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Chapter · January 2016

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Chapter 9

Learning to Love the Bomb: The Cold War Brings the Best of Times to American Higher Education

David F. Labaree

American higher education rose to fame and fortune during the Cold War, when both student enrollments and funded research shot upward. Prior to World War II, the federal government showed little interest in universities and provided little support. The war spurred a large investment in defense-based scientific research in universities for reasons of both efficiency and necessity: universities had the researchers and infrastructure in place and the government needed to gear up quickly. With the emergence of the Cold War in 1947, the relationship continued and federal investment expanded exponentially. Unlike a hot war, the Cold War offered a long timeline for global competition between communism and democracy, which meant institutionalizing the wartime model of federally funded research and building a set of structures for continuing investment in knowledge whose military value was unquestioned. At the same time, the communist challenge provided a strong rationale for sending a large number of students to college. These increased enrollments would educate the skilled workers needed by the Cold War economy, produce informed citizens to combat the Soviet menace, and demonstrate to the world the broad social opportunities available in a liberal democracy. The result of this enormous public investment in higher education has become known as the golden age of the American university.

Of course, as is so often the case with a golden age, it didn't last. The good times continued for about 30 years and then began to go bad. The decline was triggered by the combination of a decline in the perceived Soviet threat and a taxpayer revolt against high public spending; both trends with the fall of the Berlin Wall in 1989. With no money and no enemy, the Cold War university fell as quickly as it arose.

In this paper I try to make sense of this short-lived institution. But I want to avoid the note of nostalgia that pervades many current academic accounts, in which professors and administrators grieve for the good old days of the mid-century

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university and spin fantasies of recapturing them. Barring another national crisis of the same dimension, however, it just won't happen. Instead of seeing the Cold War university as the norm that we need to return to, I suggest that it's the exception. What we're experiencing now in American higher education is, in many ways, a regression to the mean.

My central theme is this: Over the long haul, Americans have understood higher education as a distinctly private good. The period from 1940 to 1970 was the one time in our history when the university became a public good. And now we are back to the place we have always been, where the university's primary role is to provide individual consumers a chance to gain social access and social advantage. Since students are the primary beneficiaries, then they should also foot the bill; so state subsidies are hard to justify.

Here is my plan. First, I provide an overview of the long period before 1940 when American higher education functioned primarily as a private good. During this period, the beneficiaries changed from the university's founders to its consumers, but private benefit was the steady state. This is the baseline against which we can understand the rapid postwar rise and fall of public investment in higher education. Next, I look at the huge expansion of public funding for higher education starting with World War II and continuing for the next 30 years. Along the way I sketch how the research university came to enjoy a special boost in support and rising esteem during these decades. Then I examine the fall from grace toward the end of the century when the public-good rationale for higher ed faded as quickly as it had emerged. And I close by exploring the implications of this story for understanding the American system of higher education as a whole.

During most of its history, the central concern driving the system has not been what it can do for society but what it can do for me. In many ways, this approach has been highly beneficial. Much of its success as a system – as measured by wealth, rankings, and citations – derives from its core structure as a market-based system producing private goods for consumers rather than a politically-based system producing public goods for state and society. But this view of higher education as private property is also a key source of the system's pathologies. It helps explain why public funding for higher education is declining and student debt is rising; why private colleges are so much richer and more prestigious than public colleges; why the system is so stratified, with wealthy students attending the exclusive colleges at the top where social rewards are high and with poor students attending the inclusive colleges at the bottom where such rewards are low; and why quality varies so radically, from colleges that ride atop the global rankings to colleges that drift in intellectual backwaters.

