff of teachers, a good teaching hospital and dispensary, and well-equipped laboratories.”36 The essential task was “to raise the Chinese to be first class medical men, and every proposition must be considered from that point of view. They must rank with the rest of the world.”37 In 1915 the foundation put its ideas in action, and two years later the PUMC laid its foundation stone.

In an attempt to combine the best of Western and Chinese cultures in its project, the foundation bought a former prince’s palace located in the heart of the capital of China to serve as the PUMC’s campus and built fourteen additional palace-style structures to expand it. This complex was in architectural harmony with the ancient Forbidden City nearby. Under the shining, jade-green roofs of these Chinese palaces, modern Western internal structures were built with the most advanced medical laboratories and equipment installed to meet the requirements of an elite medical school. With the most advanced medical facilities, the PUMC faculty provided outstanding medical education and also excelled in research.38 Admission to the PUMC required four years of college study, including courses in biology, physics, chemistry, and English, prerequisites similar to those of the leading American medical schools. In addition, all courses were taught in English.39 The foundation also made the library at the PUMC the leading medical library in Asia, with 22,000 volumes and 450 journals, as well as a superb collection of Chinese pharmacopoeia and other indigenous medical works.

From 1921 to 1942 the PUMC experienced its “golden years”; most of its graduates became leaders of China’s medical institutions and officials in governmental health organizations. The PUMC itself became the most important research center in China. Its faculty published the results of research in prominent American and European medical journals, and they provided the bulk of the contributions to the most prestigious medical publication in China, the *China Medical Journal*.40 China’s herbal medicines and some indigenous diseases such as hookworm also attracted researchers.41 The PUMC’s achievements in education and research won the
institution an international reputation. At the same time, the CMB offered fellowships for doctors from missionary and Chinese institutions, which made advanced training possible in America or Europe, or at the PUMC. To develop China’s premedical programs and scientific education, the CMB also provided crucial support to some of the most outstanding missionary schools. Those grants funded new science buildings, laboratories, or teaching/researching positions. This support greatly promoted the development of biology, physics, and chemistry, mainly at the university level.

In his study of American cultural internationalism, Frank Ninkovich argues that “the Progressive era gave birth to a new conception of the nature of historical change, whose central feature was “planning, the guidance of change through the purposeful application of scientific method. The only reason the great philanthropic foundations . . . became involved in the promotion of cultural relations, after all, was to undertake tasks that otherwise might not be attempted or that would get done inadequately if left to chance.” The Rockefeller Foundation recognized the historical implications of its involvement in China and believed that the early twentieth century was a crucial moment in China’s history when Western influence could change China’s destiny.

Although the missionaries’ work inspired the Rockefellers’ interests in China, it was medical and educational professionals who finally convinced the foundation that science and scientific methods could change the mentality and, ultimately, the lifestyle of the Chinese people. The rising prestige of the American medical profession and the political, social, and economic influence that doctors gained since the late nineteenth century gave the foundation great confidence that the Chinese professional elite educated in Western medicine could take the lead in China’s modern reform. The foundation’s role in China’s modernization greatly affected its image as a global philanthropic organization. In this case, the cooperation between America’s new professionals and modern philanthropy had a profound influence on the foundation’s early work. The whole project fully reflected the foundation’s early strategy through the mid-1920s to support the best medical education and large institutional development.

**POLICY REORIENTATION AND REORGANIZATION**

Soon after the PUMC began implementing its educational and research programs on a full scale in the 1920s, another generation of leadership came to the center stage at the Rockefeller Foundation with new interests and a new perspective. These people interpreted the foundation’s goals rather differently than their predecessors had done, and their first step was
to undertake a review of all of the foundation’s work since its creation in 1913. The result was a reorganization of Rockefeller’s extended philanthropic empire, which brought fundamental changes in its policy and agenda and started a new era in its history. Not surprisingly, this shift also profoundly affected the PUMC’s strategic position in the foundation’s plans. This section discusses some of the most important implications in Rockefeller’s China policy after the 1920s reorganization and the relationship between the foundation and its program abroad.

The primary concern that prompted the foundation’s reorganization was clearly stated in Rockefeller Jr.’s letter of 28 December 1925 to Fosdick:

As you know, this whole matter has long been very much on my mind, and the tendency to measure success by the volume of business done by a single Board or by one department of a Board instead of by the wisest and most economical promotion of the well being of mankind by all the Boards has caused me growing concern as I think of the future. Any human institution tends to get into a rut, to confuse motion with progress, and to exalt machinery and organization above work and objectives. This is certainly true in the business world, and it is equally true in philanthropy. . . . Machinery and personnel are merely the instruments by which objectives are reached, and unless we keep ourselves clear-eyed and fresh and keep the machinery elastic, we run the risk of dry rot.

Fosdick and George Vincent, then president of the foundation, were eager to meet Rockefeller trustees’ anxieties about overlapping and the multiplication of boards by way of a fundamental reorganization. The major targets were the International Health Board (IHB) and the CMB, two subsidiary boards established directly under the Rockefeller Foundation to carry out specific tasks. An underlying motive for Vincent to push reorganization, however, was that he found it very difficult to work with Frederick F. Russell, director of the IHB. Since the CMB had the same status as the IHB, the China board also became a target for reform. As a result, Fosdick and Vincent suggested disbanding the CMB and transferring its activities to the Division of Medical Education (DME). Roger Greene, resident director of the CMB in Peking, would accordingly become an associate director of the DME.

This organization created two problems for the PUMC’s relationship with the Rockefeller Foundation. First, it caused friction between the foundation staff in New York and its people in Peking. Second, it created anxiety and uncertainty among the foundation’s field officers in China. Greene was thoroughly annoyed by the Vincent plan. According to him, the New York office and Vincent in particular were responsible for the administrative
problems between the foundation and its IHB. In a memo to Richard Pearce of the DME, Greene said:

It seems to me that whatever trouble Mr. Vincent is having with Russell is due to his own failure to keep in touch with the central office of the Foundation and its subsidiaries, and to exert powers that he already possesses. . . . The defect that I see is in Mr. Vincent’s method of handling Dr. Russell when his appointment was first proposed, i.e., failing to reach a full understanding, and then when difficulties arose in failing to have things out with him.49

He continued to complain that “even when we wanted to see Mr. Vincent it was always a struggle to get by his secretary when he was in town, and he rarely seemed to have leisure to talk things over. . . . Unless Mr. Vincent changes his own ways I think he will fail to accomplish any very satisfactory results merely by a change of organization.”50 Greene thought that if Vincent were in the office more often and accessible for daily consultation, there would be no insurmountable difficulty in securing the kind of team play he wanted with the existing organization.51

Greene was most upset about the foundation’s confusing the IHB’s problems with those of the CMB. He believed that the CMB was being attacked merely as a means of undermining Russell’s position and remedying what was thought to be an unsound relationship between the IHB and the foundation. Greene insisted that China was a very special field and required a different sort of treatment, and he argued that the DME’s assignment was quite different from the CMB’s work in China. Greene doubted that reorganization would solve the problems between the foundation and the IHB; it would only create problems for the CMB. In a letter to Vincent he pointed out, “with the finances and the power of appointment of C. M. B. and I. H. B. officers in the hands of the Foundation, the machinery is already available to carry into effect any decisions regarding policy that the Foundation may choose to adopt.”52

The reform created considerable anxiety and uncertainty among the foundation’s field officers. By the time of the reorganization, the PUMC was already well defined and established. From the local officers’ point of view, what the PUMC needed from the foundation was its continuing support and stability in policy. Greene saw no point in upsetting an established organization to achieve teamwork and coordination, because those objectives “depend more on personalities and attitudes than on paper organization.”53 Henry Houghton, director of the PUMC, also complained about the speed of the reorganization, which was progressing “so much more rapidly than I had been given to suppose would be the case.”54
Greene’s distress about this second problem was evident when he wrote to Pearce: “If they want to get rid of Russell or me let them say so and give us notice to quit. That would be a reasonable proposition that it should be possible to consider at any time without beating about the bush and without attacking one man by way of another.” Greene could not understand “all this restlessness and constant desire for changes” and felt that they spoiled his time and interrupted his work. The reform he preferred “would be an ending of reorganization and the establishment of some continuity to eliminate wasted motion.” He argued that “with everybody on the job we should have time to discuss and study changes in detail that constantly need to be made, and to consider in a leisurely manner broad policies and new ideas that really need attention and can be dealt with without disturbing and time-consuming reorganizations.”

Despite Greene’s protests, the reorganization proceeded. In 1928 the foundation decided to create an independent corporation, the China Medical Board, Inc., to which it transferred the full title to the land, buildings, and equipment of the PUMC. The foundation also made it a grant of $12 million. Rockefeller Jr. later recalled, “The idea was that the Foundation should gradually withdraw from responsibility for the institution.” Such a withdrawal would be completed in two steps. First, the CMB, Inc., would become independent from the foundation; second, within a reasonable period, the Chinese would take over the PUMC. Theoretically, from 1928 on, the relations between the PUMC and the foundation would be maintained through the CMB, Inc., and the new Medical Sciences division that replaced the DME.

The exile of the CMB from the foundation was only a minor part of the entire operation. Nevertheless, it clearly revealed the significance of this reorganization. In *The Rockefeller Century*, John Harr and Peter Johnson point out that there were two major goals in the foundation’s reorganization: to build more rationality and symmetry into the Rockefeller philanthropy as a whole, and to “break the near-monopoly of medicine and public health in the Foundation’s program and turn it into the more comprehensive organization.” Accordingly, some formerly separate social science and education boards sponsored by the Rockefellers were ended, and their functions were transferred to the Rockefeller Foundation. Thus, this operation was as much to improve the foundation’s managerial efficiency as it was to end the doctors’ control of the foundation.

In *The Politics of Philanthropy* Steven Wheatley indicates other underlying changes that caused this reorganization. To begin with, by the 1920s the new generation of managers no longer viewed science as the facile solution to contemporary problems that it had been in the Progressive Era. Science and the universities supporting it could be tools for wider social manage-
ment but not ends in themselves.\textsuperscript{59} In other words, this reorganization ended the Rockefeller Foundation’s former commitment to science and medicine under the Gates era. Abraham Flexner, another one of the older generation, sadly recognized that “time was when guidance of a sort came from one or two institutions,—the Hopkins for a generation, the Foundation when Mr. Gates’s vision ruled. All that has for the time being disappeared.”\textsuperscript{60} Consequently, medical research became less important in the foundation’s agenda, and a wider range of new interests and projects, including social science and agriculture, attracted its attention.\textsuperscript{61}

Another part of the change, according to Wheatley, was that the emphasis on institutional reform was replaced by an emphasis on associationism and managerialism. He points out that “the outcome of the reorganization represented the full ascension of the new generation of philanthropic managers.” These new managers themselves were the products of the institutionalization that had occurred during the Progressive Era. By the late 1920s they were convinced that the age of institutional building was over. Instead of assuming a doctor-patient relationship, the foundations and universities and other related institutions should become partners.\textsuperscript{62}

In accord with the new orientation, the foundation adopted a new appropriations policy. At a meeting in January 1929 the trustees resolved that “concern with the development of medical schools as institutions be lessened and the principle of aid to individuals, groups and departments in relation to research and advance of medical knowledge be emphasized.”\textsuperscript{65} Endowments for institutional support were prohibited, and no grants were to be made for more than two years, while small gifts and short-term grants grew rapidly.

The PUMC was a product of the “Gates era” when doctors had, using Fosdick’s word, “captured” the foundation and when the foundation sought to build institutions. It became very difficult for the PUMC to fit into the new era, especially considering the fact that it had to depend completely on the Rockefellers’ financial support. Not only had the strong commitment to medical science at the PUMC come into question, but the institutional support still needed by the school became more and more of a burden for the foundation. However, it had already invested a great deal in this program and could not just give it up. The truth was, during the entire history of the PUMC until the communist government assumed control in 1951, financial independence had never been accomplished. The foundation never recognized the enormous burden it had assumed or how impossible it was for the Chinese to take full responsibility for this highly sophisticated medical institution. In addition, the foundation was unable to help either the PUMC or the CMB cope with the new situation after reorganization.
At the same time, Fosdick and Vincent promised Greene and Hough-
ton that the foundation’s policy toward the PUMC would not change be-
cause of the reorganization. In their own words, there was “no basis for the
rumor that there has been any change of attitude towards the Chinese pro-
ject” because “the Foundation looked upon the College with a great deal of
pride, and held it to be one of the most significant things done thus far.”64
However, this was an empty promise. Not only was the PUMC put in a
very awkward position by the foundation’s policy change during the late
1920s, but during the 1930s there was a further development that reduced
the PUMC’s importance in Rockefeller’s China crusade.

THE CHINA PROGRAM VS. THE PUMC

A significant shift took place in the PUMC’s relations with the Rockefeller
Foundation when Selskar M. Gunn became involved in the foundation’s
China work during the 1930s. After graduating from Massachusetts Insti-
tution of Technology in 1905, Gunn became a public health official before
joining the foundation’s International Health Division in Europe in 1917.
After working a number of years, primarily in Eastern Europe, Gunn be-
came vice-president of the foundation in 1927, with primary responsibili-
ties in the new Social Science Division created as part of the reorganization
in 1928.65 In 1931, at the urging of Edmund E. Day, the director of the di-
vision, Gunn took his first trip to China and spent seven weeks studying
the foundation’s work there. During this visit Gunn met the well-known
leader of China’s Rural Reconstruction Movement, Yan Yangchu (James
Yen) and was fascinated by his work with mass education in Ding County
(Ting Hsien).66 Yan’s work was only a part of the Guomindang (National-
ist party, GMD) government’s major effort to solve China’s rural problem.
This work included a number of experiments focusing on mass education,
health care, rural industries, and local administrative reform. Seizing the
momentum, Gunn suggested that the foundation study these possible new
fields of activity in China.

Gunn’s idea of a new program in China suited the general perspective of
Max Mason, the recently appointed Rockefeller Foundation president.
Mason felt that a major weakness in the functioning of the foundation’s or-
ganization was a tendency to become static, settling down to rather long-
term, unchanging programs. He believed that fluidity of action was critical
for the future success of the foundation.67 This conviction led Mason to
seek, as he called them, “vital programs” to change the situation. When
Mason sent Gunn back to China in 1932, he asked Gunn to take a “broader
view” of the possibility for a program that might not “fall into the previous
work of the Foundation.”68
Gunn's second trip to China resulted in his 1934 report, “China and the Rockefeller Foundation.” In his report, he criticized the foundation's existing work in China as no longer in touch with the times. According to Gunn, the PUMC was not “the best we can find,” and its importance, because of its enclave nature, had a very limited effect nationally. Gunn emphasized the gap between the foundation's expenditures and the results obtained. The report showed that from 1914 to 1933 the foundation had spent nearly $37 million under the heading CMB and PUMC, “well over one-third of the grand total of expenditures shown for the Medical Sciences throughout the world” [emphasis in original]. Of this amount, the PUMC had received more than $33 million. Gunn wrote to Alan Gregg: “There has always been a lot of talk of getting adequate return on the very large investment which has been made. . . . From my point of view I fail to see how an adequate return is to be obtained unless there is a change in the P.U.M.C.’s program.” Gunn thought it would be unwise for the foundation to make any further large grants to the PUMC.

While criticizing the PUMC's work, Gunn urged the foundation to “start a new and vital program,” a program that would allow the foundation to keep in contact with the constantly changing social conditions in China. Some trustees viewed this proposal as controversial, and many of them doubted whether the foundation should be involved in any specific social goal. However, Gunn's idea won support from the most influential officers and trustees, including Mason, Fosdick, and Jerome Greene. Gunn's proposed program, later named the China Program, was tentatively adopted by the foundation’s Committee on Appraisal and Plan, and in 1934 the foundation appropriated more than $1 million to the China Program for a three-year period. Gunn was placed in charge of this program, which established its headquarters in Shanghai, the biggest city in southern China. To avoid being in the same city with the PUMC, Gunn preferred Shanghai to Beijing, even though most of its activities were in northern China.

The new program presented some interesting new features that were very different from those of the PUMC. First of all, the China Program extended the foundation's previously exclusive medical efforts into a much broader program that included several disciplines such as medical education, public health, social science, and rural improvement. The foundation's assistance aimed to unite Chinese private and governmental efforts involved in China's Rural Reconstruction Movement by improving coordination and personnel among them. This comprehensive program was in accord with the foundation's new orientation; since the 1928 reorganization Fosdick and his colleagues had devoted much effort to expanding and diversifying the foundation's interests, and social science had become one of the new frontiers. For example, when the new foundation leaders ambi-
tiously searched for ways to work with European internationalists, developments in the social sciences and humanities were seen as two approaches to creating international understanding.73

Another new feature of the China Program was a shift in the foundation’s contacts in China. Previously, the PUMC and the CMB worked mainly with missionary medical schools and hospitals. As Gunn pointed out, “We have usually been labeled as belonging to the missionary movement” and “have been considered more as a foreign body rather than an agency desirous of co-operating with the Nationalists.” Now, he said, “the significance of mission colleges is waning, while the importance of national and provincial colleges is increasing. . . . The Chinese institutions are the institutions of the future.”74 The new China Program emphasized cooperation with purely Chinese institutions, private or governmental universities. Financial assistance to missionary institutions was eliminated unless the missionaries were engaged in educational programs relating to rural reconstruction. The fellowship program continued, but it was essentially subordinated to the effort to advance rural reconstruction.

In spite of these changes in objectives and priorities, some similarities existed between the PUMC and Gunn’s China Program. Both emphasized training leaders and improving the quality of their work. Also, the institutions that were selected for the China Program were the best in their specific fields. Rural sociology at Yanjing University and rural economics at Nankai were the earliest programs in this field in China; agricultural economics at Nanjing University and agricultural engineering at Qinghua University were the best; the Ding County Mass Education Movement was the leader in the rural reconstruction; and, of course, the PUMC’s involvement in public health in both Ding County and later Jining was considered as ideal. In other words, Gunn’s plan continued to depend on well-trained professionals and well-organized institutions to fulfill his goals.

