

American Hegemony and the Postwar Reconstruction of Science in Europe

John Krige



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Acknowledgments

This book lies at the intersection of my current preoccupations with the nature of American power and how it is projected abroad, and my long-standing interest in the relationships between science, technology, and foreign policy—going back to my work on the history of CERN (European Laboratory for Particle Physics) and of ESA (European Space Agency). That interest was enriched by five years at the European University Institute in Florence, Italy, where I was immersed in a world dedicated to understanding the postwar reconstruction of Europe in all its economic, political, cultural, and ideological richness. My subsequent move to the United States has brought me closer to American sources and provided me with added insights into the nature and functioning of American society.

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List of Archives

AIP	Center for History of Physics, American Institute of Physics, College Park, Maryland
AmPhilSoc	American Philosophical Society, Philadelphia
CACF	Centre des Archives Contemporaines, Fontainebleau, France
CERN	European Organization for Nuclear Research/European Laboratory for Particle Physics, Geneva, Switzerland
FFA	Ford Foundation Archives, New York City
LoC	Library of Congress, Manuscript Division, Washington, D.C.
MIT	Massachusetts Institute of Technology Archives, Cambridge, Massachusetts
NARA	National Archives and Records Administration, College Park, Maryland
NATO	North Atlantic Treaty Organization Archives, Brussels, Belgium
NBA	Niels Bohr Institute Archive, Copenhagen
RFA	Rockefeller Foundation Archives, Sleepy Hollow, New York

American Hegemony and the Postwar Reconstruction of Science in Europe

Basic Science and the Coproduction of American Hegemony

If we were a true empire, we would currently preside over a much greater piece of the earth's surface than we do. That's not the way we operate.

Vice President Dick Cheney, Davos, Switzerland, January 24, 2004

“The premise of this essay is that, given the basic inequality of resources [between the United States and Europe] after World War II, it would have been very difficult for any system of economic linkages or military alliance not to have generated an international structure analogous to empire. Hegemony was in the cards, which is not to say that Americans did not enjoy exercising it (once they had resolved to pay for it).”¹ Thus wrote Harvard historian of political economy Charles Maier in the late 1980s. For historians of science and technology his premise is striking, as it reveals the gulf between what diplomatic and economic historians take for granted about the capacity and behavior of the United States to build a world order aligned with its interests and our approach to such an issue (when it occurs to historians of science at all).² For there was not simply an imbalance in economic and military strength between the two sides of the Atlantic in 1945; there was also an imbalance in scientific and technological capability. The immense scientific and technological achievements in the United States during the war and the ongoing support for research in the country after 1945 contrasted sharply with the situation in postwar Europe. There, laboratories were ill-equipped, destroyed, pillaged, and (in the case of Germany) strictly controlled; researchers were poor, cold, hungry, and demoralized; and national governments had far more pressing concerns than scientific (and technological) reconstruction. The United States was not simply the mightiest

economic and military power in 1945; it was also the mightiest scientific (and technological) power. Given the “basic inequality of resources” for science between the two sides of the Atlantic (and indeed globally), is it not to be expected that any system of U.S.-European scientific and technological linkages established after the war were also part and parcel of an “international structure analogous to empire”? Were those in the United States who wanted to “reconstruct” or “rehabilitate” European science not also engaged in the American hegemonic enterprise? Should historians of science not also take it for granted, as Maier did, that American hegemony structured the rebuilding of scientific capabilities and institutions in Western Europe, just as it did the economic and military spheres? In this book I argue that in science too an enfeebled Europe became enrolled in a hegemonic postwar American project—and tease out “the degree to which the U.S. ascendancy allowed scope for European autonomy.”³

The place of science in U.S. foreign relations has only recently begun to attract the attention of historians of science.⁴ Much work has been done on the multifarious bonds that were established between science, notably physics, and the American state during and after World War II. We have detailed studies of how scientists and their laboratories were enrolled in the apparatus of the national security system as researchers, advisors, policymakers, and intelligence gatherers, making fundamental contributions to the consolidation of U.S. power in the postwar period and during the Cold War. We know a good deal about the role that scientists played in projecting that power abroad in line with aims of U.S. foreign policy, particularly in relationships with the Soviet Union.⁵ This history, dominated as it was by superpower rivalry, largely ignores Western Europe, and indeed the rest of the world. Moreover, the intellectual framework that it provides for thinking about the relationship between science and foreign policy ignores the asymmetry of power in which it was embedded. Ronald Doel points out that, particularly after 1945, “international science” was used “as a vehicle to promote American values and interests in the post-war world.”⁶ Similarly, diplomatic historian Joseph Manzione tells us, “The United States shared science to strengthen the Western alliance against Communism and to preserve technical and scientific preeminence. It shared science to support doctri-