9.1 The Private Origins of the System

One of the peculiar aspects of the history of American higher education is that private colleges preceded public. Another, which in part follows from the first, is that private colleges are also more prestigious. Nearly everywhere else in the world,

state-supported and governed universities occupy the pinnacle of the national system while private institutions play a small and subordinate role, supplying degrees of less distinction and serving students of less ability. But in the U.S., the top private universities produce more research, gain more academic citations, attract better faculty and students, and graduate more leaders of industry, government, and the professions. According to the 2013 Shanghai rankings, 16 of the top 25 universities in the U.S. are private, and the concentration is even higher at the top of this list, where private institutions make up 8 of the top 10 (Institute of Higher Education 2013).

This phenomenon is rooted in the conditions under which colleges first emerged in the U.S. American higher education developed into a system in the early nineteenth century, when three key elements were in place: the state was weak, the market was strong, and the church was divided. The federal government at the time was small and poor, surviving largely on tariffs and the sale of public lands, and state governments were strapped simply trying to supply basic public services. Colleges were a low priority for government since they served no compelling public need – unlike public schools, which states saw as essential for producing citizens for the republic. So colleges only emerged when local promoters requested and received a corporate charter from the state. These were private not-for-profit institutions that functioned much like any other corporation. States provided funding only sporadically and only if an institution's situation turned dire. And after the Dartmouth College decision in 1819, the Supreme Court made clear that a college's corporate charter meant that it could govern itself without state interference. Therefore, in the absence of state funding and control, early American colleges developed a market-based system of higher education.

If the roots of the American system were private, they were also extraordinarily local. Unlike the European university, with its aspirations toward universality and its history of cosmopolitanism, the American college of the nineteenth century was a home-town entity. Most often, it was founded to advance the parochial cause of promoting a particular religious denomination rather than to promote higher learning. In a setting where no church was dominant and all had to compete for visibility, stature, and congregants, founding colleges was a valuable way to plant the flag and promote the faith. This was particularly true when the population was rapidly expanding into new territories to the west, which meant that no denomination could afford to cede the new terrain to competitors. Starting a college in Ohio was a way to ensure denominational growth, prepare clergy, and spread the word.

At the same time, colleges were founded with an eye toward civic boosterism, intended to shore up a community's claim to be a major cultural and commercial center rather than a sleepy farm town. With a college, a town could claim that it deserved to gain lucrative recognition as a stop on the railroad line, the site for a state prison, the county seat, or even the state capital. These consequences would elevate the value of land in the town, which would work to the benefit of major landholders. In this sense, the nineteenth century college, like much of American history, was in part the product of a land development scheme. In general, these two motives combined: colleges emerged as a way to advance both the interests of

particular sects and also the interests of the towns where they were lodged. Often ministers were also land speculators. It was always better to have multiple rationales and sources of support than just one ([Brown 1995](#); [Boorstin 1965](#); [Potts 1971](#)). In either case, however, the benefits of founding a college accrued to individual landowners and particular religious denominations and not to the larger public.

As a result these incentives, church officials and civic leaders around the country scrambled to get a state charter for a college, establish a board of trustees made up of local notables, and install a president. The latter (usually a clergyman) would rent a local building, hire a small and not very accomplished faculty, and serve as the CEO of a marginal educational enterprise, one that sought to draw tuition-paying students from the area in order to make the college a going concern. With colleges arising to meet local and sectarian needs, the result was the birth of a large number of small, parochial, and weakly funded institutions in a very short period of time in the nineteenth century, which meant that most of these colleges faced a difficult struggle to survive in the competition with peer institutions. In the absence of reliable support from church or state, these colleges had to find a way to get by on their own.

Into this mix of private colleges, state and local governments began to introduce public institutions. First came a series of universities established by individual states to serve their local populations. Here too competition was a bigger factor than demand for learning, since a state government increasingly needed to have a university of its own in order to keep up with its neighbors. Next came a group of land-grant colleges that began to emerge by midcentury. Funded by grants of land from the federal government, these were public institutions that focused on providing practical education for occupations in agriculture and engineering. Finally was an array of normal schools, which aimed at preparing teachers for the expanding system of public elementary education. Like the private colleges, these public institutions emerged to meet the economic needs of towns that eagerly sought to house them. And although they colleges were creatures of the state, they had only limited public funding and had to rely heavily on student tuition and private donations.