Without a doubt, Gunn’s China Program dramatically changed the foundation’s previous work in China—specifically that of the PUMC. What was the origin of Gunn’s new approach, and how valid were his criticisms of the PUMC’s work? There is little surprise at Gunn’s proposals for China given his extensive experience in public health work in Eastern Europe. He had become convinced that public health had to be coordinated with a simultaneous attack on social, economic, and political problems in a community if it was to be successful. This suggests that Mason picked the right man if he wanted a major change in the foundation’s approach to China. Before his first visit in 1930, Gunn had proposed to the foundation a cooperative public welfare program between the International Health Division and the Division of Social Sciences.75

In addition, Gunn visited China just at the time when the Chinese reconstruction and rural reform movements were surging forward. Many Chi-
nese intellectuals had begun to realize that the rural problem was the most urgent and critical problem in China and had committed themselves to the improvement of education, public health, and the standard of life in rural areas. They were seeking help from outside of the Chinese government, which was suffering from a hopeless shortage of financial and personnel resources. These Chinese reformers involved in rural reconstruction wanted a program that could provide cooperation among institutions and projects and that could train professionals for rural reform. Gunn and these Chinese reformers soon found common interests and mutual needs; Gunn promised to bring much-needed funds and personnel, and the Chinese reformers became the major participants in his experimental social plan.

There was only one problem with this strategy from the perspective of the foundation: How could the PUMC fit into this picture? In other words, was it possible for the foundation to start another extensive program in China while it still supported the PUMC? It was no secret that the foundation's financial resources had been decreasing seriously since the onset of the Great Depression and that the trustees were rethinking China's strategic importance to the foundation. In fact, the report of the reappraisal of 1934 asked, “Is the welfare of mankind best served by enlarging our investment in China? Is China the outstanding strategic point in which we ought to pick our attack? Is there no other sector of the world where we can hope to obtain as large a return in human happiness and welfare as we can in China?” South American countries, Mexico, and India were mentioned as possibly providing geographical balance to the foundation's programs.77

Gunn was aware of this situation; indeed, he confessed frankly to Roger Greene that he and Greene would be in competition for foundation funds for China projects.78 Gunn's severe criticism of the PUMC should, therefore, be understood in this context. In fact, some officers in New York questioned the objectivity of Gunn's criticism of the PUMC because they thought that he might hope to secure interest in his new program at the expense of the existing one.

Gunn's criticisms should also be understood as part of the debate at the time among American medical professionals and public health personnel, which juxtaposed “public health versus clinical medicine.” As a public health official, Gunn was naturally critical of the elite style and the research orientation of the PUMC. For example, in his criticism Gunn did not mention the fact that the PUMC was the first medical school in China that had a standard hygiene department, headed by John Grant, an eminent champion of public health. Moreover, some of the best-known pioneers in public health and midwifery training such as Chen Zhiqian (C. C. Chen), Yang Chongrui (Marian Yang), and Li Tingan graduated from or trained at the PUMC.79 PUMC students also actively participated in the rural health care experiment in Ding County and other public health work.
Furthermore, as early as 1925 the PUMC had opened an urban experimental program—a Health Demonstration Station—in cooperation with the Metropolitan Police Department of Peking. This station afforded a demonstration for the first time in China of a modern health organization with a clinic, records, visiting nurse service, and educational features. Furthermore, it provided a means of giving medical undergraduates much-needed practical training in public health and preventive medicine. The hygiene department of the PUMC provided professional and training services as well as financial support for this station.

To avoid competition between the PUMC and the China Program, Greene suggested that Gunn absorb the PUMC into the China Program, under Gunn’s direction, and eliminate the CMB, Inc. Gunn, however, was ambivalent about becoming entangled with the PUMC. As he explained to Gregg, “I have made a point . . . of keeping out of P.U.M.C. matters, but the China program being what it is, it is difficult and illogical not to pay attention to the most important medical institution in the country.” 81 While Gunn had no choice but to make the PUMC a part of the China Program, he continued to criticize the school. From 1934 to 1937 the China Program, under Gunn’s leadership, cosponsored the Chinese government’s annual inspection of the PUMC; the results were not favorable. 82

The foundation’s 1920s reorganization and subsequent changes in its policies profoundly affected the PUMC. Gunn’s China Program represented the foundation’s new interests in and perspective on China. In this new situation, the PUMC was no longer the key to the Rockefeller Foundation’s success in China. Furthermore, its position in the foundation’s new program was uncertain at best and potentially in conflict with its goals. The foundation’s assumption that after a certain number of years the Chinese would take the full responsibility for the PUMC had never become a reality. The PUMC’s almost total financial dependence on Rockefeller support put a strain on relations and was a major cause of a series of frictions and crises between the foundation’s headquarters in New York and the PUMC’s officers in Peking. This situation had existed in the 1920s but worsened in the 1930s.

The departure of Roger Greene, resident director of the CMB, in 1934 was the most dramatic episode of these conflicts. 83 Greene’s resignation was the result of Rockefeller Jr.’s personal involvement, but the decision was not the result of a conflict of personalities. Greene, in fact, was a victim of the foundation’s basic quandary. On the one hand, the PUMC’s financial survival was completely out of the hands of local officials or foundation field officers; on the other hand, to the new generation of foundation managers, the PUMC was seen more and more as a costly obligation and a burden. Nevertheless, Greene, the program’s oldest officer, refused to recognize this change. His obstinate insistence on keeping high standards and expanding
the college, as well as his strong personal attachment to the institution, made the enforcement of the foundation’s new policy very difficult. Unfortunately, Greene’s departure did not solve the problem. On top of this, the conflict between the PUMC’s Chinese trustees and the foundation’s New York officers over “the Greene matter” seriously damaged the trust between the two sides, and their relationship never recovered.

CONCLUSION

The Rockefeller Foundation’s experiences in China during these two distinctive periods present a very valuable example of the foundation’s policy change during its first few decades. The PUMC stood as a symbol of the foundation’s commitment to medical science during the “Gates era.” Concerning the goal of fostering leaders for China’s medical education and research, the foundation had reason to be very proud of the PUMC. Indeed, the PUMC and the CMB were the leading forces in promoting modern medical education in China. The school became the most famous medical education and research center in all of Asia at that time, and most of its graduates held important positions in China’s medical schools, government health organizations, and research institutions. In addition, the PUMC, with its worldwide reputation, improved the medical profession in China profoundly and thus fostered the growth of the new Chinese intellectuals in general. This generation of medical professionals influenced several generations of medical students, and their legacy along with the “PUMC spirit” have a special place in the development of modern medicine in China.84

Without a doubt, the establishment of the PUMC in 1915 and the substantial organizational reforms within the foundation during the 1920s were the direct products of American culture. They also reflected the foundation’s understanding of China. If the foundation’s knowledge of China’s history and existing problems had been very superficial when it launched the PUMC, by the time Gunn visited China the foundation had much greater contact with the Chinese and attempted to see China’s problems from the Chinese viewpoint. If the PUMC began entirely as a solution by American doctors and missionaries to China’s problems, Gunn’s China Program was the result of a strong Chinese influence. His prompt action in shifting the foundation’s focus in China was under the influence of its general policy change at home, but it also indicated the foundation’s ability to adapt itself to the changing situation abroad. The China Program included much broader reform efforts than the PUMC, and, if it had not been interrupted by the Japanese invasion in the Second World War, it very likely would have produced even greater involvement of the Rockefeller Foundation in Chinese affairs.
NOTES


8. Gates to Smith, 10 June 1907, JDR Papers, Rockefeller Family Archives, RAC.


10. Gates to Smith and Fitch, 6 March 1907, RG 2, Rockefeller Family Archives, RAC. Robert E. Fitch was the president of Hangzhou Christian College.

11. Subank to Gates, 13 December 1907, RG 2, Rockefeller Family Archives, RAC. This letter was written by M. D. Subank representing the Missionary Medical Association.

12. Smith to Gates, 8 and 29 June 1907, RG 2, Rockefeller Family Archives, RAC.

13. Subank to Gates, 13 December 1907 (see note 11).

14. Frederick T. Gates, “Address on the Tenth Anniversary of the Founding of the Rockefeller Institute of Medical Research,” 1911, Gates Papers, RAC.


19. Judson to Gates, 31 January 1907, RG 2, Rockefeller Family Archives, RAC.

20. Fitch to Gates, 16 April 1907, RG 2, Rockefeller Family Archives, RAC.

21. Serious debates took place in two general conferences of the Protestant missionaries in China (1877 and 1890) over the legitimacy of missionaries’ secular work in fields such as education and medicine. Calvin Mateer, president of Dengzhou College, took a particularly strong position: “There are two sufficient reasons why Christian Missionaries should strive to prepare men to lead in the great transformation. . . . First, . . . true science and the arts which proceed from it, will effectually [sic] uproot heathen superstition, and prepare a highway for the general triumph of Christianity. . . . Second, . . . if conscientious and Christian men are not forthcoming to control and direct this movement, it will be controlled by heathen and infidel men. Science and art and material improvement will fall into the hands of the enemies of Christianity, and will be used by them as a mighty engine to hinder the progress of truth and righteousness. Science is either the ally of religion, or her most dangerous enemy.” See “The Relation of Protestant Missions to Education,” in Records of the General Conference of the Protestant Missionaries of China, Held at Shanghai, May 10–24, 1877 (Shanghai: Presbyterian Mission Press, 1878), 173.
29. Gates to Judson, 14 February 1910, RAC.
30. Chamberlin to Gates, 22 January 1914, RAC.
31. *Rockefeller Annual Report* (1924), 254, mentioned that among those who are interested in the promotion of science in China, there is a marked division into two groups, one believing that at present attention should be devoted almost exclusively to teaching the application of modern science in such fields as medicine, engineering, and agriculture, as they are now known in the west. This group holds that it would be a mistake to encourage scientific research for some time to come. Others believe that while the application of existing scientific knowledge is needed, teaching and research in pure science should not be slighted at this critical period in the educational development of China, and that the scientific workers there should be enabled to keep up with their literary colleagues in productive research if they are to have their due share of leadership.
32. Simon Flexner, “Meeting of the Commission,” 1915, RAC. See also his account in “Report on the Second China Medical Commission,” 1915, China Medical Board, RAC.
33. Simon Flexner, “Central and Southern China,” in “Report on the Second China Medical Commission,” 1915, China Medical Board, RAC.
34. Balme to Welch, 1 October 1915, William Henry Welch Personal Paper Collection, Alan Mason Chesney Medical Archives, the Johns Hopkins University.
35. Flexner, “Central and Southern China.”
37. “Log of the China Medical Commission Second Trip to China,” 1916, RAC.
39. The Rockefeller Foundation people and the missionary doctors had a serious debate over the issue of whether to use English or Chinese to teach medicine in China. In their study of this debate, Peter New and Yuet-Wah Cheung point out that “language is the core of the culture and in the case of western medicine being introduced into China, with its own vocabulary and syntax, what it implies is that the Chinese are being asked to forsake its long held and long valued traditions and cultures and adopt a new universe of discourse.” Peter New and Yuet-Wah Cheung, “Harvard Medical School of China, 1911–1916: An Expanded Footnote in the History of Western Medical Education in China,” *Social Science and Medicine* 16 (1982): 1207–1215.
40. For example, in 1926 PUMC faculty published a total of 168 research articles in these journals, including fifty written by Chinese faculty.
42. The PUMC formally opened in 1921 but was forced to close by the Japanese occupation in 1942.
43. For example, the number of fellowships in 1924–1926 were 163, 186, and 169, respectively. Rockefeller Foundation Annual Report (1926), 334–337.
46. Raymond B. Fosdick was the president of the Rockefeller Foundation from 1936 to 1948. According to Steven Wheatley, he was the captain of this reorganization. In the late 1920s Fosdick was well on his way to becoming Rockefeller Jr.’s most trusted friend. See Steven C. Wheatley, The Politics of Philanthropy: Abraham Flexner and Medical Education (Madison: University of Wisconsin Press, 1988), 154.
47. Rockefeller Jr. to Fosdick, 28 December 1925, Houghton Library, Harvard University (hereafter referred to as HL. bms Am 1864).
48. See Wheatley, Politics of Philanthropy, 155–156.
49. Greene to Pearce, 20 January 1926, HL. bms Am 1864.
50. Ibid.
51. Greene to Peabody, 24 January 1926, HL. bms Am 1864.
52. Greene to Vincent, 20 January 1926, HL. bms Am 1864.
54. Houghton to Greene, 24 February 1926, HL. bms Am 1864.
55. Greene to Pearce, 20 January 1926, HL. bms Am 1864.
56. Ibid.
57. Rockefeller Jr. to Houghton, 2 October 1940, China Medical Board, RAC.
60. A. Flexner to S. Flexner, 29 December 1928, Simon Flexner Papers, RAC; and Wheatley, Politics of Philanthropy, 164–165.
63. Minutes, 3 January 1929, folder 1, box 1, series 906, RG3, Rockefeller Foundation Archives, RAC; and Wheatley, Politics of Philanthropy, 168.
64. Vincent to Greene, 18 December 1925, and Houghton to Greene, June 1926, HL. bms Am 1864.
65. Selskar Gunn’s work in China and the China Program were treated in James C. Thomson Jr., While China Faced West: American Reformers in Nationalist China, 1928–1937 (Cambridge, Mass.: Harvard University Press, 1969), chap. 6; and Yung-chen Chiang, “Social Engineering and the Social Sciences in China, 1898–1949” (Ph.D. diss., Harvard University, 1986), chap. 6. While using some of the information from these two works, the following discussion has a different perspective and takes into account some new materials.
66. Gunn admired Yan Yangchu as “truly a remarkable man. He combines idealism with great wisdom in judgment and the ability to place himself practically in the attitude and mind of a peasant.” Having some doubts about Yan’s Mass Education Movement,
Gunn said, "My own guess is that Yen and his group are going to be successful." Thomson, *While China Faced West*, 128. For a detailed account of James Yen’s work, see Charles W. Hayford, *To the People: James Yen and Village China* (New York: Columbia University Press, 1990).

67. Gunn to Mason, 23 January 1934, RG 1.1, Rockefeller Foundation Archives, RAC.
68. Ibid.
69. Selskar M. Gunn, “China and the Rockefeller Foundation,” Shanghai, China, 23 January 1934, RG 1.1, Rockefeller Foundation Archives, RAC.
70. Ibid.
71. Gunn to Gregg, 7 December 1936, China Medical Board, RAC.
74. Gunn to Mason, 4 December 1933 and 23 January 1934; and Gunn, “China and the Rockefeller Foundation,” 4, 54.
75. See Chiang, “Social Engineering,” 244.
77. “Report of the Committee on Appraisal and Plan on Mr. Gunn’s Program for China,” 11 December 1934, RG 3, Rockefeller Foundation Archives, RAC.
78. Gregg to Greene, 20–21 March 1934; and Greene to Gunn, 20 January 1934, HL bms Am 1864.
81. Alan Gregg became the director of the Medical Sciences division after Richard Pearce’s death in 1930. According to Wheatley’s study, Gregg had some critical opinions about Raymond Fosdick’s reorganization of the Rockefeller Foundation during the late 1920s. See Wheatley, *Politics of Philanthropy*, chapter 6. Roger Greene shared Gregg’s opinions on Fosdick and other administrational problems. Gregg visited China in the summer of 1932 and became familiar with the PUMC matter. Gunn to Gregg, 7 December 1936 (see note 71).
83. More elaborate accounts of these conflicts can be found in Ferguson, *China Medical Board*, see also Qiusha Ma, “The Rockefeller Foundation and Modern Medical Education in China, 1915–1951” (Ph.D. diss., Case Western Reserve University, 1995).
84. The so-called PUMC spirit indicates high standards and strict requirements in medical education, research, and practice.
A Central Periphery: 
*The Naples Stazione Zoologica as an “Attractor”*

GIULIANA GEMELLI

INTRODUCTION

E ach year in Italy a TV special, Telethon, is dedicated entirely to fund raising for medical research in genetic diseases. In the past two years a consistent portion of the funds collected has been devoted to financing a group of young geneticists in Naples. Although genetics in Naples has a long and outstanding tradition, one of the aims of Telethon is to revitalize this old tradition, which has been in decline for a long time. The tradition was the product of a complex institutional “constellation” in which the Naples Stazione Zoologica played an important role, along with other university institutes, serving as a “core,” especially in attracting international attention and cooperation.

The Stazione Zoologica was created as a private institution in 1872 by the German biologist Felix Anton Dohrn. The city of Naples provided land for the installation of laboratories for the Dohrn station for a period of ninety-nine years. The work of the facility quickly contributed to overall intensification in German-Italian scientific relationships,1 thanks to the entrepreneurial, scientific, and artistic genius of its founder. For one hundred years, beginning in 1872, the Stazione represented the intellectual and institutional focus of an international community of scholars, which generated a “permanent congress” of the most outstanding personalities in biological research, including eighteen Nobel laureates.

Between the end of the 1960s and the early 1970s, after a century of activity, this innovative configuration experienced a crucial change for reasons that were largely independent of the station’s high performance and scientific legitimacy. During this period the original, brilliant premises for the creation of the station as an “epistemic community,” that is, a “network of professionals with recognized expertise and competence in a particular do-
main and an authoritative claim to policy-relevant knowledge,”2 was called into question. This was a consequence of both the deterioration of the political climate within and outside the Stazione and a complex and equally deteriorated system of relations of the last descendent of the Dohrn family with the internal and the external framework of the institute, including its academic referees. Finally, after the ninety-nine-year agreement with the municipality of Naples expired, the Dohrn family was dismissed from the station’s Board of Administrators. The Stazione was transformed into an Italian public institution with a strongly bureaucratic structure.

At this time, the Stazione’s scientific vanguard position was to a large extent bypassed by other organizations and research strategies. For example, the Scientific Committee on Oceanic Research (SCOR) and the Intergovernmental Oceanographic Association (IOA) were based on cooperative programs and on the collaboration of national academies and fund-granting agencies. The role of SCOR became so important that it cooperated with the United Nations to create a special forum for governmental discussion. All of the marine stations in Europe, including Naples, played only a marginal role in this process. Nevertheless, an analysis of Rockefeller Foundation archival sources reveals that because of its high concentration of research networks, Naples became a crucial center, potentially acting as an attractor of large-scale research. These networks included not only marine biology but also the molecular biology efforts of Adriano Buzzati-Traverso, the cybernetics of Eduardo Caianiello and Valentino Braitemberg, and the pioneering creation of the Research Institute in Agricultural Economics in Portici by Manlio Rossi-Doria.

The aim of this paper is not to reconstruct the history of the Stazione Zoologica, which is well known,3 but to analyze the role of the Rockefeller Foundation in its institutional development beginning after World War I and continuing until the late 1960s. The paper also examines the reasons for the institution’s failure in the late 1960s and early 1970s, which coincided with the end of the Dohrn era and the beginning of a new phase under the present direct control of the CNR (Consiglio Nazionale delle Ricerche). It explores these institutional dynamics in a national and international context by referring to the role of the Stazione as a potential framework for the emergence of an epistemic community and as an institutional “attractor” based on large-scale research programs.