nal arguments about the superiority of liberal capitalism and democracy over Marxism-Leninism.”⁷ Doel and Manzione recognize that if internationalism could serve these purposes after the war, if it came to mean something more than simply the circulation of knowledge and ideas within the scientific community itself, it was partly because science had become an affair of state. But they do not emphasize sufficiently that internationalism could only be an effective instrument of foreign policy because of the massive scientific and technological imbalance in favor of the United States vis-à-vis its allies. Combining scientific advantage with economic and political leverage, scientific statesmen, officials in the U.S. administration, and officers in organizations like the Ford and Rockefeller foundations did more than simply “share” science or “promote” American values abroad; they tried to *reconfigure* the European scientific landscape, and to build an Atlantic community with common practices and values under U.S. leadership.

This book is not simply about science and foreign policy, then, but about how science was embedded in, and instrumentalized for, the projection of American power in postwar continental Europe. More specifically, it is about how, in the first decade or two after 1945, the United States attempted to use its scientific and technological leadership, in conjunction with its economic, military, and industrial strength, to shape the research agendas, the institutions, and the allegiances of scientists in Western Europe in line with U.S. scientific, political, and ideological interests in the region.⁸

This chapter has two purposes. First, I introduce the notion of hegemony as used by economic and diplomatic historians to theorize U.S.-European relations in the postwar era.⁹ Second, I suggest that basic science, or fundamental research, was the key node articulating American hegemony with the postwar reconstruction of science in Europe. The coupling of science and foreign policy was symptomatic of the new role that science, and basic science in particular, had in the postwar period, and of its presumed significance to economic growth, industrial strength, and national security. In the remainder of the book, I fill out that claim through a series of case studies that follow one another in roughly chronological order and that demonstrate how U.S. scientific statesmen, policymakers, and foundations, in collaboration with elites abroad, tried

to rebuild European science to reflect U.S. concerns in the early years of the Cold War.

The Coproduction of Hegemony

The concepts of hegemony and empire as developed by diplomatic and political historians are not bound by notions of territorial acquisition or local rule, hallmarks of the “formal” empires imposed by Europeans on much of the world from the fifteenth to the nineteenth centuries. Tony Judt, for example, deems it “irrelevant” (historically) that the United States “eschews territorial acquisitions.” Like the British at the height of their imperial reign, the United States today “prefers to get its way by example, pressure and influence”—even if that does not always suffice.¹⁰ In similar vein, John Lewis Gaddis defines empire as “a situation in which a single state shapes the behavior of others, whether directly or indirectly, partially or completely, by means that can range from the outright use of force through intimidation, dependency, inducements, and even inspiration.”¹¹ Tracing the origins of this strategy back to John Quincy Adams in the nineteenth century, Gaddis remarks that since Adams’s day the United States has sought to maintain a preponderance of power (the term is Leffler’s)¹² as distinct from a balance of power, then on a continental, now on a global, scale.¹³

The construction of an “informal” American empire in Western Europe after the Second World War was undertaken in collusion and in collaboration with sympathetic elites on the Continent, and with a large measure of mass support. By and large the United States did not use force to impose its methods of industrial production and management, its economic system, its political preferences and models, its military ambitions, or its cultural products on supine European peoples who were too demoralized and disoriented to do anything but accept them (even if Washington sometimes toyed with the idea of armed intervention). Indeed, European leaders who shared the United States’ political and ideological objectives asked, at times even begged, the country to remain involved, to be a major economic, political, and military presence. The American empire that emerged was the negotiated outcome of a complex process in which European partners selectively appropriated and

adapted features of the U.S. agenda and ambitions for the Continent and made them their own.¹⁴ As Tony Smith points out, “Indirect imperialism of the American sort can only be effective when foreign peoples lend themselves root and branch, and for their own reasons, to the design of the imperial center.”¹⁵ To consolidate a liberal, democratic, capitalist regime abroad by resorting as little as possible to the use of force required a transnational elite that linked U.S. policymakers with a “team of partners” in Western Europe whose members “quickly became convinced that their countries’ interests, and perhaps their own political fortunes, were best served by alignment in the new field of U.S. strength.”¹⁶ It is by virtue of that “alignment” that the United States “perfected the art of controlling foreign countries and their resources without going to the expense of actually owning them or ruling their subjects,” as the British and other European powers previously had to do.¹⁷ The specificity of American foreign policy is to be sought in the repertoire of instruments other than territorial expansion and direct subjugation that the United States could use to achieve influence and control after World War II—not in the illusory view that the United States, albeit a great power, “doesn’t do empire.”¹⁸