The rate of growth of this system of higher education was staggering. At the beginning of the American republic in 1790 the country had 19 institutions calling themselves colleges or universities ([Tewksbury 1932](#), Table 1; [Collins 1979](#), Table 5.2). By 1880, it had 811, which doesn't even include the normal schools. As a comparison, this was five times as many institutions as existed that year in all of Western Europe ([Ruegg 2004](#)). To be sure, the American institutions were for the most part colleges in name only, with low academic standards, an average student body of 131 ([Carter et al. 2006](#), Table Bc523) and faculty of 14 ([Carter et al. 2006](#), Table Bc571). But nonetheless this was a massive infrastructure for a system of higher education.

At a density of 16 colleges per million of population, the U.S. in 1880 had the most overbuilt system of higher education in the world ([Collins 1979](#), Table 5.2). Created in order to meet the private needs of land speculators and religious sects rather than the public interest of state and society, the system got way ahead of

demand for its services. That changed in the 1880s. By adopting parts of the German research university model (in form if not in substance), the top level of the American system acquired a modicum of academic respectability. In addition – and this is more important for our purposes here – going to college finally came to be seen as a good investment for a growing number of middle-class student-consumers.

Three factors came together to make college attractive. Primary among these was the jarring change in the structure of status transmission for middle-class families toward the end of the nineteenth century. The tradition of passing on social position to your children by transferring ownership of the small family business was under dire threat, as factories were driving independent craft production out of the market and department stores were making small retail shops economically marginal. Under these circumstances, middle class families began to adopt what Burton Bledstein calls the “culture of professionalism” (Bledstein 1976). Pursuing a profession (law, medicine, clergy) had long been an option for young people in this social stratum, but now this attraction grew stronger as the definition of profession grew broader. With the threat of sinking into the working class becoming more likely, families found reassurance in the prospect of a form of work that would buffer their children from the insecurity and degradation of wage labor. This did not necessarily mean becoming a traditional professional, where the prospects were limited and entry costs high, but instead it meant becoming a salaried employee in a management position that was clearly separated from the shop floor. The burgeoning white-collar work opportunities as managers in corporate and government bureaucracies provided the promise of social status, economic security, and protection from downward mobility. And the best way to certify yourself as eligible for this kind of work was to acquire a college degree.

Two other factors added to the attractions of college. One was that a high school degree – once a scarce commodity that became a form of distinction for middle class youth during the nineteenth century – was in danger of becoming commonplace. Across the middle of the century, enrollments in primary and grammar schools were growing fast, and by the 1880s they were filling up. By 1900, the average American 20-year-old had 8 years of schooling, which meant that political pressure was growing to increase access to high school (Goldin and Katz 2008, p. 19). This started to happen in the 1880s, and for the next 50 years high school enrollments doubled every decade. The consequences were predictable. If the working class was beginning to get a high school education, then middle class families felt compelled to preserve their advantage by pursuing college.

The last piece that fell into place to increase the drawing power of college for middle class families was the effort by colleges in the 1880s and 1990s to make undergraduate enrollment not just useful but enjoyable. Ever desperate to find ways to draw and retain students, colleges responded to competitive pressure by inventing the core elements that came to define the college experience for American students in the twentieth century. These included fraternities and sororities, pleasant residential halls, a wide variety of extracurricular entertainments, and – of course – football. College life became a major focus of popular magazines, and college

athletic events earned big coverage in newspapers. In remarkably short order, going to college became a life stage in the acculturation of middle class youth. It was the place where you could prepare for a respectable job, acquire sociability, learn middle class cultural norms, have a good time, and meet a suitable spouse. And, for those who were so inclined, was the potential fringe benefit of getting an education.