The concept of attractor is related to the process in which opportunities and constraints are mixed in the same context and implies a situation of institutional instability and uncertainty. The concept of epistemic community refers not only to the process of integration between research and entrepreneurship but also to the effects of the emergence of science policy at the level of the state and public administration of science.4 These tools
permit an analysis of the development of the new framework of “big science,” which implies deep changes in the structure of scientific cooperation, as compared to the traditional organization of scientific interchange and cooperation, involving organizational patterns of research institutions as well as the social rules of scientific practices. The crisis of the Stazione occurred during a period of transition that saw a decline of the original pattern of cooperation established by Anton Dohrn and his son, Reinhard. This began with the famous “tables” rented to different countries for totally independent research projects in “the fraternity of a common endeavor to understand the living world that surrounds us.” It was replaced by a model of international competition and cooperation, implying the increasing intersection between science administration, technology and industry, and the development of research as a function of the “market economy.”

The concept of epistemic community also refers to the effects of this process at the level of national decision-making as well as at the level of the dynamic interaction between domestic and international relations, “not only in terms of material interests, but also as part of the bargaining and negotiation to take place among different epistemic understandings and practices.” The Stazione Zoologica, which began as an international, nonprofit institution, initially acted as an attractor of national and international networks that became more and more complex and articulated after World War II. When more competitive and better-equipped laboratories began to imitate the model of the Stazione, it was pushed toward a structural change that unfortunately occurred during a difficult political and institutional environment arising from internal struggles. At this time, the support of the Rockefeller Foundation along with other American institutions (such as the National Science Foundation, the U.S. Public Health Service, the Office of Naval Research, and the U.S. Air Force) was crucial not only in ensuring the station’s survival but also in stimulating and strengthening its “economies of scale.” At the same time, the foundation’s ongoing concern for the station revealed a dramatic situation, which in the late 1960s for political and institutional reasons also greatly affected other institutions with international strategies and large-scale organizational patterns, such as Buzzati-Traverso’s international laboratory of genetics.

THE STAZIONE ZOOLOGICA AFTER WORLD WAR I: BETWEEN PUBLIC ADMINISTRATION AND PRIVATE ORGANIZATION

Relations between the United States and the Naples station began later than the station’s relations with European countries like Germany and Italy.
Nonetheless, some of the most important American institutions established relations in Naples before World War I, such as the Smithsonian Institution (1893), Columbia University (1896), the Women's Association (1898), the Carnegie Institution (1902), and, finally, after 1914, the Rockefeller Institute for Medical Research (RIMR), which named its table in memory of Jacques Loeb (1859–1924), who had previously worked at the station. One of the station's strongest American supporters was the cytologist Edmund Wilson, who actively endorsed the reinstatement of Reinhard Dohrn as station director after World War I. This was a difficult period for the Dohrn family since, as Germans, their properties had been declared alien in 1915 and confiscated. Dohrn was reinstated on the governing board only in 1923, after a very troubled period, thanks largely to the support of the philosopher Benedetto Croce, who at that time held a high post in the Ministry of Education. Even then, Reinhard Dohrn obtained his position only as a result of a legal sleight of hand that transformed a private and independent institution into a quasi-public institute under the formula of the *ente morale*.

During the Fascist regime this was the legal procedure used most frequently by the state to gain control of institutions outside its domain. In effect, the station, a private enterprise, was administered in a quasi-public manner under the control of the Italian state but by the direction of its former owner. The *ente morale* consisted of a Board of Trustees with five members, presided over by the mayor of Naples and including representatives of the Italian Ministry of Education, Ministry of Agriculture, and National Research Council. The fifth member of the board was to be the director of the station. The latter requirement immediately raised a delicate political question:

> whether it was convenient to have professor Dohrn, a German citizen, at that place. The matter was finally settled by Benedetto Croce. In a speech to the Senate, Croce said that he could show to the opponents a number of letters of the most important and prominent biologists both of England and of the United States, unanimously stating that Dohrn ought to be the Director. By a following Decree it was decided that professor Reinhard Dohrn should be a member of the Board of Trustees and the Director of the Zoological Station for life.

The station remained international in its aim and spirit of collaboration without political and ideological boundaries, but legally it became an Italian institution. The diplomatic mind of Reinhard Dohrn and the support of outstanding Italian scientists and intellectuals prevented the regime of Mussolini from exerting control over it. Dohrn was able to receive different grants from the Italian government as well as from private institutions, such as the Rockefeller Foundation, that supported the rebuilding of
the station. These multiple supports created many opportunities but also produced some constraints.

In February 1924 Wilson wrote an article for the journal Science in which he praised the role of the station in the international scientific community and indicated the importance of American research and grant-making institutions in favor of the Naples station:

We [Americans] owe a large debt to the Station. An opportunity now offers to make some repayment by helping in a process of reconstruction of far reaching importance for biological research in this country. . . . We believe that the time has come when this country should join with others in renewing its support of the Station and in upholding the policy of its Director in every possible way.

A copy of the article was sent by the head of the Department of Zoology at Columbia University, T. H. Morgan, to the director of the Rockefeller Foundation’s International Education Board (IEB), Wickliffe Rose. Morgan strongly urged a visit by a Rockefeller officer to the station.10 Following this suggestion Rose wrote to Dohrn, who in his answer, while minimizing the limitations to the international organization of the Stazione resulting from its administrative structure and to the political situation, stressed the difficulty created “on the side of several of the nations as to the capacity of paying the corresponding grants for the tables.”11

Two months later the IEB decided to support the reestablishment of the Naples station with a “sum of $10,000 a year for a period of five years with the understanding that if the finances of the station improved there might be a reconsideration of this sum for any one year.”12 In 1927 the grant was reduced to $7,000 per year, but the foundation also decided to extend funding until 1931 for a total of $54,000.

The station’s receipt of the grant was marked by some misunderstandings. These were the first manifestations of an increasing organizational gap between the Dohrns’ system of scientific cooperation based on renting tables, which meant conducting separate negotiations with each country in order to create permanent relations with specific national institutions and the process of internationalizing research programs. The latter was a policy based on cross-fertilization strategies, which was typical of the Rockefeller Foundation in the interwar period and implied an articulated dynamic of selective dissemination across countries. This new strategy made use of grants to institutions as well as the recruitment of individuals through the use of fellowships.

A few months after receiving the first installment of the Rockefeller grant, Dohrn wrote to Rose not only to thank him for his generous support but also to point out:
If the International Education Board gives a subsidy to support 20 tables which are to be placed at the disposal of the ablest applicants regardless of nationality, I am very much afraid that this will slacken the process of regeneration between the Station and the different countries. Would it instead not be possible to say that a subsidy is given to enable the Station to offer at reduced price a sufficient number of tables to the countries with low exchange rates and in general to help towards re-establishment? [emphases in original]

Dohrn’s request was in conflict with Rockefeller Foundation policy and the orientation of its scientific consultants, who thought that to reestablish and improve the excellence of the station, it was important to recruit the best scholars and provide general support for programs with fellowships. Dohrn’s ideal also ignored the basic rule that each grant should be directed toward obtaining permanent support from national sources, including public institutions and the government. For different reasons, including “the sake of independency [sic] and internationality of the Station,” Dohrn thought that it was strongly desirable “that subsides come from more than one side.”

The Rockefeller Foundation reluctantly accepted Dohrn’s point of view but, at the same time, also used the station’s scientific networks to develop its fellowship program. This was especially useful in supporting young Italian scholars, who were likely to become full university professors and develop new fields of interest in biological research, such as physiology and genetics. August Trowbridge, a Rockefeller Foundation officer, observed in a memorandum to Rose after visiting the Naples Station in 1927:

Marine biology seems to be less important in these days of emphasis in Physiology and Genetics than it was in Dohrn’s father’s days, when the emphasis was more on the Morphological aspects. Then too, the older Dohrn was a great money getter and had rich patrons in Germany, who contributed generously. The Italians are saying that this support comes from Germany as a part of an extensive pre-war spy system—all the biological students were reserve officers who, through excursions on the Bay of Naples (excursions they never take by the way) learned valuable secrets which they could not get from the maps (what secrets is not specified). It is all nonsense, of course, but it is a talking argument for those who for any reason wish to get complete control and oust Dohrn. Dohrn can probably obtain enough support to hold on to his job, but any real domination by non-Italians (especially Germans) will be fought tooth and nail by the Italians.

Further inquiries made clear to the Rockefeller officers that the administration of the station was not entirely in Dohrn’s hands and that he had recurrent struggles with Italian official representatives on the station board. Significantly, one of Dohrn’s main opponents was Professor Filippo Bot-
tazzi, head of the Institute of Physiology and rector of the University of Naples. In a memorandum from this visit in May 1927, Trowbridge reported:

Asked if he had any definite plan, Bottazzi said that if the Station were attached to the University, expenses could be saved. . . . Dohrn says that Bottazzi wants to kill the Station by absorbing it into his own Department of the University. It looks . . . as though the Station were between the devil and the deep blue sea: if the University of Naples were to absorb it, the probability is that most, if not all, of the foreign support would be given up—if it can't get foreign support in addition to the amount coming in from the tables and the entrance to the Aquarium, then the University is likely to be able to absorb it.18

This kind of behavior was not widespread among most Italian university professors. For example, the cytologist and geneticist Giuseppe Montalenti, who directed the station during World War II, and his younger colleague Alberto Monroy, who became director of the station in the troubled period of the early 1970s, did their best to optimize and strengthen the station's scientific performance and institutional health. Nonetheless, beginning in the late 1920s the relationship between the Stazione and the Italian university became more and more complex. This was one of the reasons why the idea of creating an International Committee of Management of the Naples station—suggested in 1926 by one of the Rockefeller consultants, Frank Lillie, and endorsed by the foundation’s officers—was never adopted. Moreover, Dohrn seemed to want to modernize requirements for research as suggested by Lillie, who noted that “the proposed Advisory Board would rectify such judgment, as our Board does at Woods Hole.”19 It should be noted that the marine station at Woods Hole, Massachusetts, had originally been created in an effort to emulate the Naples station, although at that time it was undergoing a reorganization. Dohrn had the right intuition—that physiology was the core discipline of the future—and introduced a new sector entirely devoted to this kind of research. From the organizational point of view, however, his main concern was to reestablish the successful system of the past based on “tables” rather than investing in a rapid modernization of technical equipment.20

Despite Dohrn’s enormous personal efforts, which put a great strain on him personally and also aggravated an already compromised institutional situation, the station continued to be in difficulty not only financially but also because of the Italian government’s introduction of “constraints” such as the requirement that a majority of assistants be Italian.21 In a September 1929 memorandum about an interview with Alberto Missiroli, director of
the Rome Malaria Station, Rockefeller Foundation staff member Lauder Jones reported, “Missiroli said that Professor Dohrn was struggling with very unfavorable conditions; spoke of hostility of certain university men, of limitations of funds.”22 At the same time, it was clear that Dohrn was not eager to obtain relevant funds from the Italian government, wishing to preserve the station’s independence.23 Support from Germany was also a problem. During the Weimar Republic, relations between Italy and Germany were unfriendly, and “all German contributions had to be disguised as funds from scientific institutions, respecting a balance between Italian and German funds.”24 After 1933, because of Dohrn’s opposition to Nazism, it also became clear that the contribution from the Kaiser Wilhelm Gesellschaft (KWG), which was a partner of the station, might not continue.

In 1931 Jones suggested to Dohrn that he consolidate his relationships with the Comitato Talassografico, whose director, Professor Giuseppe Magrini, was a member of the station’s board and at the same time the organizer of a new station near Trieste. Jones wrote:

It is my belief that a recommendation to New York for continued support to the Marine Zoological Station of Naples could have more chance of being successful if, from some sources in Italy, perhaps through the Comitato Talassografico, the Italian Government could participate in a program of contributions to the Station of Naples, with the understanding that the sum contributed by the Rockefeller Foundation would diminish over a period of years, while the sum contributed by the Italian Government would be increased, and at the end of the period agreed upon the total increase of the maintenance will be secured from Italian sources.25

Other consultants, particularly the French scientist and philosopher Maurice Caullery, observed that the crisis at the station not only was related to its financial situation but also existed because “the evolution of biological science has not preserved at the station the advantages which it formerly possessed and which exerted an influence and an efficaciousness which could not be denied.”26 Actually, at the time of Anton Dohrn, morphological and embryological physiology research was the axis of zoology, and the study of marine animals was at the core of biology. Despite the fact that the station’s founder “had a clear perception of the place which physiology would come to occupy in the zoological scheme of things,” Caullery was skeptical about the possibility of its remaining “so great a center of scientific attraction as it did in the past.”27 While observing that “in many countries maritime biological stations have been organized which offer comparable resources,” and sometimes even superior resources, he concluded that it was “highly probable that the Station is not destined to repre-
sent for the biology of the next two or three decades a position comparable with that which it knew under the guidance of its founder.”

Despite these criticisms, in 1932 the Rockefeller Foundation decided to award $18,000 to the Naples station. The foundation justified the grant as follows:

The general interest in the subject of biology in Italy will probably result eventually in more ample support from Italian sources. It has just been learned that the Italian state is planning to build four new institutes in Rome, one of which is for biology, and it is believed that the organization of a research institute for biology in Rome will make it necessary for the Italian Government to have a marine biological station associated with this institute.

In fact, the critics were proved correct. The station found it more and more difficult to maintain, let alone strengthen, the old patterns of bilateral agreements with different countries. At the same time, it was impossible for the station to enter the new competitive-cooperative system of biological research institutes at the international level because of its peculiar status. Bilateral international agreements, which were previously an advantage, now acted as constraints, as did the Stazione’s hybrid institutional character as an Ente morale of the Italian state. In a January 1932 letter to Jones, another Rockefeller Foundation officer observed that the station was living more on its past than on the new planning for the present and the future:

Professor Dohrn . . . is unable to present any suggestion for a tapering program. . . . I have no suggestion further than . . . that I do not believe that the station can pull out of its difficulties for a long, long time and that the Foundation can apparently do but one of the two things: either withdraw its support completely, or consider the idea of carrying it for a good number of years. . . . There are a considerable number of professors who have profited immensely from Naples, but they all go back to the time when Naples was functioning as a real international station, practically free from Italian control. This condition is ceasing to exist to a larger extent each successive year, and if the Italians are not able to completely control the Station, I am certain they will transfer their interest and finances to their new Station at Miramar and Messina.

REESTABLISHING THE STATION AFTER WORLD WAR II

The need for coordination and cooperation among scientific institutions that had been stressed in most of the Rockefeller reports and memoranda became a shared concern of Italian scholars after World War II. In a June 1945 letter to Columbia University geneticist Theodosius Dobshansky,
Adriano Buzzati-Traverso, a former Rockefeller fellow working at the Instituto Italiano di Idrobiologia, wrote:

The only way to improve the level of biological production and to raise a new generation of modern-minded biologists is to have institutes outside the University which, keeping the closest possible contacts with foreign laboratories, should introduce these methods and mentality which I have had the chance to know and to appreciate in the States, in England, and in some German laboratories. We think that for the time being, such extra-University Institutions could be in Italy . . . the Zoological Station in Naples, where now is working a good friend of ours, Professor G. Montalenti and perhaps the already named Institute of Public Health in Rome, where it exists a physical Institute, with well-known physicists, such as Edoardo Amaldi, who are very much interested in biophysical problems.31

Given this receptive attitude, the Rockefeller Foundation and other external funding sources played an important role in strengthening biological research in Italy between the end of the war and the early 1960s, with a particular focus on genetics. The Naples station was at the core of this strategy as early as March 1944, when the (British) Royal Society gave £1000 for its maintenance.32

The role of the Rockefeller Foundation was particularly important in strengthening the interactions among the Italian National Research Council (CNR), the university institutes, and the independent laboratories, to organize and rationalize the distribution of human resources and technical equipment. Meanwhile, the foundation continued its policy of supporting promising young scholars in the field of genetics with fellowships and travel grants. Between 1946 and 1961 a total of sixty-five fellowships were awarded to Italian scholars: thirty-one in medical sciences, natural sciences, and public health; twenty-three in the social sciences; and eleven in the humanities. Unlike before the war, the fellowships in health and medical fields were awarded to strengthen the institutionalization of disciplines such as genetics, biochemistry, and embryology, rather than to develop individual “human capital” or to cross-fertilize experimental research in Italy. The fellows undertook pilot projects with the American grants, but they also implemented new organizational strategies that enhanced cooperation among institutes, research centers, the industrial system, and the government. This process was particularly evident and relevant in developing certain research fields such as genetics. More generally, the Rockefeller Foundation’s aim was not only to strengthen experimental research but also to develop the management of biomedical research by improving the organizational framework.
The main university centers for genetics were Pavia with Carlo Jucci and Buzzati-Traverso,33 Milan with Claudio Barigozzi, and Naples with Montalenti. A former Rockefeller fellow (1931–32) who had been the director of the Naples station during World War II, Montalenti developed an increasing cooperation with Buzzati-Traverso, largely based on their international networks and on the idea that research could not be completely separated from organizational strategies.

One of the first steps in reorganizing the station was to develop a proposal, which had been discarded in the interwar period, to create an advisory committee with the cooperation of the National Research Council (NRC) in Washington. In 1947 the station also received a four-year grant from UNESCO for $30,000. Two important features of the award were the creation of links with the International Council of Scientific Union and the permanent participation of a UNESCO representative at the station’s board meetings. Reinhard Dohrn, who remained the station’s director until 1954, despite some misgivings about this last point, nevertheless tried to make the best of the agreement with UNESCO, which contained a provision that support would gradually decline from an initial grant of $10,000 to $3,000 in the final year. Dohrn wrote:

I confess that I had expected—or I rather say more precisely hoped—that UNESCO would take an especially helpful interest in the Naples Station after the first approach they made in 1946, then emphasizing the international character and tradition of the Stazione. But their cutting down makes me a little skeptical—all the more so as I hear that some people of UNESCO think that the Station is national and not international.34

Dohrn’s concern about UNESCO reveals the ambivalent way in which the station’s administrative structure was viewed, with a national administration and an international aim that hampered new strategies for international scientific cooperation. The creation of an international advisory committee was one way to reduce the danger of isolation of the station. At its origins, the aim of the advisory committee was threefold: normalizing the fee for the rental of tables, eliminating problems of customs duties for the equipment brought by investigators working at the station, and promoting its relations with various countries. In 1950 the station had 197 table occupants, of whom 88 were from a number of foreign countries (see Table 8.1).