Building an informal (or “quasi”) empire by consensus involves a gamble.¹⁹ By eschewing force, and by resorting to threat and blackmail as a last resort, the United States accepted that it could not determine the course of postwar European reconstruction. It could only hope to shape its general trajectory and physiognomy in line with U.S. interests. And therein lay its strength. Europeans’ relative freedom of action under the American umbrella, Maier writes, “did not weaken Washington’s policies. On the contrary, it allowed the U.S. actions to seem less dominating and less constraining and thus probably made for a more broadly accepted policy. Precisely this possibility for national divergence made American policies more supple and more attractive than they might otherwise have been.”²⁰ The United States, having left centrist European leaders the space to determine their own destiny, aided and abetted by Washington, constructed an “empire by consent,”²¹ founded on “consensual hegemony,”²² that is, a hegemony that was coproduced.²³

The term *coproduction* is familiar to the science studies community.²⁴ It is covalent with Maier’s consensual hegemony, but goes beyond that

term in drawing attention to the creativity of both partners and to the relative plasticity of U.S. policymakers. Coproduction also signals that the United States gave Europeans room to leave their imprint on the hegemonic regime and implies that empire building is a fluid process. As Ann Stoler stresses, imperial formations are states of becoming rather than ready-made, rounded, bounded objects; they are founded on ambitions that trade on fuzziness, ambiguity, and confusion.²⁵ These nuances are crucial, in my view, not simply because they permit us to grasp better the flow of historical events that I describe in subsequent chapters, but also because they add depth to the brief discussion of the “Americanization” of European science in the final chapter.

The postwar coproduction of an American empire cohered with a Wilsonian view of America’s global role in the twentieth century. Its dominant leitmotiv was, in Woodrow Wilson’s own words, “to make the world safe for democracy.”²⁶ The view of American exceptionalism—the idea that the United States had a unique role and mission in history and that America’s interests were not narrow and parochial but embodied the interests of all—predated Wilson himself. For two or three centuries those who built the New World believed that they were creating a “model, a light shining out to a wretched globe and inspiring it to lift itself up.”²⁷ For them, though, that model would be diffused best by example, not by imposition or proactive promotion. World War II and its aftermath changed that. First German militarism and then the conviction that Soviet Communism was bent on world domination led to the view that the nation’s security lay in the expansion of democracy worldwide. Now the United States could not simply watch “failed states” stumble along without leadership. Now economic misery, industrial backwardness, and political instability threatened to create a vacuum that could be filled by forces hostile to democracy and to the global vision that inspired America’s leaders. As cooperation with Stalin’s Soviet Union gave way to confrontation, and to the Manichean division of the world into two rival political and ideological systems, faith in the United Nations as an instrument for managing the new world order collapsed. Convinced that there was “a clear and present danger to national security,”²⁸ the United States took it upon itself to make the world safe for democracy. It decided to use “the nation’s great power actively and often very aggres-

sively to spread the American model to other nations, at times through relatively benign encouragement, at other times through pressure and coercion, but almost always with a fervent and active intent.”²⁹

The idealistic fervor that inspired American interventionism is not to be underestimated. Robert Kagan correlates it with the determination to hold totalitarian expansion at bay:

After Munich, after Pearl Harbor, and the onset of the Cold War, Americans increasingly embraced the conviction that their own well-being depended fundamentally on the well-being of others, that American prosperity could not occur in the absence of global prosperity, that American national security was impossible without a broad measure of international security. This was the doctrine of self-interest, but it was the most enlightened kind of self-interest—to the point where it was at times almost indistinguishable from idealism.³⁰

The justification for “internationalism” thus lay not simply in the overwhelming military and economic power that the United States had at its disposal in 1945, though that obviously facilitated matters. It was inspired by a definition of America’s mission and identity that was deliberately crafted, a definition with moralistic and evangelical overtones that had deep roots in the American psyche, a definition that identified the United States with freedom in a world menaced by totalitarianism. As Henry Luce, the founder and editor/publisher of *Time*, *Fortune*, and *Life* magazines and author of a classic book on the “American century” (1941), explained, “If we had to choose one word out of the whole vocabulary of human experience to associate with America—surely it would not be hard to choose that word. For surely the word is Freedom. . . . Without Freedom, America is untranslatable.”³¹ The American empire was built to defend national security by promoting democracy and resisting tyranny, and that noble mission implied that it must protect not only narrow U.S. interests but also the interests of all “free men.” America shouldered the burden of world leadership not simply, or even predominantly, because it was a major power intent on defending itself from attack and maintaining world superiority. It did so because its global vision embodied the protection at home, and the promotion, or imposition, abroad, of “universal” “freedoms” that were exemplified in U.S. policies and practices and in the daily lives of the American people. As Dean Acheson, Harry Truman’s Under Secretary of State, put it, “For the United States to take steps to strengthen countries threatened with