Spurred by student desire to get ahead or stay ahead, college enrollments started growing quickly. They were at 116,000 in 1879, 157,000 in 1889, 238,000 in 1899, 355,000 in 1909, 598,000 in 1919, 1,104,000 in 1929, and 1,494,000 in 1939 (Carter et al. 2006, Table Bc523). This was a rate of increase of more than 50 % a decade – not as fast as the increases that would come at midcentury, but still impressive. During this same 60-year period, total college enrollment as a proportion of the population 18-to-24 years old rose from 1.6 % to 9.1 % (Carter et al. 2006, Table Bc524). By 1930, U.S. had three times the population of the U.K. and 20 times the number of college students (Levine 1986, p. 135). And the reason they were enrolling in such numbers was clear. According to studies in the 1920s, almost two-thirds of undergraduates were there to get ready for a particular job, mostly in the lesser professions and middle management (Levine 1986, p. 40). Business and engineering were the most popular majors and the social sciences were on the rise. As David Levine put it in his important book about college in the interwar years, “Institutions of higher learning were no longer content to educate; they now set out to train, accredit, and impart social status to their students” (Levine 1986, p. 19).

Enrollments were growing in public colleges faster than in private colleges, but only by a small amount. In fact it wasn't until 1931 – for the first time in the history of American higher education – that the public sector finally accounted for a majority of college students (Carter et al. 2006, Tables Bc531 and Bc534). The increases occurred across all levels of the system, including the top public research universities; but the largest share of enrollments flowed into the newer institutions at the bottom of the system: the state colleges that were emerging from normal schools, urban commuter colleges (mostly private), and an array of public and private junior colleges that offered 2-year vocational programs.

For our purposes today, the key point is this: The American system of colleges and universities that emerged in the nineteenth century and continued until World War II was a market-driven structure that construed higher education as a private good. Until around 1880, the primary benefits of the system went to the people who founded individual institutions – the land speculators and religious sects for whom a new college brought wealth and competitive advantage. This explains why colleges emerged in such remote places long before there was substantial student demand. The role of the state in this process was muted. The state was too weak and too poor to provide strong support for higher education, and there was no obvious state interest that argued for doing so. Until the decade before the war, most student enrollments were in the private sector, and even at the war's start the majority of institutions in the system were private (Carter et al. 2006, Tables Bc510 to Bc520).

After 1880, the primary benefits of the system went to the students who enrolled. For them, it became the primary way to gain entry to the relatively secure confines of salaried work in management and the professions. For middle class families, college in this period emerged as the main mechanism for transmitting social advantage from parents to children; and for others, it became the object of aspiration as the place to get access to the middle class. State governments put increasing amounts of money into support for public higher education, not because of the public benefits it would produce but because voters demanded increasing access to this very attractive private good.

9.2 The Rise of the Cold War University

And then came the Second World War. There is no need here to recount the devastation it brought about or the nightmarish residue it left. But it's worth keeping in mind the peculiar fact that this conflict is remembered fondly by Americans, who often refer to it as the Good War ([Terkel 1997](#)). The war cost a lot of American lives and money, but it also brought a lot of benefits. It didn't hurt, of course, to be on the winning side and to have all the fighting take place on foreign territory. And part of the positive feeling associated with the war comes from the way it thrust the country into a new role as the dominant world power. But perhaps even more the warm feeling arises from the memory of this as a time when the country came together around a common cause. For citizens of the United States – the most liberal of liberal democracies, where private liberty is much more highly valued than public loyalty – it was a novel and exciting feeling to rally around the federal government. Usually viewed with suspicion as a threat to the rights of individuals and a drain on private wealth, the American government in the 1940s took on the mantle of good in the fight against evil. Its public image became the resolute face of a white-haired man dressed in red, white, and blue, who pointed at the viewer in a famous recruiting poster. Its slogan: “Uncle Sam Wants You.”