Other aid in restarting scientific activity at the station after the war was provided by the Italian CNR, which instituted a Centro Studi di Biologia, directed by Montalenti at the Stazione Zoologica. In 1948 the new center held a symposium in cooperation with the CNR on “Embryology and Genetics,” which brought to the station the best European scholars, in-
including the Italians, particularly from Milan and Pavia. As described in a Rockefeller Foundation memo, the work at the Centro Studi was on genetics, and Montalenti was considered one of the “promising stars” in the development of Italian research in this particular field.\textsuperscript{35} In 1948 he received two allocations and two grants-in-aid from the foundation, totaling $8,650. In 1951 he received a three-year grant of $10,000 to strengthen research and teaching of human genetics at the University of Naples. That year he also received a four-year grant of $10,594 for research in the genetics of microcythemia. Finally, in 1959 he received a $26,400 grant for a two-year period. An example of the high regard in which Montalenti was held is the following diary note of a Rockefeller Foundation officer in 1950:

Trained in the classical field of embryology, Montalenti easily turned his attention to studies of the genetic and environmental factors which control growth and development. This new interest was matured during the Foundation fellowship year which he spent with Frank R. Lillie at the University of Chicago and in his many stays at the University of Naples. In the interval since then he has fashioned out of shabby, almost empty, laboratories a respectable, well-furnished and well equipped institute. He has trained his own staff, he has organized a series of well-planned courses in general biology and genetics for both science and medical students, and he has firmly established a program of research in genetics.\textsuperscript{36}

Montalenti was clearly the “Italian star” of the Rockefeller Foundation, and he was also considered the man who tried to transform Naples scientific laboratories into a well-organized and integrated system. This system, how-

TABLE 8.1

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Researchers</th>
</tr>
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<tbody>
<tr>
<td>Belgium</td>
<td>2</td>
</tr>
<tr>
<td>Denmark</td>
<td>2</td>
</tr>
<tr>
<td>England</td>
<td>23</td>
</tr>
<tr>
<td>France</td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
<td>9</td>
</tr>
<tr>
<td>Holland</td>
<td>8</td>
</tr>
<tr>
<td>Spain</td>
<td>2</td>
</tr>
<tr>
<td>Sweden</td>
<td>11</td>
</tr>
<tr>
<td>Switzerland</td>
<td>15</td>
</tr>
<tr>
<td>United States</td>
<td>4</td>
</tr>
</tbody>
</table>

One researcher each: Austria, Brazil, China, Greece, Hungary, India, Norway, Turkey.
ever, only benefited his laboratories at the University of Naples, rather than the Stazione Zoologica, which Montalenti left in 1962.

Amid these negative events, the station entered a growing institutional crisis. In fact, one feature of the Naples station that originally had acted as a competitive advantage, the system of tables, risked becoming a constraint in the development of the station’s international strategies. It was highly unlikely that the station would develop into a scientific pole of excellence if this system was not connected with other kinds of activities such as the creation of a scientific team integrated with university laboratories, international conferences, large-scale research programs, and a strong policy of modernization of the laboratory equipment. To make these changes, the Stazione Zoologica received new grants from the Rockefeller Foundation, beginning with a 1947 award of $5,000, “as a contribution toward the general expenses of modernizing and maintaining the Station.”37 Other support soon followed. On 6 April 1951, after the phasing out of the UNESCO grant, Reinhard Dohrn received a letter from the foundation announcing that “action was taken providing up to $25,000 to the Stazione zoologica of Naples toward general expenses and the purchase of equipment.” Meanwhile, the foundation started to support the travel expenses of scholars working with the station, to improve their knowledge of the technical apparatus and scientific strategies of the most important research laboratories in the world. In 1952 a long-term associate of the Stazione, Professor Giuseppe Reverberi, received a grant “to familiarize himself with modern American advances in embryology and cytology in the laboratories of Weiss at Chicago, Hamburger at Saint Louis, Spratt at Baltimore, Witschi at Iowa City, to spend the summer at the Marine Biological Laboratory of Woods Hole, and to spend the last month of his fellowship in the Laboratories of Dr. A. E. Mirsky at the Rockefeller Institute.”38

In 1954 the young Peter Dohrn, a former student of Montalenti training to succeed his father at the direction of the station, received a special grant to visit research institutes in the U.S.39 In 1961 Monroy, a former Rockefeller fellow (1949) who in the late 1950s had become professor of comparative anatomy at the University of Palermo, went to California, Japan, and India, thanks to a $3,270 travel grant. Professor Luigi Califano, who in the late 1950s became chairman of the Committee on Biology and Medicine of the CNR and director of the Institute of Pathology at the University of Naples, received grants to improve the technical equipment for his research.40

The Stazione thus acted to help launch the careers of its associates, and it also played an important role in the process of cross-fertilization of the university system. This process, however, did not establish progressive and increasing cooperation between the Stazione, the university, and the gov-
ernment. To be fair, this lack of a cooperative system that could support large-scale research was not just typical of the Stazione; it also occurred in other institutional dynamics at a time in the early 1960s when the universities and new private institutions tried to promote pioneering research. In most of these cases, they failed to overcome the jealousy and even hostility of the university system, despite, as in the case of the Stazione, the establishment of working relations among individual researchers such as Montalenti, Monroy, Califano, and the Dohrns. The relationship between the Dohrn station and the universities during the 1950s and 1960s served primarily to funnel resources in one direction: away from the station toward the consolidation of academic careers of university researchers.

CRISIS, OPPORTUNITY, AND CONSTRAINT

At the end of the 1950s the Stazione Zoologica found itself in a situation of potential dramatic change, thanks to the concentration in Naples of a number of outstanding personalities in the field of genetics and molecular biology. They included not only Montalenti and his team of prominent young scholars but also Buzzati-Traverso and his group from Pavia as well as a pioneering team of scholars in cybernetics, led by Eduardo Caianiello and Valentino Braitenberg, who worked in cooperation with the Stazione Zoologica. To appreciate this unusual opportunity, it is necessary to understand the political and institutional conjuncture of this period.

The end of the 1950s and the early 1960s was a very dynamic period in Italian politics with the experiment of the Centro-Sinisra as well as in scientific policies. It saw, for example, the appointment of open-minded and well-informed administrators to some of the leading ministries, such as Marcello di Domizio and later on Giuseppe Medici at the Ministry of Public Instruction. A reform policy was under study both in public administration and in the fields of education and research. Buzzati-Traverso spent most of his energy trying to launch his project for a new institute of molecular biology outside the university with international links and an international board. The international climate also seemed favorable after Francesco di Consolazio’s report on European Biological Research and the U.S. National Science Foundation’s (NSF’s) call for the creation of an international center for biological studies focusing on research in molecular biology. The NSF even asked Buzzati-Traverso to submit a proposal. Buzzati-Traverso could rely on the support of the president of the CNR, the physicist Giovanni Polvani, to strengthen scientific research in Italy as well as on his own international connections with the European agencies such as Euratom, the European Nuclear Energy Community. An agreement between the CNR and CNEN (Comitato Nazionale per l’Energia
to create an International Laboratory of Genetics and Biology (LIGB, or Laboratorio Internazionale di Genetica e Biologia) was signed 28 December 1960, and it was officially instituted 15 January 1961. Euratom participated in the creation of the LIGB, signing a five-year contract of association and granting the new institute 620 million lire.

Buzzati-Traverso decided to locate his institute in Naples rather than in Pavia for several reasons. The most obvious included the availability of governmental funds for development in the Mezzogiorno (southern region of Italy), the willingness of some Neapolitan industrialists to provide money for the purchase of a site, the presence in Naples of a very active physics group (including Caianiello, who was one of the pioneers of cybernetics), and, last but certainly not least, the prospect of strong cooperation with Montalenti and Dohrn’s Stazione Zoologica and its international nature. It should be noted that this latter collaboration did not materialize because Montalenti, despite having a research center within the Stazione, was mainly interested in strengthening his Institute of Genetics at the University of Rome, which was established in 1961. Another reason for Buzzati-Traverso’s move was that his former assistant Giovanni Magni had reached a leading position at the Institute of Genetics in Pavia and could take over formal responsibility for the research group when Buzzati-Traverso departed.

In the international context, Buzzati-Traverso could count on the future support of the European programs of American scientific agencies such as the NSF and the National Institutes of Health (NIH). For example, Gerald Pomerat described in a memorandum dated 6 February 1961 how a new Rockefeller Foundation policy would “expand considerably overseas programs, instead of the past practices of large numbers of small grants.”42 At the early stages of his project, when it was still to be located in Pavia, Buzzati-Traverso thought he could quickly gain support from large American institutions like the Rockefeller Foundation.

The project of the LIGB was based on the idea of developing “big science” in Italy as a way to transform the relationship between government and science in the country. At the least, Buzzati-Traverso thought that an independent international institution could enhance international cooperation and interdisciplinary research. In addition, he hoped to transform the pyramidal structure “with only one professor, a typical form in most European Universities” into a more articulate and competitive organization that could also attract a large number of foreign researchers.

Buzzati-Traverso also considered the creation of the International Institute of Genetics and Biophysics to be a model for a general reform of Italian universities. It would begin the larger reform of the Italian science faculties and fundamental research in the university system. Buzzati-Traverso identified two strategic goals: the development of postgraduate studies and the
creation of national research institutes for each relevant discipline. To strengthen his project and gain support within Italian political and governmental circles, he tried to create a pressure group of leading scientific personalities that included chemists (Vincenzo Caglioti, Adolfo Quilico, and Giovanni Semerano), biologists (Alberto Monroy and Buzzati-Traverso himself), physicists (Ugo Amaldi and Carlo Bernardini), mathematicians (Benjamino Segre and Sandro Faedo), a geologist (Livio Trevisan), and an astronomer (Leonida Rosino).

In the early 1960s the Rockefeller Foundation was asked to support this enormous enterprise in cooperation with other prestigious American and European institutions such as Euratom, the Ford Foundation, the NSF, the NIH, the U.S. Atomic Energy Commission, and the Office of Naval Research. Not surprisingly, foundation officers expressed doubts about the European and international dimensions of the project, in part because they correctly foresaw increasing social conflict in Italy at the end of the 1960s. American foundation officers were particularly wary of the unstable political situation and clearly anticipated the jealousies of the Italian university baroni based on their reaction to the financial support that Buzzati-Traverso had already been given by the Italian government as well as on the rapid increase of Buzzati-Traverso’s international links and scientific networks. In a May 1960 memorandum Robert S. Morison, an associate director of the Rockefeller Foundation’s Medical Sciences division, stated:

There is room for doubt that the Institute should seek endowment at this stage. Aside from the difficulty of estimating its future course at this time, the proposal leads to the suggestion that some sort of holding company be set up in the U.S. This seems unfortunate to me since it reduces the value of the LIGB as a model for a general reform of Italian universities. For other more emotional reasons such a scheme might reduce Italian interest, if not arouse Italian hostility.

After long discussions, the Rockefeller Foundation finally refused to commit itself to such a large-scale project, deciding instead to continue its assistance to the Institute of Genetics at the University of Pavia. In October 1960 Pomerat sent a letter to Buzzati-Traverso announcing the foundation’s decision:

Our reluctance to go into your request more actively at this moment is primarily a question of timing, for we have many irons in the fire. We must give much thought to the needs of the emerging countries of Africa. It is also a question of another kind of timing: a feeling that active discussion here will go more smoothly when the project at Pavia has entered one further stage of its growth, when it has actually obtained Euratom Support, aid
from [the] National Science Foundation and so on. I personally believe that your plans for the School are sound. I have faith that the project could be brought to maturity. If it is to play a goodly role in setting a pattern for what could be done in other European universities, however, it must be Italian from the first, European second, and International only third.45

One month later, in November 1960, Buzzati-Traverso decided that the right location for the new institute was Naples. Paradoxically, at that time, the Naples station entered a phase of institutional crisis, which lasted until the mid-1970s. Before it was over, Peter Dohrn resigned as director, and Buzzati-Traverso’s International Laboratory collapsed. While the institutional reasons for Dohrn’s resignation and the failure of the laboratory differ, they reflect the same context of structural crisis and collapse of independent, international research centers in Italy in the late 1960s.

The first sign of the station’s institutional crisis occurred during a period of growth. According to historian Karl Josef Partsch, Peter Dohrn, the third generation of the family to direct the station, began the process by taking up the role of innovator for which his father had groomed him. The actions he undertook were numerous and far-reaching.

He increased the number of tables for guest scientists; he obtained support for important research projects. . . . He rebuilt the Library (again with a grant of the Rockefeller Foundation). . . . He also remodeled the physiology and biochemistry laboratories and, as a consequence, increased the permanent staff. This led to conflict with the Administrative Council and with the authorities in Rome. In addition the staff of the Station, supported by the . . . labor unions, demanded the right to perform independent research instead of only providing services and facilities to visiting scientists. This change of policy found favor in Rome.46

To this picture should be added two other elements found in the Rockefeller Foundation’s reports from the period: the ambivalent role of the university and the deterioration of the internal climate at the station. In an October 1959 memorandum, general secretary of the advisory board L. G. Kleinholtz stated that “a considerable amount of politicking is being done for the Station; certainly there has been some against the station in the recent past. For example, when the elder Dohrn was retiring, influence was being exerted from some sources (unnamed to me) to have the Station made part of the University of Naples Zoology department.”47 This was clearly not a new pattern in the relationships between the university and the station, but, at the time of Reinhard Dohrn, it was not a serious threat since the university research was poorly developed. Now, thanks to the high quality of their work, many station researchers had become university professors, creating a negative drain.
The station's internal instability, Kleinholtz went on, was the result of many different influences, including the director's "marked reluctance to delegate responsibility," the need "for a scientific, collecting and maintenance staff adequate in number and training for the duties required of them, and a salary scale for the staff that will minimize undue turnover of personnel." Last but certainly not least was the unreliability of financing from the government "who in 1957 stopped an annual contribution of some 20 million lire and reintegrated this sum only after a petition of the most prominent University professors." As stated in Kleinholtz's memorandum to the Rockefeller Foundation in October 1959, "Reassurance has been given the Station by the Minister of Education that the Station is included in a long-range plan which the government is proposing for the improvement of education in Italy. But Dohrn has indicated that this particular plan has become something of a political football; with each change of cabinet and Minister of Education that plan seems to move back to the starting line." Nevertheless, Kleinholtz concluded his memorandum by stating:

Even with some of these criticisms I would still rate the Naples Station as one of the best on the continent, both in ways of physical plants and equipment, and in the lively ferment of biological research that is being done. . . . If Dohrn learns to operate efficiently and get over the hurdle of inadequate or irregular financing, the Station should be able to develop remarkably in the future, instead of coasting on its past.

Other evidence supports his claim. The station was trying to build a new image of itself by launching research projects, such as the study of marine biological applications of radioisotope research techniques, which was possible because of "the excellently equipped radio-isotope laboratory of the Station . . . which suffices for virtually any type of biological research requiring radiation counting techniques." Establishing internal stability would take longer, especially settling personal quarrels with the management, which had often been a part of the station's paternalistic tradition, as noted by Kleinholtz. These attempts were susceptible to influence by external events, such as the announcement in 1959 that Montalenti was moving to Rome. Despite his promise to continue cooperation with the station, since the early 1960s, he had devoted the majority of his energies to the establishment and consolidation of his new laboratory. At the same time, Buzzati-Traverso declined to replace Montalenti because he was too busy developing his international laboratory. There was some consolation in that the station could count on the continuing support and excellent advice of CNR president Professor Francesco Giordani and on the station's prestigious legacy. As an American observer of
the Office of Naval Research stated in a 1958 report, “The postwar years have witnessed a great improvement in its [the Station’s] scientific equipment, and at present a very substantial building and remodeling program is underway which will give its famous biological library new quarters and will modernize many of the older laboratories.”52

In addition to the remodeled library, made possible with the assistance of the Rockefeller Foundation, the station had also responded to financial strictures by the creation of the Anton and Reinhard Dohrn Foundation. This permitted new and increasingly intensive research programs in areas such as comparative biochemistry and the physiology of respiratory pigments and enzymes in marine invertebrates, directed by long-time associate of the station Dr. Francesco Ghiretti, and a project on the dynamics of early echinoderm development directed by Professor Heinz Holter of the Carlsberg Laboratory in Copenhagen, with whom the station had developed a long collaboration. Thus, at the beginning of the 1960s the Naples station was not only a healthy institution but also one well suited for innovation. Previous constraints from the persistence of traditional patterns of scientific routine based on individual work rather than on organized, competitive research were being transformed into opportunities based on the effort to upgrade a multinational activity into a truly international structure and by turning the station into a modern, well-equipped, large-scale scientific institution.

This kind of effort could only be sustained, however, in a favorable political environment, which, unfortunately, was totally lacking. The Italian government gave the station uneven attention at best, and only intermittent financial support. This in turn constrained the possibility of obtaining American foundation support, which was well known to be based on the principle of seed money or matching funds. In 1961, just when the Ford Foundation started to develop an interest in the Naples scientific research center and especially the Buzzati-Traverso project, the government announced “the removal of a large part of Italian support for the Station which has been switched to the cure of illiteracy in South Italy.”53

During this same period there was a discussion about transforming the role of the station by increasing its strategic role in the Mediterranean area. This occurred when the International Union of Biological Sciences (IUBS), an international committee created to strengthen scientific cooperation, considered a plan to give the station the key role in a major program “of international academic cooperation and indirect assistance to the academically less developed nations because of its strategic position as a mediator between some of the best scientific talent of the Western World and the budding academic potential of the Mediterranean basin.”54

Paul Weiss, a member of the IUBS committee, stated that the consolidation of this new organizational pattern “might make it attractive for
greater support from the government agencies in the United States and research council and similar organizations in Europe.” The final report of the IUBS committee stated that in the future development of the station,

truly international cooperation and training become, rather than postulate, a practical need. Solid long-range funding of an effective international program of proper scope and magnitude in research and advanced training in these areas seems an imperative necessity. In order to maintain the existing status and to allow the anticipated further developments there is needed an international body to sponsor the Station and to provide assistance and advice. . . . The financial support is provided at present in about equal parts from Italian and international sources. To allow for the further development of the Station and the strengthening of its international character, funds will have to be obtained from many different additional sources.

A committee was created, but the envisaged development program did not begin, partly because of misunderstandings and friction between the committee and the station’s director, who was increasingly concerned by his own personal condition, but also because such a program seemed to be quite uncertain and “risky” to the most suitable grantors: the Rockefeller and Ford Foundations. It is tempting to conclude that the big American foundations, particularly Rockefeller, did not support the development of a Naples scientific pole of excellence because they foresaw clearly the strong constraints of the social and political environment, whose dramatic effects were revealed a few years later. This included the total lack of cooperation between the university system, which was becoming more and more bureaucratic as well as controlled by political forces and by the trade unions, and private research institutions. There was also erratic behavior by the government and the CNR, the personal rivalries and jealousies of academics, and, finally, the existence of a “civil society” that was able neither to have an autonomous voice outside the arena of political parties nor to develop its own institutions. The role of private foundations, despite an initial promising start in the mid-1960s, was progressively reduced to that of being institutional enclosures (that is, islands of innovation without cross-fertilization effects on the national university system) in the dramatic climax of events in the early 1970s. From this point of view, it is not surprising that the reasons for the crisis of the Naples station were similar to those that produced the crisis of the Buzzati-Traverso laboratory.

During the riots of 1968 Buzzati-Traverso was attacked both by the Leftist movement of the students and by the conservative baroni, who, as noted by Mauro Capocci and Gilberto Corbellini, “diverted the attention of the students to LIGB.” The laboratory’s equipment was destroyed in the riots of 1968–69, and the project of creating an international graduate school in molecular biology in Naples, in collaboration with the CNR, was
abandoned, despite the agreement of the NSF and the University of California. In May 1969 Buzzati-Traverso left the LIGB and, in 1970, accepted a prestigious position at UNESCO.58

The crises of the LIBG and the station (significantly, both became state-controlled institutions) were not exceptions in the history of Italian scientific policy. Comparing what happened to Buzzati-Traverso with what occurred in other fields such as management, electronics, petrochemicals, and, to some extent, the social sciences, one can see that the limitations and failures of innovative ventures were a recurrent pattern in the history of Italian scientific institutions, particularly when they were developed in an international configuration.

The reluctance of the Rockefeller Foundation to support a venture such as Buzzati-Traverso’s and the process of internationalization of the Naples station reflected the foreigners’ unmistakable and oft-repeated perceptions about Italy as an institutional framework creating obstacles to the activity of international research networks rather than facilitating their development. Despite the impetus given by a small group of “men with a vision,” the lack of sufficient commitment to long-range strategic planning limited the possibility of organizational development that was needed to accomplish large-scale research objectives. It is debatable whether the situation has really changed since then.

CONCLUSION

An issue of the popular Italian magazine L’Espresso recently announced the creation of a new pole of integrated scientific research in molecular biology and genetics in Naples: the Biogem, to be completed within the year 2001 with 40 billion lire of financing.59 The integrated biotechnological pole would include the Istituto Internazionale di Genetica e Biofisica (a kind of duplicate of the Buzzati-Traverso laboratory); the Anton Dohrn Station, which survived the end of the Dohrn era with its name but without its strong international perspective; and a new institute, the Tigem (Telethon Institute of Genetics and Medicine), originally planned for Milan but now moving to Naples.

The plan for the Biogem contains some similarities to what happened thirty years ago. Although there are new resources and new actors, again the Italian government is acting as a constraint rather than as a supporter and protector of independent research. From this point of view, an epistemic community that can affirm the constitutional rights of science against its reduction to the level of a system of bureaucratic rules is badly needed, as much as or even more than it was thirty years ago. Otherwise, there is likely to be a repeat of the past’s mistakes and no promise of a new coordinated and competitive network combining research and human capital “for the
welfare of mankind.” This will require something of the pioneering, idealistic, and even romantic spirit of the Dohrns’ period in any new venture, as well as a new, strong, and coordinated cooperation between private initiative and public institutions.60

NOTES

5. J. Huxley, Letter to the Editor, Times (London), 14 October 1943.
10. Morgan to Rose, 12 February 1924, folder 516, box 36, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.
11. Dohrn to Rose, 15 March 1924, 3, folder 516, box 36, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.
12. Minutes of the Rockefeller Foundation, Zoological Station, Naples, Term grant 32262, folder 67, box 5, series 751 Italy, RG 1.1, Rockefeller Foundation Archives, RAC.
13. Dohrn to Rose, 25 August 1924, 3, folder 516, box 36, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.
14. Morgan and Wilson to Rose, 12 May 1924, folder 516, box 36, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.
15. Dohrn to Rose, 25 August 1924, 5, folder 516, box 36, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.
16. Two scholars of the Naples station—Giuseppe Montalenti and Giuseppe Reverberi—obtained Rockefeller fellowships in the early 1930s.

17. A. Trowbridge, memorandum, “Trip to Italy,” 8 May 1927, 7, folder 518, box 37, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.

18. Trowbridge, “Trip to Italy,” 11 May 1927, 11, folder 518, box 37, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.

19. Trowbridge, memorandum of a conversation with Professor F. B. Lillie, Paris (memo dated) 6 March 1926, 2, folder 517, box 37, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.

20. Trowbridge, memorandum to Rose on Naples Zoological Station, 16 February 1926, 6, folder 517, box 37, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.

21. Ibid., 1.

22. L. Jones, memorandum, 25 September 1929, 1–2, folder 519, box 37, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.


25. Jones to Dohrn, 20 August 1931, 3, folder 67, box 5, series 751 Italy, RG 1.1, Rockefeller Foundation Archives, RAC. Dohrn was very skeptical about the possibility of cooperation with the Talassografico. Cf. his letter to Jones 4 September 1931, folder 67, box 5, series 751 Italy, RG 1.1, RAC.

26. Report (signed M.A.C.) from an eminent European scientist to A. T. on the Zoological Station in Naples, 30 May 1927, 3, folder 518, box 37, series IEB, RG 1.1, Rockefeller Foundation Archives, RAC.

27. Ibid., 4.

28. Ibid., 5.

29. Zoological Station–Naples, Term Grant, 10 October 1932, folder 67, box 5, series 751 Italy, RG 1.1, Rockefeller Foundation Archives, RAC.

30. Tisdale to Jones, 28 January 1932, folder 67, box 5, series 751 Italy, RG 1.1, Rockefeller Foundation Archives, RAC.

31. Buzzati-Traverso to Dobshansky, 4 June 1945, folder 2104, box 749, series 751, RG 1.1, Rockefeller Foundation Archives, RAC.

32. Peter Dohrn, interview by author, 6 March 2000, Colli sul Velino (Rieti).


34. Dohrn to Pomerat, 26 May 1949, 2, folder 69, box 5, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.

35. Pomerat officer’s diary, 4 November 1950, folder 70, box 5, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.

36. RF 54072, officer’s diary, “University of Naples Genetics,” folder 77, box 6, RG 1.2, Rockefeller Foundation Archives, RAC.

37. Weaver to Dohrn, 31 January 1947, folder 69, box 5, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.
38. Giuseppe Reverberi, Fellowship Card, 1, RAC, NSA, Italy I, Box 4.
39. P. Dohrn’s application for a special Fellowship to the Division of Natural Sciences and Agriculture, 6 October 1954, folder 11, box 130, RG.1.2, Rockefeller Foundation Archives, RAC.
40. Grant-in-aid ($8,500), University of Naples, for the purchase of equipment for use in the Institute of General Pathology, folder 81, box 7, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.
41. Both Buzzati-Traverso and Braitemberg were (and Braitemberg still is) personal friends of Peter Dohrn, whose daughter graduated with Caianiello. Peter Dohrn, interview by author.
42. Italian Institute of Genetics, University of Pavia, 1961, folder 62, box 5, RG 2, Rockefeller Foundation Archives, RAC.
43. As stated by Capocci and Corbellini, “The research groups operating at the LIGB increased. In January 1964, the group started on the oncogenic viruses, directed by Mayorca. The molecular embryology groups, directed by Jean Brachet from Brussels, and the molecular genetics groups, led by Paolo Amati, were settled in January 1965. Afterwards came the group on cellular regulation, led by A. and M. Di Girolamo. In 1966, the biostucturist Werner Schreil arrived to create an ultrastructures group. 62 seminars were held in 1965, 42 in 1966, and 42 in 1967, plus a number of courses, summer schools and meetings. . . . Following the international vocation of LIGB, students of these courses came from all over the world, thanks also to the several scholarships offered. At the same time, several partnerships were established to allow LIGB scientists to hold courses and to make researches abroad.”
44. Morison to JGH, memorandum, 16 May 1960, Buzzati-Traverso Genetics, series 751, RG 2, Rockefeller Foundation Archives, RAC.
45. Pomerat to Buzzati-Traverso, October 1960, series 751, RG 2, Rockefeller Foundation Archives, RAC.
47. L.G. Kleinholtz, memorandum to G. Pomerat, 14 October 1959, 3, folder 71, box 6, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.
48. Ibid., 1–2.
49. Ibid., 4.
50. Ibid., 6.
52. Office of Naval Research in London, Technical report ONRL 18-58, 4 March 1958, 1, folder 71, box 6, series 751, RG 1.1, Rockefeller Foundation Archives, RAC.
53. R. S. Merton officer’s diary, 7 March 1961, folder 61, box 6, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.
54. Weiss to Merton, 7 March 1961, 2, folder 61, box 6, series 751D, RG 1.2, Rockefeller Foundation Archives, RAC.
55. R. S. Merton officer’s diary, 7 March 1961, 2, folder 61, box 6, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.
56. Report of the Survey Committee on the Naples Station convoked by the International Union of Biological Sciences at Naples, 14–16 April 1961, folder 71, box 6, series 751D, RG 1.1, Rockefeller Foundation Archives, RAC.
57. Capocci and Corbellini, “The Rise of Molecular Biology in Italy.”
60. As a testimony to the continuity of this kind of spirit, Peter Dohrn has donated a sculpture of the explorer and zoologist F. Nansen, Nobel peace laureate, which was given to his father by Nansen himself, to the Geneva Commission for the Political Refugees. Peter Dohrn, interview by author.
In the aftermath of the Second World War, the Rockefeller Foundation had to decide when and whether to resume its funding of German biomedical science and medicine. Whereas the foundation had maintained contact with German medical research well into the era of the Third Reich right up to the American entry into the war, it hesitated over resuming relations with Germany after 1945. This reluctance requires explanation, as the U.S. occupying authorities, faced by the problems of how best to restructure German science, made it clear that they welcomed the foundation’s guidance and resources. The American military set out to document the achievements of German science and medicine under Nazism, and German scientists were keen to collaborate in the hope that this would permit them to resume their academic careers. In such a context, resuming Rockefeller largesse might have made sense,\(^1\) but the foundation’s medical and natural sciences divisions were reluctant to resuscitate any German program. This raises broader issues of how the foundation saw its international role after the war.

In the wake of the liberation of Europe, the Rockefeller Foundation was inundated with calls for assistance. Some came from Holocaust victims who had spent the war in hiding or in camps but could not readily return to academic posts. Walter Beck was a German Jewish scientist who the foundation acknowledged had done good work on blood colloids. After he returned to Germany from a fellowship at Boston University in 1936, he went underground and was hidden in the Netherlands. Beck survived the war but could not find work. Manfred Frenkel was a German democrat who left for Bucharest in 1933 and was similarly bereft of resources. Other

NINE

“Out of the Ghetto”:
The Rockefeller Foundation and
German Medicine after the Second World War

PAUL WEINDLING
demands came from or on behalf of former grant holders, such as the psychiatrist Robert Gaupp, who was funded in 1939. Emil Abderhalden, claiming that he was “a strong anti-Nazi,” demanded reparations for losses when he was evacuated from Halle by the Americans from the zone to be occupied by the Soviets. The Swiss Legation in Washington, however, regarded this “with a grain of salt.” In any event, a foundation memo of 28 April 1947 warned that Abderhalden was too old to be of significance to the rehabilitation of German medicine.

Requests were also received from German professors who were tainted by Nazism or from institutions that were finding it difficult to shed the burden of their Nazi past. Rockefeller staff member Robert A. Lambert recommended support for the neurologist Georges Schaltenbrand, who was in detention as a former Nazi party member, because he had served at Peking Union Medical College (PUMC) from 1928 to 1930 and had received four Rockefeller grants between 1932 and 1937. Max Pfannenstiel, the professor of hygiene at Marburg and SS officer who observed trial gassings at the concentration camp of Belzec and had contact with the SS doctor Sigmund Rascher, who had conducted lethal pressure and freezing experiments, wrote to the foundation in July 1945 requesting support.

This unrepentant opportunism prompted Raymond Fosdick, president of the foundation at the time, to lay down the policy that the Rockefeller Foundation would not consider making any German grants. Even the biochemist Otto Warburg was not assisted, although he complained that he was bereft of equipment and resources. He had fortuitously remained in his Rockefeller-erected Kaiser Wilhelm Institute for Cell Chemistry throughout the war, albeit categorized by the Nazis as a half-Jew.

News filtered through to the Rockefeller Foundation of German medical atrocities perpetrated as human experiments. The neurologist Leo Alexander (engaged on medical intelligence work involving human experiments) reported in August 1945 that the biochemist Karl Thomas from the University of Leipzig was detained because of suspected links to questionable Nazi research. Former foundation contacts in tropical medicine and infectious diseases were condemned for unethical human experiments. The malaria researcher Claus Schilling was prosecuted—and executed in May 1946—for malaria vaccine experiments which infected about one thousand subjects at the Dachau concentration camp. Werner Fischer, a former foundation fellow, conducted human experiments at the Sachsenhausen concentration camp. Fischer, a virologist, had worked at the National Institute for Medical Research as a foundation fellow in 1932–33. Overall, German medical science formed a distasteful spectacle.

The Rockefeller Foundation did not explicitly review its funding policies in prewar Germany as having been naïve, particularly its insistence on
honoring commitments after 1933, but it took a careful look at its medical sciences funding in Germany before and after 1933. In November 1945 the foundation’s medical sciences grants to the Kaiser Wilhelm Gesellschaft (KWG) were analyzed; this analysis showed that the last major grant ceased in June 1936 and that only three small grants were made after 1933. Whether the foundation felt vulnerable to accusations that it supported Germans who went on to conduct human experiments is not apparent from its general correspondence and specific German project files, but there was certainly extreme reticence after 1945. Medical Sciences program officer Daniel P. O’Brien endorsed the condemnation of the malariologist Schilling. Alan Gregg, head of the medical sciences division, took satisfaction “that neither Kraepelin, Loeb, nor Spielmeyer lived to see the end-result” of Rockefeller funding of the Kaiser Wilhelm Institute for Psychiatry. U.S. authorities gave high publicity to the Nuremberg Medical Trial, which ran from December 1946 until July 1947. From the ranks of the Robert Koch Institute, the virologist Eugen Haagen was arrested, and the bacteriologist Gerhard Rose was prosecuted at Nuremberg. Many in the scientific community regarded the trial as a threat to progress in medical research.

By way of contrast, German academics expected that Rockefeller largesse would promptly resume after 1945. Expectations ran high that massive injections of Rockefeller capital would soon remedy the wrecked state of German science. In 1946 the director of the Hamburg Tropical Institute, Ernst Nauck, who retained his post despite having prescribed ghettization of the Jews as a way to control infectious diseases in German-occupied Poland, hoped that a visit from a Rockefeller program officer was imminent. The foundation treated all German requests with extreme caution.

Whether victim or perpetrator, all German applicants received the same reply: Nothing could be done until a foundation-appointed officer could conduct a tour of inspection and evaluate matters. While this was the Rockefeller’s normal procedure, the program officers were in no hurry to send such an executive into postwar Germany. Gregg, the foundation’s Medical Sciences program officer, stressed this time and time again. Warren Weaver, who was in charge of the Natural Sciences division, was even more negative, taking a view that support for German science could resurrect German militarism. The generation of Germans over age of twenty-five was dismissed as unpromising, but officers conceded that Europe could not exist with an economic and intellectual vacuum at its center. Although individuals wrote on behalf of particular cases, no leading person of influence made the case for assistance to Germany—unlike Abraham Flexner, who after the First World War overcame the Rockefeller Foundation’s hesitations about funding Germany after recent hostilities.
The foundation’s effort to distance itself from the German problem was at first in line with occupation policies of sealing off Germany so that order could be restored and war criminals could be identified. Moreover, the foundation had long-established policies in not engaging in relief work. The U.S. military government approached Rockefeller in 1946 to see whether it would be willing to fund provision of penicillin, as it was otherwise unaffordable; the Office of Military Government for Germany, U.S. (OMGUS) indicated that it required a million dollars for the task. The foundation’s trustees turned down the scheme as coming under medical assistance rather than research.15

The puritanical distancing of the foundation from matters German stood in contrast to its prewar German policy. Although the foundation had scaled down funding in Germany after 1933, it had not withdrawn. As Gregg wrote on 28 February 1936:

We haven’t any categorical or sweeping objection to giving research aid, at the present time to investigators in Germany. Long term projects, however, and undertakings subject to political pressure do furnish obstacles to support from the outside of Germany, and it is evident that under the general circumstances somewhat cogent reasons must be given for aid, even if this aid is of short duration and small magnitude.16

The funding provided by the foundation for refugees from Nazism amounted to little more than what it spent on the KWG Institutes for Physics and Cell Biology in Nazi Germany.17 The foundation maintained its Paris office until 1941 even under German occupation, and a former German adviser to the foundation’s “SS [i.e. social sciences] division” in the 1920s visited as a German officer. Gregg found the person in question, August Wilhelm Fehling, deeply repulsive.18 William Schneider describes how the foundation’s mission to Vichy France and the occupied French zone negotiated with the Germans in the hope of funding projects in the Axis sphere of influence.19

There was intense interest among all of the Allies in evaluating German wartime science, and major programs of screening scientists were conducted—notably at the Dustbin interrogation center at Versailles and Schloss Kransberg (near Frankfurt am Main), the Combined Intelligence Operations of CIOS for the Supreme Headquarters Allied Expeditionary Force (SHAEF), and the Field Information Agency Technical (FIAT) program of screening German scientists. One of the CIOS reports—appropriately, on German medical education by Leo Alexander—found its way to the foundation.20 The Allies were convinced that the Germans held scientific information of strategic value for the war in the east and (thereafter)
for the east-west conflict of the emergent Cold War. Operation Paperclip, the transplanting of German scientists like the high-altitude aviation physiologist Hubertus Stughold to the U.S., was notorious in setting a new ethos of Cold War science in which strategic value took priority.

Such factors explain why Germany lagged behind other European countries in the Rockefeller Foundation’s program, which included support for European reconstruction. Looking back on the year 1946, Fosdick despaired of the devastation brought about by the war. He feared that the peacetime development of sciences was going to be difficult, yet he did not take into account how the war generally demonstrated the utility of basic medical research for strategic ends. The year 1946 was one of fact-finding. Fosdick reported that foundation representatives visited every European country—with the exceptions of Russia, Hungary, Romania, and Greece—thereby indicating the still fluid frontiers of the Cold War. By 1947, despite the onset of the Cold War, only Bulgaria and Russia remained unvisited by the foundation. Gregg, the Medical Sciences program officer, had flown over Germany in 1945, traveling from France to Czechoslovakia. He managed to send a letter to Fehling as his former link to the KWG in July 1946, but he still desisted from any visit to Germany. Gregg and other foundation officers procrastinated.

During 1946 the task of reconstructing German science was supported by the British and French governments. The British set about “restarting the motors of German science”; the strategy had strong support from Sir Henry Dale of the British Medical Research Council (MRC), who liaised closely with the Rockefeller Foundation’s medical sciences officers. It was Dale who hit on the name Max Planck Gesellschaft to replace the discredited Kaiser Wilhelm Gesellschaft. The foundation noted the OMGUS report on the numbers of KWG personnel removed. Rockefeller was not especially concerned about the impending liquidation of that institution.

The Rockefeller Foundation’s hesitations over Germany were increased as the issue of democratization came to the fore. It considered that science was best conducted in a democratic context, where its officers would link rigidity and backwardness to authoritarian systems. At the same time, the foundation’s policy was not to become politically entangled. While the foundation viewed the project of democratizing Germany favorably, it hesitated about lending its support.

Germans continued to feel isolated, and their sense of economic deprivation and grievance grew. International travel and cultural contacts had been a matter of privilege under the Nazis, and the sense of acute isolation after liberation persisted. When the Rockefeller Foundation tours of inspection were eventually initiated, their representatives found a mentality of frustration and recrimination. One German reflected, “Germany is being made into a Ghetto” [emphasis in original]. The allusion was, in the his-
torical perspective of the Holocaust, banal; in part, it conveyed a genuine isolation from international contacts, and, in part, it was a ploy at claiming victim status. The ploy worked.

The ice was broken in August 1946 when two trustees, John D. Rockefeller III and William Myers of Cornell University, visited Germany and Austria. The U.S. military government and Department of State were keen for the foundation “to get back into Germany as soon as possible.” For example, General Lucius Clay suggested that foundation executives be stationed in the U.S. zone, visiting professors come to the zone, and a book scheme be developed. By contrast, there was a lack of enthusiasm within the foundation for restarting the German program. Gregg was among the foundation officers who, in October 1946, met visiting Dutch researcher P. J. Idenberg to discuss the situation in Germany. While agreeing on the need for making Germany civilized and humane, the officials contemplated only a modest scheme of support for visiting foreign professors to Germany.

While the trustees were impatient, foundation officers delayed. Eventually, Albert Mann, deputy director for agriculture in the Natural Sciences division, conducted the first Rockefeller Foundation tour of inspection, arriving in Germany 13 January 1947. Mann was carefully briefed by the U.S. State and War Departments, whose officials welcomed the mission. His report, “Educational Conditions in Postwar Germany Based on Notes during a Trip to Germany January and February 47,” was compiled 31 March 1947. Mann noted that there was a surplus of scientists in certain fields and that the old authoritarianism persisted. He visited a range of universities, not confining his report to the U.S. zone.

Mann diagnosed that the medical faculties and practicing physicians were “one of the most Nazified groups in Germany.” He found that denazification procedures were in progress, although erratic and often perfunctory. Criteria varied between dismissals of persons with membership in Nazi organizations, as these were now deemed to be criminal, and the more stringent requirement of demonstrating a pro-democratic stance. War damage and funding problems compounded the problems. Institutes that the foundation had funded, like those of the KWG, had been dissolved by the American military government, and, when consulted about the impending liquidation of the KWG in November 1945, the foundation acquiesced; KWG institutes were subject to different zonal policies, and institute directors faced uncertainty. The Russians were attempting to attract leading scientists, like Otto Warburg, the cell biochemist, who had previously benefited from substantial foundation support. Competition with the Soviets for German personnel was soon to be a significant factor in liberalizing the policies of U.S. and Britain toward the sciences. Overall, Mann considered that greater stability in economics and politics was a prerequisite for Rockefeller funding.
Matters were held up, as Mann died shortly before completing his report. A posthumous compilation found favor with Fosdick, who appears to have been more interested in a revived German program than the program officers were. British social scientist William Beveridge approached Fosdick in February 1947, urging that the foundation supply books to German universities on a large scale. The foundation considered the situation in April 1947, encouraged by General Clay, as head of OMGUS, to collaborate directly with German universities. Foundation officers were concerned that too close a tie to the U.S. military government would make the foundation look like an arm of the State Department. As far as the medical sciences were concerned, Gregg believed that Germany could not be left out and that the country was essential to world peace, yet he remained cautious. He confided to the chair of the U.S. National Research Council (NRC) that he was pessimistic about the value of funds for German universities and more generally about the political stability of Europe. The German patient should be left to languish.

Mann was also criticized for political naïveté in focusing on science rather than educational institutions. It was pointed out that he overlooked the nationalism of many of the scientists whom he interviewed. In response to Mann’s report, the feeling grew that a youth program was more necessary than science funding. In November 1947 the foundation sent in Robert Havighurst, a former General Education Board (GEB) officer, who at the time was at the Human Development Program at the University of Chicago. During his tour Havighurst consulted widely and recorded a remarkable set of interviews with leading scientists, administrators, and other public figures. Havighurst’s Leitmotif was that of a ghettoized Germany; he took this symbol from the German church leader who had informed him that “Germany is being made into a Ghetto. The German people cannot leave, cannot go out, and other people do not come to them.” As Havighurst remembered, “The symbol of the ghetto occurred to me many times after this interview.”

As the Cold War mounted, the freeze on grants thawed. By 1947 Fosdick was pessimistic about the Soviet bloc but optimistic about Germany as having “the basic foundations for a peaceful and productive democratic society.” The foundation even arranged for a fact-finding visit to the Soviet zone of occupied Germany. In November 1947 Havighurst recommended a program of modest grants for scientific equipment and supplies for medicine and public health. Gregg remained cautious. He “pointed out that a doctor was morally obligated to accept a patient and do all he could for him, whether or not he thought him fit to be saved.” His fellow program officers reluctantly conceded that there should be small-scale funding in Germany but did not support more than this.
By coincidence, the Nuremberg Medical Trial was about to raise uncomfortable questions about the German abuses of medical research. Whether the trial directly impinged on foundation officers’ sense of unease with Germany is not documented, although there was later contact with Alexander Mitscherlich, the German medical observer, and John West Thompson, a military official responsible for evaluating German science who took a major role in establishing an International Scientific Commission on Medical War Crimes during 1946.37 Gregg’s proposition that a physician does not censure or punish his patients aroused much interest. Another program officer, R. S. Morison, reflected that the physician also has an obligation to society at large. He considered that the foundation could best support education and the inculcation of “democratic principles” rather than reverting to a pure science policy.38 Given the still negative views of Gregg and more so of Weaver, the shift to youth psychology and facilitating international communication is, in fact, what came to shape the foundation’s German policy. Here the foundation came to complement the policies of UNESCO in Germany under Thompson, who prioritized youth education and a scheme for an international university sited in Germany.

The emergence of a positive policy of support for German science can be seen in bald terms in the statistics of grants for fellowships (see Table 9.1).

Although Gregg visited Europe annually, he had avoided Germany. He first ventured into the Western zones in Germany in 1949 and found the whole experience thoroughly depressing. What struck him was not only the destruction he saw but the failure of Germans to recognize what had happened. On his first day he reflected, “The Germans still seem to me to

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TABLE 9.1
Special Grants to Germany for European Rehabilitation from the Medical Sciences Program, 1946–1950

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Grants</th>
<th>Total U.S. Dollars</th>
</tr>
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<tr>
<td>1946</td>
<td>2</td>
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<td>1947</td>
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<tr>
<td>1951</td>
<td>26</td>
<td>166,541</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$1,228,011</td>
</tr>
</tbody>
</table>

Source: German Program and Policy, 1945–48, folder 37, box 7, series 717, RG 1.1, Rockefeller Foundation Archives, RAC. Calculations do not include $39,445 granted to the Institute of Psychosomatic Medicine.
be strangers to self-reproach and the responsibilities that attend freedom.”

His unease came to a climax in a report on an interview with Fehling, the
former KWG official and adviser to the foundation on social science fellow-
ships. Gregg was repulsed by Fehling’s efforts to gloss over the traumas of
Nazism. Gregg found “his character and his caste in Germany” quite un-
pleasant. He decided that any scientific expenditure had 50 percent less
value in Germany until a youth program was in place. Gregg was so utterly
disgusted by most of what he found in Germany and Austria that he felt a
huge sense of relief on crossing the frontier. “It isn’t that you can vomit
what you have already had to eat—you can’t—but at least you don’t have to
sit smilingly and eat more and more.”

The German situation was more positively appraised by Joseph J. Willite,
assisted by the historian Carl Schorske, in a report dated 30 April 1950.
John B. McCloy, the new and more indulgent U.S. commander-in-chief in
Germany, asked them to consider “what program, if any, is desirable for the
RF.” This involved:

A. Germany as an international problem
B. Allied re-education attempts
C. Rise of German political and economic power
D. Creative forces in Germany
E. Omnipresence of Russia
F. Funds available to U.S. High Commissioner
G. Shift from public to private agencies

Willite concluded that the foundation should work in Germany but should
focus on education “rather than the extension of Knowledge alone,” albeit
taking initiatives on the highest cultural and intellectual levels.

In drawing attention to “the omnipresence of Russia,” the report con-
veyed how Cold War incentives were to shape the new wave of funding.
German scientists became aware that inter-allied frictions could work
greatly to their advantage. The geneticist Hans Nachtsheim played on U.S.-
Soviet tensions by highlighting the Lysenkoist suppression of genetics by
the Marxists as a violation of democracy. The establishment of the Free
University of Berlin to rival the old university on Unter den Linden in the
Soviet zone marked a culmination of the process. Certainly, a constant spur
was rivalry with Soviet initiatives and the need not to alienate a younger
generation so that they turned to communism.

The European reconstruction program meant that a more lenient atti-
dute was adopted toward the older generation of German professors. In a
memorandum on “Scientific Rehabilitation in Germany,” N. Artin and
Robert Courant recommended fellowships for absolutely trustworthy older
scientists, notably for Hermann Rein, the physiologist and rector of Göt-
tingen University. But Gregg still did not trust Rein. The problem arose: How could the foundation really decide in the murky German context who had a clean record? Normal funding procedures and refereeing by U.S. scientists could not resolve the problems of guilt and complicity.

The result was that the foundation did not overcome its inhibitions and resume funding in medicine and public health until 1950. There were a number of stages, reaching back to 1946 and involving the U.S. administration of Germany and the foundation’s International Health Division (IHD). After the collapse of the penicillin initiative, Rockefeller officer Bauer visited the six medical faculties in the U.S. zone in May/June 1947, and R. R. Struthers inspected German medical faculties in October 1948.

The IHD did not run a program for Germany between the wars (apart from fellowships) because of a fundamental antagonism to the German laboratory-based approach to public health. In 1947 it contemplated a scheme for an American-style Graduate School of Public Health. This was a public health type of Marshall plan (by coincidence, the negotiations were with a Col. H. T. Marshall), as it was linked to schemes of social reconstruction with the provision of training for public health nurses and clinics. The foundation favored appointing the Hungarian Béla Johan as director of the school; Johan was a long-term beneficiary of foundation support. The proposed location was Heidelberg, where the renowned philosopher Karl Jaspers, as rector, had spoken at the reopening of the medical school on the subject of the nation’s guilt. The foundation also hoped for a public health survey to be carried out by Thomas Parran, the U.S. surgeon general. Eventually, it was undertaken by Hugo Freund (a liberal/left German reformer) and Franz Goldman, the émigré public health expert at Harvard. The graduate school was to be an alternative American-style school at a level to match any school in Europe.

The approach to Goldman marked a willingness of the foundation to take counsel from former refugees. The IHD supported a comprehensive survey of public health in the Western zones, with a view to making recommendations to the military government. Goldman was asked (in a scheme reminiscent of the League of Nations Health Organization study tours) to lead a group of Germans on a tour of Czechoslovakia (whose recent legislation John Grant, then director of the IHD’s European office, admired), Denmark, England, and the U.S. to acquaint them with developments outside Germany. One hope was that exposure to non-German conditions would contribute to a strengthening of a commitment to democracy since, by 1949, there was concern that undemocratic elements in the German medical profession predominated and that right-wing extremists were in the ascendancy in medicine.

The scheme turned sour. Given that the tropical medicine expert (and former Nazi Party member) Ernst Rodenwaldt remained at Heidelberg
arguing that he did not have to retire), the proposed new start in public health training revealed problems in the German university structures. Rodenwaldt’s successor was a former SS officer, the virologist Horst Habs, whose wartime activities were quaintly dressed up as a special interest on epidemics as related to culture. Col. Karl R. Lundeberg, the chief of the U.S. Public Health and Welfare Branch, reported very positively on Habs. Although Bauer confirmed the favorable impression of Habs, once consultation about the scheme took place, damning reports on Habs were received. Habs was criticized by veterans of German hygiene, notably Wilhelm von Drigalski and the federal government medical officer Franz Redecker. While these criticisms were somewhat discounted by Bauer as coming from the old guard of German hygiene, Habs received a very negative political evaluation by American intelligence. When Bauer reported on the scheme, he was reprimanded by George K. Strode (as head of the IHD), who warned that the impression should not be given that the foundation was definitely committed to such a large scheme, particularly as the German support for such a new school was so lukewarm. It looked as though the University of Heidelberg was seeking to secure funds for its institute of hygiene rather than being genuinely interested in the scheme for a national school of public health. The Heidelberg scheme appears to have collapsed, marking the end of Rockefeller attempts to reconstitute German public health by weaning it away from a narrowly experimental approach.

Parallel to the IHD initiative, Gregg received a report on medical education compiled for the U.S. Army by Otto Guttentag, who held a chair in homeopathy at San Francisco in 1947. He pointed to the lack of education in public health, psychiatry, and psychology, and he was concerned that German medicine was tainted. Struthers, as Medical Sciences representative of the foundation, met deans of German medical schools on 13 May 1947. He reported, “The attitude of the group seemed quite inelastic and wedded to their previous methods of teaching.” Gregg regarded Guttentag as a reliable and critical observer, and he was also held in high esteem by the medical historian and reformer Henry Sigerist, whom Gregg had aided. One recommendation was for U.S. professors to visit Germany, but a negative aura surrounded the issue of funds for German medicine.

There were exceptions in line with new Rockefeller Foundation priorities. Alexander Mitscherlich, who had compiled a report on the Nuremberg Medical Trial condemning leading figures in German medicine, found special favor with the otherwise diffident Gregg. Initially, he aimed to establish an institute to develop psychosomatic medicine. He also was angling for funds for a child guidance clinic. Mitscherlich, who held a travel grant to visit the United States in 1951, decided to emigrate to the U.S. as he felt wholly out of step with his German colleagues. Although he eventually remained in Germany, the foundation’s interest in his work high-
lights how many in the foundation had new interests and wished to support only persons of high moral standing. The foundation remained circumspect even though funding had substantially increased.

Overall, the new German medical sciences policy involved a two stage process: first, that of keeping German grants to an absolute minimum, and, second, that of contributing to democratic reconstruction with support for a younger generation of students and researchers. Despite the fact that the foundation had been cautioned against promoting the unsuitable former SS officer Habs, two years later it became possible for a leading eugenicist and professor of public health in Hamburg, Hans Harmsen, to receive Rockefeller funding. Still, the foundation was reluctant at a number of levels to reengage with Germany. Key officers delayed the start of a German program, and there was a general reticence on matters German. This situation provides a salient insight into the foundation: The officers rather than the trustees and Rockefeller family members had a decisive effect on its operations.

More broadly, it is worth considering whether the German problems were determined by the politics of an exceptional situation. The period after 1945 was one of transformation in science funding rather than normalization. New attitudes can be detected among foundation officers. Certainly, in the case of Gregg, the shift to support for psychosomatic medicine was symptomatic of a broadening of criteria for medical funding. In the German situation, the foundation was reluctant to resume a prominent role. In other contexts, the foundation was to leave the task of science funding to state agencies, having carried the burdens of the task between the wars; this allowed the foundation to focus on agriculture and population problems.

In 1946 Fosdick contemplated that “the challenge of the future is to make the world one world—a world truly free to engage in common and constructive intellectual efforts that will serve the welfare of mankind everywhere.” Yet the foundation remained reluctant to embark on postwar reconstruction in the Western zones. While ideas of freedom and world unity were to become increasingly irreconcilable within the context of the Cold War, the Federal Republic of Germany as a frontline state was to benefit greatly from U.S. know-how and funding by the 1950s.

NOTES

2. Kurt Beringer wrote on Gaupp’s behalf on 11 November 1946; on Frenkel, see letter received 3 May 1946; on Beck, see RP diary, 25 May 1946.
3. See General Correspondence, 1945, series 717, RG 2, Rockefeller Foundation Archives, Rockefeller Archive Center, Sleepy Hollow, New York (hereafter referred to as RAC). On the Swiss report, see Folder 24, box 5, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.


5. Scholz memo on German Research Institute for Psychiatry, 23 September 1946 (date received), folder 58, box 10, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.

6. Folder 96, box 12, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.


8. KWG grants, 26 November 1945, folder 2103, box 310, series 717, RG 2-1945, Rockefeller Foundation Archives, RAC.

9. Scholz to O’Brien, stamped 23 August 1945; O’Brien to Gregg (concerning Schilling), 13 November 1945, folder 2369, box 350, series 717, RG 2, Rockefeller Foundation Archives, RAC; Gregg to Wuth, 30 August 1945, folder 52, box 10, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.


11. Folder 96, box 12, series 717, RG 1.1, Rockefeller Foundation Archives, RAC; and Weindling, Epidemics, 408.

12. Folder 15, box 2, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.

13. Officers’ conference on the Mann report, 7 April 1947, folder 32, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC. Warren Weaver was completely negative, arguing that it was too early to step in to help German science. 24 August 1947, folder 39, box 7, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.


15. On penicillin, see memorandum from R.S.M. to Fosdick of 16 January 1947, folder 2624, box 389, series 717, RG 2-1947, Rockefeller Foundation Archives, RAC.

16. A. Gregg note of 28 February 1936, folder 88, box 12, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.


18. Concerning Fehling, who had visited the Paris office as an artillery officer, see Appleget to Laves of UNESCO, 10 September 1948, RG 2-1948/428, Rockefeller Foundation Archives, RAC; and Gregg officer’s diaries, 1 and 4 October 1949, folders 143–170, box 22, RG 12.1, Rockefeller Foundation Archives, RAC. Cf. Fehling letter to Gregg, 12 July 1946, General Correspondence, 1946, series 717, box 350, folder 2369, Rockefeller Foundation Archives, RAC.

20. R. Cannon Eley supplied the CIOS report on German Medical Schools, 29 November 1945, General Correspondence, 1945, series 717, RG 2, Rockefeller Foundation Archives, RAC.

21. Gregg to Fehling, 12 July 1946, folder 2369, box 350, series 717, RG 2-1946, Rockefeller Foundation Archives, RAC.

22. Folder 2624, box 389, series 717, RG 2-1947, Rockefeller Foundation Archives, RAC.


24. John D. Rockefeller III notes, 5 August 1946, folder 55, box 6, RG 5, Rockefeller Foundation Archives, RAC; and "Background Material Concerning Mr. Mann's Mission," 101–104, folder 24, box 5, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.

25. Gregg officer's diary, 22 October 1946, folder 2370, box 350, series 717, RG 2, Rockefeller Foundation Archives, RAC.


27. O’Brien on interview with Capt. S. Shulits, 9 November 1945, folder 2103, box 310, series 717, RG 2-1945, Rockefeller Foundation Archives, RAC.


29. Beveridge to Fosdick, 6 February 1947, folder 2625, box 389, series 717, RG 2-1947, Rockefeller Foundation Archives, RAC.

30. Officers Conference, 7 April 1947, folder 32, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.

31. Bronk to Gregg, 11 October 1947, and Gregg to Bronk 17 October 1947, folder 32, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.

32. Fosdick to Rockefeller III, 7 July 1947, folder 32, box 4, series 717, RG 1; and D’Arms, "Memorandum on 'Report on Educational Conditions in Postwar Germany by A. R. Mann,'" folder 32, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.

33. D’Arms, “Memorandum.”

34. Havighurst interviews, box 3a, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.

35. Note from Fosdick, 24 November 1947, on Havighurst report on Germany, 1947, 35, folder 18, box 3, series 717, RG 1.2, Rockefeller Foundation Archives, RAC. For the ghetto quotation, see also folder 32, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.

36. Gregg officer's diary, 19 November 1947, box 22, RG 12.1, Rockefeller Foundation Archives, RAC.

37. Interviews: EFD with J.W. Thompson, 29 October 1947, folder 2426, box 363, series 100, RG 2-1947, Rockefeller Foundation Archives, RAC.

38. Morison memorandum, 20 November 1946, folder 37, box 37, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.

39. Gregg officer's diary, 13 September 1949, box 22, RG 12.1, Rockefeller Foundation Archives, RAC.

40. Gregg officer's diary, 1 October 1949, box 22, RG 12.1, Rockefeller Foundation Archives, RAC.

41. Gregg officer's diary, 29 September 1949, box 21, RG 12.1, Rockefeller Foundation Archives, RAC.

42. Gregg officer's diary, 4 October 1949, box 21, RG 12.1, Rockefeller Foundation Archives, RAC.

44. On young Germans turning communist, see Saul K. Padover letter of 30 April 1946, file 37, box 7, Germany Program and Policy 1945–48, series 717, RG 1.1, Rockefeller Foundation Archives, RAC.

45. Gregg officer’s diary, 28–29 September 1949, box 21, RG 12.1, Rockefeller Foundation Archives, RAC.

46. On R.R. Struthers’ visit to German medical faculties in October 1948, see General Correspondence, 1948, file 2887, box 428, RG 2, Rockefeller Foundation Archives, RAC.


48. General Correspondence, Germany, files 2884 and 2887, box 428, RG 2 GL, Rockefeller Foundation Archives, RAC.

49. J. Grant on a public health survey of the Western zones of Germany, 28 March 1949, folder 34, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC; De Forest, OMGUS, to Grant, 16 September 1949, folder 35, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC; and Grant to Strode, 3 January 1949, folder 35, box 44, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.

50. 96-101, folder 37, box 4, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.


53. Gregg officer’s diary, 19 December 1946, box 22, RG 12.1, Rockefeller Foundation Archives, RAC; and Guttentag to Gregg, 24 March 1947, folder 2628, box 390, series 717, RG 2, Rockefeller Foundation Archives, RAC.

54. Gregg officer’s diary, 8 December 1947, box 22, RG 12.1, Rockefeller Foundation Archives, RAC. Gregg trusted Heubner (a leading Berlin pharmacist) and others but not Rein.

55. Gregg officer’s diary, 19 September 1949, box 22, RG 12, Rockefeller Foundation Archives, RAC.

56. Bauer officer’s diaries (on Mitscherlich), 3 May 1950, box 5, RG 12.1, Rockefeller Foundation Archives, RAC.

57. Mitscherlich’s grant was for travel to the U.S., 1 March to 31 May 1951.

58. Comments by AG and RSM: “I still think that M. is the best person that I have met.” See 29 September 1952, Struthers to Mitscherlich on decision to emigrate; 13 February 1953 on Mitscherlich’s decision to remain in Germany, in General Correspondence 1947, series 717, box 389, file 2626, RG 2, Rockefeller Foundation Archives, RAC. Gregg to Mitscherlich, 28 October 1952, and Mitscherlich to Gregg, 15 September 1952, folder 54, box 5, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.

59. Travel grant to Harmsen, folder 41, box 5, series 717, RG 1.2, Rockefeller Foundation Archives, RAC.

INTRODUCTION

Foundations wield their influence on the conduct of pure and applied science (including medical science) in a variety of ways. Those foundations having a particular agenda or well-defined research goals can forge lines of investigation de novo to promote their vision even though no such work had ever existed previously. Alternatively, foundations can bring about the spread of their favored research agendas by transplanting to new locations special types of work in progress—or particular experimental approaches—that are already viewed as highly successful or important. Foundations can also elect to use their funds to nurture the development of many different types of exemplary and established research programs, regardless of subject area.

Over the decades of its functioning, the Rockefeller Foundation has employed all three of these modes of support. For example, its “science of man” programs, initiated in the 1930s, certainly helped to forge completely new types of research programs devoted to the study of possible biological influences on human behavior. The efforts to bring the tools and techniques of physics into biological laboratories under the umbrella of “molecular biology” are the best known and most carefully documented examples of the second approach. Here, research support from the Rockefeller Foundation fostered new working relationships among previously disparate scientific disciplines in a number of different laboratories in the U.S. and internationally. Finally, the Rockefeller Foundation officers continually trolled the scientific community throughout the world as they sought out the most eminent laboratories or promising scientists to support, to fulfill the foundation’s function of “making the peaks higher.”
This last mode of foundation activity, that of supporting meritorious ongoing work of whatever type, most closely describes the relationship between the Nuffield Foundation and a small group of medical researchers carrying out their genetic studies in the Department of Medicine at the University of Liverpool in the U.K. The Nuffield Foundation was not involved in the creation of this group, nor did it endeavor to replicate a similar group elsewhere. However, Nuffield's support was the key factor in ensuring the success of the Liverpool group by providing both a secure setting for the conduct of the ongoing work and the financial resources that permitted the group to extend the range of its activities. As a result of this Nuffield Foundation support, medical genetics became a major professional commitment at Liverpool. Ultimately, this same support helped move medical genetics out of the laboratory and into the clinic, turning genetics into a tool for use by physicians. Furthermore, the Nuffield grant helped to catalyze a change in research emphasis in the U.K. Instead of a focus on the rare single-gene disorders that affected only a relatively few individuals, more emphasis was placed on research that explored the role of genes in the development of chronic health problems, such as cancer, that affect large numbers of people. In fact, most of the current generation of clinical geneticists in the U.K. either are alumni of the Liverpool group or can trace their intellectual lineage to it. It is the founding group that I have termed the “Liverpool School.” The crucial support the Liverpool School received from the Nuffield Foundation is the subject of this paper.

THE NUFFIELD FOUNDATION

The Nuffield Foundation, a British medical charity, was the creation of William Morris (Lord Nuffield), designer of the Morris motor car and founder of Morris Motors Ltd. in Oxford, England. The foundation was inaugurated in 1943, and in its trust deed four main goals were enunciated: (1) the advancement of health and the prevention and relief of sickness; (2) the advancement of social well-being; (3) the comfort and care of the aged poor; and (4) the pursuit of other charitable purposes as determined by Lord Nuffield or the trustees.

From its inception, the Nuffield Foundation sought to benefit from the experiences of others and was in touch with the Rockefeller Foundation. Leslie Farrer-Brown, soon to become the director of this new foundation, made contact with Hugh H. Smith of the Rockefeller Foundation’s International Health Division (IHD), who was based in London. Smith’s report back to Rockefeller suggested that Farrer-Brown had done his homework:

Last week Mr. L. Farrer Brown, who has recently been appointed as the secretary of the Trustees of the new Nuffield Foundation, came in for a talk
about the work of his organization. He is quite familiar with the work of the Rockefeller Foundation and is anxious that there should be sympathetic understanding between his organization and ours. . . . The chief objects of the Nuffield Foundation will be the promotion of medical research and teaching, the organization and development of medical and health services, and studies in relation to the care and comfort of aged persons. The normal scope of the Foundation’s activities will be Great Britain and Northern Ireland. Attention may be given, however, to projects particularly affecting the Empire. The Nuffield Trustees have had an initial meeting but will probably not begin to function actively for two or three months.3

In response, Raymond Fosdick, president of the Rockefeller Foundation, sent his own warm letter of congratulations on behalf of the foundation to Sir William Goodenough, chair of the Nuffield Foundation trustees:

On behalf of one of the older foundations whose aims are somewhat similar to those of the Nuffield Foundation, may I convey to you and your associates our cordial greetings and best wishes. We welcome the advent of this significant and promising organization and we look forward with anticipation to opportunities for cooperation in the fields in which the interests of the two foundations will coincide. If at any time we can be of service to you in sharing the results of our experiences over the last thirty years, please do not hesitate to call on us.4

Sir William was equally gracious in return:

I know how much what you say will be welcomed by my colleagues who are connected with the Nuffield Foundation, and how very glad we shall be to seek for opportunities for cooperation . . . in the field in which we are interested in common. I have no doubt at all, bearing in mind the great experience which your Foundation has already accumulated, that you would be able to give us most valuable guidance and help in many directions, and I shall not hesitate to turn to you for this when the occasion offers.5

Despite all the cordiality and good intentions, the realities of wartime Britain prevented direct contact. Instead, it was Frank L. Engledow, a professor of agriculture at Cambridge University, who was pressed into service to visit the Rockefeller Foundation during a trip he undertook in 1943 to a nutrition conference in the U.S. Engledow (later Sir Frank Engledow) was to serve the Nuffield Foundation as one of its first trustees and in many other capacities for more than forty years. As Frank B. Hanson reported the visit:

E[ngledow] attended the recent Food Conference at Hot Springs and is visiting various RF officers regarding Foundation policy and practice for use in
administering the Nuffield Trust. . . . He takes full notes on everything that is told him and says it will all be useful information in establishing their own program.6

Even in 1945, as the war was drawing to a close, Farrer-Brown was unable to accept an all-expenses-paid invitation to come to the New York office of the Rockefeller Foundation:

Alas, I cannot see any prospect of being able to get away from here within the next 12 months. . . . The shackles come from war-time obligations and conditions; staffing problems which are not capable of early solution and the necessity for constant attention to an organisation still in its infancy all contribute.7

It is difficult to reconstruct just what factors were paramount as the Nuffield Foundation’s managing trustees sought to turn their goals into a coherent program of research support. As they proceeded, however, they made several key decisions that shaped the infrastructure of the Nuffield Foundation in a fashion different from that of the Rockefeller Foundation. In so doing, they determined the manner in which the Nuffield Foundation was to function for decades to come. At an early trustees meeting it was agreed that rather than soliciting proposals on its own, “the Foundation should wait until other people produce ideas, for which they will ask Foundation support; the Foundation’s job will then be to make the best choice it can among a vast host of competitors.”8 In a period of increasing government involvement in health and research, the trustees sought to position the Nuffield Foundation as both a risk-taker and a supplemen
ter. That is, the foundation would endeavor to use its resources to undertake areas of work that the government, usually through the Medical Research Council (MRC), was unwilling to engage in—or that it was financially unable to support adequately.

There was certain to be a lot of interest in the Nuffield grants and an abundance of requests. To keep the workload within reasonable bounds and to give some coherence to their decisions, the trustees decided to adopt a framework of five-year plans. During each such five-year interval, particular areas of research consistent with foundation interests could be emphasized for support. This was to provide flexibility that would, as it turned out over the next twenty years, permit a shift from the physical sciences to the biological sciences and then into areas of technical education and science literacy. From the start, the trustees also opted to retain only a small staff. This decision limited the degree of in-house expertise that could be brought to bear in the evaluation of proposals. Thus, it became the standard practice that outside consultants were routinely enlisted to help determine the
value and grantworthiness of proposals submitted within their area of expertise.

It was during the fourth and last quinquennium, a period which began in 1959, that the Nuffield Foundation gave its largest grant up to that point for research in the medical sciences: an award in the amount of £350,000. This grant represented something old and something new. Its area of study fell squarely within the first of the original goals set out by the foundation. At the same time, it represented the beginnings of a new mode of operation of the foundation. Rather than sitting passively and waiting for proposals to come to it, the foundation tried to be proactive in offering its support to groundbreaking work in one of its areas of interest. The prime mover for this unusually large grant was Janet Vaughan, a Nuffield Foundation trustee from its beginning in 1943 and, generally, one of its most outspoken members.

JANET VAUGHAN, THE NUFFIELD FOUNDATION, AND THE LIVERPOOL SCHOOL

From all reports, Janet Vaughan (1899–1993) was an extraordinary woman. As an undergraduate student at Somerville College in Oxford, she was taught by J. B. S. Haldane, who expanded her interests beyond physiology into genetics and neurology. After her graduation Vaughan remained at Oxford to study pharmacology and pathology. During this period she went on Sunday morning rounds with Sir Archibald Garrod, then Regius Professor of Medicine and the first person to put forth the connection between genes and enzyme proteins. Vaughan qualified as a physician in 1924 but left clinical practice soon thereafter to spend more time taking care of her father after the death of her mother. At this point she redirected her considerable energies to carrying out research in pathology with a special interest in diseases of the blood and bone. She received a Rockefeller Foundation fellowship to study at the Thorndike Laboratory at Boston City Hospital (1929–30), a Beit Memorial Fellowship (1930–33), and a Leverhulme fellowship from the Royal College of Physicians (1933–34). Her book, *The Anaemias*, first published in 1934, became a standard. During World War II she set up blood banks and was the medical director of the Blood Transfusion Service in Slough, northwest of London. In 1945, at the conclusion of the war, Vaughan was appointed principal of Somerville College, a position she held until 1967. While principal she continued to work on her research at Churchill Hospital in Oxford. This research dealt with the effects on human health of isotopes that homed to bone. In addition, she often represented the university, the Royal College of Physicians, and the government in matters related to medical practice and education, activities that she considered “odd jobs.”
Vaughan’s service as a Nuffield Foundation trustee was one such odd job. In her informal (unpublished) memoirs, she describes her Nuffield service:

From 1953 to 1963 I served on the University Grants Committee medical advisory committee. . . . This period covered two annual visitations when we visited in some detail all the medical schools in Great Britain and it also covered the period of great rebuilding and replanning of teaching hospitals. All the plans for new hospitals came first to the committee before they could be accepted. . . . Quite apart from making suggestions, one of the jobs these visitations did was to carry ideas from one medical school to another: Ideas about teaching, about practice, about building, about adjustments between Ministry of Health and University needs. It certainly gave members of the committee a wonderful bird’s-eye view of what was happening in English medicine. This I personally could carry to the Nuffield Foundation. I could see at first hand where needs for help were greatest, where there were promising men working on exciting new ventures.\(^\text{10}\)

According to John McAnuff, assistant director of the Nuffield Foundation at that time, it was Vaughan who campaigned for the foundation to support the study of genetics and its role in human disease.\(^\text{11}\)

Vaughan was also a close colleague of Oxford geneticist Edmund Brisco Ford. E. B. Ford (or “Henry” as he was known to his friends) was the founder of a subspecialty within the field of genetics: ecological genetics, the study of the genetic changes in natural populations. He conducted field studies, mainly with butterflies and moths, but he had more than a passing interest in human genetics. As part of his commitment to the importance of natural selection as a biological mechanism, Ford had maintained that the genes for the human blood groups—such as the ABO blood group genes, which produce the A, B, and H antigens that reside on the surface of the blood cells—were prime examples of balanced genetic polymorphisms (or variations in genes).\(^\text{12}\) Ford asserted that these blood group polymorphisms could hardly be neutral, as was the general view at that time, but could only have reached their current high levels in the human population as a result of a balance of the advantages and disadvantages that each blood type confers on the individual. In 1945 he went further and suggested that among the disadvantages of particular blood group polymorphisms might be an increased susceptibility to specific human diseases.

Ford was a frequent consultant for the Nuffield Foundation when grant proposals involved matters of genetics. Vaughan first turned to Ford and raised the possibility of providing him with substantial Nuffield support so that he could broaden his research program to include medical genetics. Ford demurred:
The Foundation was uncertain where, if at all, to place such a unit; Oxford was briefly considered and they asked me to be Director of it. I said that was quite impossible: The Director must be a medical man and at that time there was only one person in the country for the job, so that, taking all into consideration, such a unit must be cited [sic] at Liverpool. . . . When I put these points to Janet V[aughan] she accepted them both without question and did much to get the Foundation to do so too.13

The “one person in the country” that Ford had in mind was Cyril A. Clarke, a Liverpool physician and member of the Department of Medicine at the University of Liverpool. Clarke was an avid butterfly collector and had perfected a procedure for the hand-breeding of butterflies. In addition to his medical duties, he had been working at Liverpool with Philip Sheppard, a former student of Ford’s and a member of the University of Liverpool science faculty, on a range of experiments centered on butterfly genetics.14 Over time, Clarke and Sheppard had extended their research collaboration to include some work on human genetics. In the process, they gathered about them a small group of physicians who carried out their clinical duties under Clarke during the day and then pursued the genetic studies in their free time, generally in the evening.

It was an unusual group of researchers. Clarke, a clinician, had not become involved in medical research until the middle years of his career. Most of his young collaborators could best be characterized as dedicated amateurs. They had originally sought the research experience in order to write the theses that would bring them a higher medical certification: the M.D. degree. Like Clarke, they had come to research with little or no training in genetics and had found it necessary to educate themselves or to rely on informal tutorials provided by colleagues more experienced in genetics. Clarke himself had learned genetics from such tutorials.15

At first, the Liverpool research projects were directed toward looking for the purported association, predicted by Ford, of blood group (and other seemingly innocuous polymorphisms within genes) with the onset of human disease. The search for gene polymorphisms that are related to human disease was seen as a powerful approach to understanding disease. In an era in which the physiological basis of disease processes was still poorly understood, any such association could well be a key point of entry to help tease apart the mechanisms of prevalent diseases—a “golden” clue in the view of the researchers. Furthermore, it was felt that the polymorphisms could also serve the clinician as diagnostic tools. As signals of disease susceptibility, particular polymorphisms could be tested for as part of public health programs geared toward disease prevention.

Other than the theoretical direction provided by E. B. Ford at Oxford, a major influence on the research programs of the group came from the
laboratories of another clinician/researcher: Victor McKusick at the Johns Hopkins University in Baltimore. A meeting between one of the core group of Liverpool researchers, Richard McConnell, and McKusick in 1958 led to the year-long visit to Baltimore by David Price Evans, another of the young Liverpool doctors also involved in research. One by one, over the years that followed, many of the Liverpool doctors came to Johns Hopkins for periods of a year or more at a time to do the requisite clinical work and to complement that work with research projects carried out in the laboratory.16

To their basic approach of looking for diseases associated with gene polymorphisms, the Liverpool group added another dimension, one that emerged from their work in butterfly genetics. In 1958 Clarke and Sheppard noted a similarity between the structural organization of the cluster of genes that they had found responsible for mimicry in butterflies and the cluster of genes at the human Rh blood group locus. The Rh genetic locus is responsible for the production of the Rh factor found on blood cells. This similarity in gene organization proved so tantalizing that Clarke and Sheppard decided to extend the group’s work to include emphasis on erythroblastosis fetalis or Rh disease.

At that time, Rh disease was a major genetic disease of fetuses and children with often dire consequences. The disease occurs when an Rh-negative mother (a woman genetically unable to produce Rh factor on her cells) gives birth to an Rh-positive baby (whose Rh-positive gene was provided by the father). At the time of birth, the leakage of small amounts of the baby’s blood with its payload of Rh factor into the mother’s circulatory system elicits a response against the Rh factor by the mother’s immune system. There is no harm done to the child who is already born. However, this immune response is enduring and endows the mother with the capability of reacting against the blood cells of any subsequent fetuses in utero who are Rh-positive. This immune reaction—when it occurs—can cause significant damage to the developing fetus. Clarke and Sheppard applied the intellectual apparatus of ecological genetics to this human health problem and sought out other genes that could interact with the Rh gene cluster. This they found in the ABO blood group locus. Incompatibility between an Rh-negative mother and an Rh-positive fetus at the ABO locus often protected the fetus against damage. Clarke, Sheppard, and their colleagues sought to defeat the dark cloud of genetic disease hanging over families by mimicking in some way the protection offered by ABO incompatibility.

The Liverpool group came up with a plan to protect against Rh disease by circumventing the mother’s immune system through the use of anti-D antibody as a form of passive immunity similar to that accomplished by ABO incompatibility. The group was just at the point of testing this possible treatment for Rh disease when Ford, now acting as an emissary of the
Nuffield Foundation, approached them to explore the possibility of support for medical genetics at Liverpool. Vaughan reported on the progress of the negotiations to the foundation’s director, Leslie Farrer-Brown:

I had a long session with Ford yesterday [18 February 1963] and we planned that he should work out some scheme with Shepherd [sic] and Clark [sic] at Liverpool, and put it up to the Foundation; the plan being that there should be a close association in anything done between the Oxford and Liverpool groups, but that the medical side of it would, of course, be done in Liverpool. I think this holds out good promise for the future, building on what the Foundation has already done and spreading ourselves into one of the most promising fields in Medicine. I think and hope that I encouraged Ford to think in a big way in the first instance—it is always easier to prune than to expand. . . . I have a . . . feeling that something very exciting is going to grow out of all this.17

Ultimately, these negotiations led to the establishment of the Nuffield Unit of Medical Genetics within the Department of Medicine at Liverpool. Grant funds permitted a building to be constructed to provide necessary laboratory space for an enlarged range of research activities. As Price Evans recalled:

One morning, Cyril [Clarke] told me that the Nuffield Trust were giving him £350,000. This was to enable him to carry on with his genetics researches—including human and medical aspects as well. . . . He had already decided that £150,000 would be spent on a building. I was given the job of producing it.18

The remainder of the grant was to be used to support the various lines of research that would be based within the new building.

THE NUFFIELD UNIT OF MEDICAL GENETICS

The dedication of the Nuffield Unit, a five-story building on the Liverpool medical campus, took place on 26 May 1967. The building was actually a wing added on to the Medical School. Each of the floors was dedicated to another area of investigation: cancer research, hematology, cytogenetics, and pharmacogenetics and immunology. The fifth floor housed the animal house. Atop the building was a facility unusual in medical research: a heated greenhouse for Clarke and Sheppard’s butterfly experiments.

The space and support facilities now available permitted a large number of research projects to be attempted and, with the help of the technical staff, allowed many of them to be carried out full time. More room also
meant more space to accommodate other investigators. As Price Evans recalls, “Some new, relatively minor aspects were added . . . [however,] the Nuffield support was not conditional on the development of new lines of research activities.” According to Marcus Pembrey, another Liverpool School alumnus, “the Liverpool style was deregulated. If something interested you, you studied it or read about it.” While formal modes of presentation such as seminars and colloquia were not common, there was always a lot of conversation. Price Evans maintains that Liverpool “was seen amongst doctors [as a place] where genetics of relevance to medicine was an active process.” As disconnected as many of the research efforts seemed, the search for the relationship between genetic polymorphisms and human disease was the central research theme that tied together almost all of the activities.

David Weatherall, who headed the research on genetics in hematology before moving on to Oxford University, sums up the Nuffield grant this way:

> Without that building and getting . . . that group of people together, I think it [Liverpool medical genetics research] would have died straight after the Rhesus [work]. . . . I think the Nuffield [grant] . . . raised the national focus on clinical genetics. People from Liverpool . . . did have an influence. There is no question about it.

Richard McConnell, one of the first of the Liverpool investigators, observes:

> The thing that characterized the Nuffield Unit was that it was widespread. It covered quite a range of medical disciplines. We were all expected to continue to see patients and to take part in the clinical activities of the hospital . . . It was research based and it was based in general medical practice.

Over the next ten years, the research output was impressive. Perhaps the most important accomplishment was the development and validation of a successful treatment for Rh disease using anti-D antibody—regarded as one of the medical success stories of the twentieth century. In addition, researchers recognized an association of some polymorphisms with response to drugs, making it possible to provide individual patients with appropriate drugs at correct levels for the treatment of disease; they also enhanced the understanding of the genetic basis of serious blood diseases such as thalassemia.

In addition, the Nuffield Unit became an educational and training center. It was a place where physicians could come to extend their knowledge of human genetics and work for periods of time on research projects that explored the relationship of genetics (more accurately, gene polymorphisms) to disease.
There was one area in which the Nuffield Unit lagged. Clarke was reluctant to put an emphasis on the development of genetic counseling as a separate specialty. His view was that all physicians should be able to provide the necessary genetic interpretations and counseling for their patients. As a result, Liverpool was one of the last major medical regions in the United Kingdom to set up a genetic counseling service.

ROCKEFELLER FOUNDATION SUPPORT FOR GENETICS RESEARCH IN THE UNITED KINGDOM

The University of Liverpool and its Medical School were certainly known to the officers of the Rockefeller Foundation. Indeed, the foundation’s staff was impressed by the work of the Liverpool group. However, during the period between 1958 and 1970 the Rockefeller Foundation provided only a very modest amount of funding—on the order of $13,000—for work done at that institution. Moreover, this amount was spread out over a number of small grants, which further diminished the possibility for any real Rockefeller influence to be exerted.

The largest of these grants, a grant-in-aid in the amount of $8,500, was earmarked for the purchase of equipment to facilitate the separation and concentration of subcellular entities. It was given in 1958 following a visit by Rockefeller Foundation officer G. R. Pomerat to Liverpool. Pomerat’s report shows that he was pleased with what he saw during that visit:

The department here was founded in 1903, a year before the one at Cambridge, and is thus the oldest school of biochemistry in Britain. Main lines of research in the Biochemistry Department are those of Morton on the study of Vitamin A, especially for its systemic effects; those of Goodwin on the biosynthesis and metabolism of carotenoids; those of Glover . . . on sterol metabolism and on the conversion of carotene to Vitamin A in the intestine; and those of King on the enzyme systems concerned with transaminations and decarboxylations in microorganisms. The physical facilities of the Department of Biochemistry are now quite good. On the equipment side they appear to have nearly all they need except for a Spinco preparative ultracentrifuge which at least three groups could use for their mitochondria and microsome work. Prof. Morton says they have made many efforts to obtain this machine but are blocked because it requires dollars. GRP [Pomerat] tells Morton to submit a request in a month or two, together with a representative series of departmental reprints and that this will be studied in the early summer. This is typically the best kind of aid the RF can give in Britain at present and this is a good department to which to offer such help.
The other grants to the University of Liverpool during this period were all scattered among varied areas of the foundation’s interest. One of them, in 1959, was in the amount of $500 and was given to Roderic Gregory, a medically trained professor of physiology at Liverpool with a specialty in gastroenterology. The grant was to permit Gregory to extend his stay in the U.S. after an American Physiological Society meeting, to visit other laboratories and to gather data for an invited paper to be given at the annual meeting of the Federation of American Societies for Experimental Biology, to be held the following year in Atlantic City. Another example of Rockefeller Foundation support to Liverpool was a small travel grant ($720) in June 1960 to Norman Burges, a professor of botany and former dean of the Faculty of Sciences. Burges was then associated with the university’s Hartley Botanical Laboratories. The award was to permit a visit to the United States for the meetings of the Soil Biology Congress in Madison, Wisconsin, with stops at several laboratories.

There were, in addition, a series of grants to the University of Liverpool’s School of Tropical Medicine. Professor Brian Maegraith received two grants totaling $1,200 (in 1959 and 1965) for travel to the U.S. “that he may be kept abreast of US advances in tropical medicine, particularly in the field of schistosomiasis.” In 1969 a $2,225 grant-in-aid was given to Dr. Herbert Gilles to cover travel and living costs associated with his travel to Nigeria, where he was to assist in community health efforts.

There were some possible overlaps between these grants and the Clarke group. The grant to R.A. Morton was directed toward the Faculty of Medicine—and to a unit that was based in the same administrative locale as was the Clarke group. The grant to Gregory was meant to enlarge his expertise in the treatment of peptic ulcers. It came at the time that the Clarke group was searching for genetic markers (such as blood type genes) associated with various forms of stomach cancer.

Why did the Rockefeller Foundation give so little attention to Clarke’s group at that time? One reason is that after the Second World War the Rockefeller Foundation shifted its interests away from animal genetics and toward agricultural topics. Nonetheless, interest by the foundation in research programs in the area of human genetics did not disappear completely after the war. Support continued to be provided to several institutions and investigators working in the area of mammalian and human genetic research, groups that had been recipients of the foundation’s support before the war.

Primary among these groups was the Galton Laboratory at University College London. From its founding early in the first decade of the twentieth century, the Galton Laboratory had been the major center for human genetics research in the U.K., and it had been a recipient of funding from the Rockefeller Foundation beginning in the 1930s and continuing
through the war years. By the 1950s and 1960s the Galton Laboratory was roughly the same size as the Liverpool School group. Its chief areas of research interest included understanding which human traits are inherited and determining the patterns of that inheritance. The Galton researchers also searched for evidence of physical linkages between genes on chromosomes so that one gene of the linked pair could serve as a marker for the presence of the other gene. Clarke and members of his team frequently consulted with the Galton group as they attempted to validate their own data. However, there were some significant differences between the Galton and the Liverpool groups. Most of the Galton Laboratory personnel were scientifically, not medically, trained. Furthermore, the Galton Laboratory did not have a close identification with the clinical setting and the health-related concerns faced by physicians in their daily practice. Even though the Galton Laboratory was located within easy distance to University College Hospital, there were continual expressions of difficulties in establishing collaborations between the Galton researchers and the hospital’s clinicians.

The Rockefeller Foundation also provided funding for genetic research in other places in England. J. B. S. Haldane received funding for research on mice, fruit flies, and humans while he was in the Department of Genetics at University College London. Dr. Hans Grüneberg received support totaling about $100,000 from 1953 to 1965 for developmental genetics research on rodents. Harry Harris received Rockefeller Foundation support while he was at the London Hospital Medical College from 1956 to 1959 and again at King’s College prior to his moving to head the Galton Laboratory.

It is possible that the Clarke group did not meet the criteria for Rockefeller Foundation support. The emerging work on Rh disease may have made the group appear to be on a research hilltop but not on a mountain peak. After all, nearly all of the members of the group were clearly amateurs. Unlike the groups that continued to receive funding, the Liverpool School group did research as an add-on. Even after the Nuffield support came along, clinical work with patients always remained paramount. Research programs were pursued by physicians, some without formal research training, only after work with patients was concluded. It may have been these aspects—the lack of a primary commitment to research and the informal nature of the research training and environment—that kept the Liverpool School below the radar of the Rockefeller Foundation officers. Perhaps it took someone like a Janet Vaughan, with insider information, to recognize the strengths in groups that otherwise lacked a long track record of research productivity. It also appears that Clarke’s Liverpool researchers never made any overtures to the Rockefeller Foundation on their own behalf. And once the Nuffield Foundation support was received during much of the 1960s and early 1970s, there was even less need for the group to seek additional funding from other sources.
CONCLUSION

It is reasonable to conclude that the Nuffield grant of 1963 to the University of Liverpool orchestrated by Janet Vaughan and E. B. Ford was successful in spurring new types of medical research and in stimulating the development of clinical genetics in the United Kingdom. In fact, most of the next generation of clinical geneticists in the U.K. were trained within the Nuffield Unit. As these genetically trained physicians moved into medical facilities around the country, they became a major force in releasing human genetics from the laboratory. Genetics came to be used to inform judgments made in the clinic. In return, the medical findings from the clinic became the basis for further investigations by genetic researchers.

Notwithstanding its successes, the Nuffield Unit of Medical Genetics was not able to maintain itself as a permanent center for medical genetics research. After Cyril Clarke retired and his immediate successor David Price Evans left the United Kingdom to work in Saudi Arabia in 1983, the facilities of the Nuffield Unit were taken over, in small increments, by other research groups unconnected with medical genetics. There was little effort to prevent this. Foundations are not fixed institutions. They evolve in their interests; patterns of funding change. Furthermore, the Nuffield grant was closely tied to and dependent on the active presence of certain key individuals. Once those individuals had retired or moved on to other positions, there were too few sufficiently credible voices to persuade the Nuffield Foundation or the university to continue support.

It is, of course, unrealistic to expect all research funders to march in lockstep toward identical goals. It is also unfair to declare winners and losers when funders are seen, in retrospect, to have missed some rich vein of research endeavor. In fact, if there is a take-home lesson here, it may be that it is “funding polymorphisms”—or the multiplicity of funding strategies with decisions made by foundations and funding agencies drawing on different sources of information and insight—that constitute the surer route to overall research success.

NOTES


2. One of the most complete summaries of the history of the Nuffield Foundation can be found in Ronald W. Clark, A Biography of the Nuffield Foundation (London: Longman, 1972).
3. Smith to Sawyer, letter no. 49, 14 April 1943, folder 2000, box 303, RG 2 (General Correspondence), Rockefeller Foundation Archives, Rockefeller Archive Center, Sleepy Hollow, New York (hereafter referred to as RAC).

4. Fosdick to Goodenough, 6 May 1943, folder 1755, box 255, RG 2 (General Correspondence), Rockefeller Foundation Archives, RAC.

5. Goodenough to Fosdick, 15 June 1943, folder 1755, box 255, RG 2 (General Correspondence), Rockefeller Foundation Archives, RAC.

6. Frank B. Hanson officer's diary, 24 June 1943, RG 12.1, Rockefeller Foundation Archives, RAC.

7. Farrer-Brown to Willits, 29 March 1945, folder 2000, box 303, RG 2 (General Correspondence), Rockefeller Foundation Archives, RAC.


15. According to Richard McConnell, the individual tutoring Clarke was Professor Burnett, a colleague at the University of Liverpool. Interview by author, May 1998.


17. Janet Vaughan to L. Farrer-Brown, 19 February 1963, Med/91, Q5/2/1, Nuffield Foundation, London. The misspellings of the names here should not be taken as evidence that Vaughan was unfamiliar with the Clarke-Sheppard work but are most likely attributed to the fact that, from childhood on, Vaughan had great difficulty with spelling.

18. David Price Evans to D. T. Zallen, 19 March 2000, e-mail communication.


22. Grant-in-aid to University of Liverpool, England, for the purchase of equipment for use in research in the biochemistry department of the Faculty of Medicine, 29 January 1958, folder 300, box 31, series 401, RG 1.2, Rockefeller Foundation Archives, RAC.

23. G. R. Pomerat officer's diary, 2 May 1957, RG 12.1, Rockefeller Foundation Archives, RAC.

24. Travel grant for Roderic Alfred Gregory, Professor of Physiology, University of Liverpool, England, 31 December 1958, folder 134, box 15, series 401, RG 1.2, Rockefeller Foundation Archives, RAC.

25. Travel grant for Dr. Norman Alan Burges, Professor of Botany, Hartley Botanical Laboratories, University of Liverpool, Liverpool, England, 10 June 1960, folder 309, box 31, series 401, RG 1.2, Rockefeller Foundation Archives, RAC.

26. Travel grant for Professor Brian Maegraith related to “Conquest of Hunger—Schistosomiasis,” 19 April 1965, folder 135, box 16, series 401, RG 1.2, Rockefeller Foundation Archives, RAC.
27. Grant-in-aid to the Liverpool School of Tropical Medicine to enable Dr. Herbert Gilles, Senior Lecturer, to advise on health problems at Ibadan and Zaria, Nigeria, 12 November 1969, folder 133, box 15, series 401, RG 1.2, Rockefeller Foundation Archives, RAC.

28. Correspondence between J. B. S. Haldane and the Rockefeller Foundation, folders 578 and 581, box 45, series 401, RG 1.1, Rockefeller Foundation Archives, RAC.

29. Correspondence between H. Grüneberg and the Rockefeller Foundation, folders 581 and 585, box 45, series 401, RG 1.1, Rockefeller Foundation Archives, RAC.

30. Correspondence between H. Harris and the Rockefeller Foundation, folder 139, box 16, series 401, RG 1.2, Rockefeller Foundation Archives, RAC.
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