One consequence of the war was a sharp increase in the size of the U.S. government. The historically small federal state had started to grow substantially in the 1930s as a result of the New Deal effort to spend the country out of a decade-long economic depression, a time when spending doubled. But the war raised the level of federal spending by a factor of seven, from \$1,000 to \$7,000 per capita. After the war, the level dropped back to \$2,000; and then the onset of the Cold War sent federal spending into a sharp, and this time sustained, increase – reaching \$3,000 in the 1950s, 4,000 in the 1960s, and regaining the previous high of \$7,000 in the 1980s, during the last days of the Soviet Union ([Garrett and Rhine 2006](#), figure 3).

If for Americans in general World War II carries warm associations, for people in higher education it marks the beginning of the Best of Times – a short but intense period of generous public funding and rapid expansion. Initially, of course, the war brought trouble, since it sent most prospective college students into the military.

Colleges quickly adapted by repurposing their facilities for military training and other war-related activities. But the real long-term benefits came when the federal government decided to draw higher education more centrally into the war effort – first, as the central site for military research and development; and second, as the place to send veterans when the war was over. Let me say a little about each.

In the first half of the twentieth century, university researchers had to scabble around looking for funding, forced to rely on a mix of foundations, corporations, and private donors. The federal government saw little benefit in employing their services. In a particularly striking case at the start of World War, the professional association of academic chemists offered its help to the War Department, which declined “on the grounds that it already had a chemist in its employ” (Levine 1986, p. 51).¹ The existing model was for government to maintain its own modest research facilities instead of relying on the university.

The scale of the next war changed all this. At the very start, a former engineering dean from MIT, Vannevar Bush, took charge of mobilizing university scientists behind the war effort as head of the Office of Scientific Research and Development. The model he established for managing the relationship between government and researchers set the pattern for university research that still exists in the U.S. today: Instead of setting up government centers, the idea was to farm out research to universities. Issue a request for proposals to meet a particular research need; award the grant to the academic researchers who seemed best equipped to meet this need; and pay 50% or more overhead to the university for the facilities that researchers would use. This method drew on the expertise and facilities that already existed at research universities, which both saved the government from having to maintain a costly permanent research operation and also gave it the flexibility to draw on the right people for particular projects. For universities, it provided a large source of funds, which enhanced their research reputations, helped them expand faculty, and paid for infrastructure. It was a win-win situation. It also established the entrepreneurial model of the university researcher in perpetual search for grant money. And for the first time in the history of American higher education, the university was being considered a public good, whose research capacity could serve the national interest by helping to win a war.

If universities could meet one national need during the war by providing military research, they could meet another national need after the war by enrolling veterans. The GI Bill of Rights, passed by congress in 1944, was designed to pay off a debt and resolve a manpower problem. Its official name, the Servicemen’s Readjustment Act of 1944, reflects both aims. By the end of the war there were 15 million men and women who had served in the military, who clearly deserved a reward for their years of service to the country. The bill offered them the opportunity to continue their education at federal expense, which included attending the college of their choice. This opportunity also offered another public benefit, since it responded to

¹ Under pressure of the war effort, the department eventually relented and enlisted the help of chemists to study gas warfare. But the initial response is telling.

deep concern about the ability of the economy to absorb this flood of veterans. The country had been sliding back into depression at the start of the war, and the fear was that massive unemployment at war's end was a real possibility. The strategy worked. Under the GI Bill, about two million veterans eventually attended some form of college. By 1948, when veteran enrollment peaked, American colleges and universities had one million more students than 10 years earlier (Geiger 2004, pp. 40–41; Carter et al. 2006, Table Bc523). This was another win-win situation. The state rewarded national service, headed off mass unemployment, and produced a pile of human capital for future growth. Higher education got a flood of students who could pay their own way. The worry, of course, was what was going to happen when the wartime research contracts ended and the veterans graduated.

That's where the Cold War came in to save the day. And the timing was perfect. The first major action of the new conflict – the Berlin Blockade – came in 1948, the same year that veteran enrollments at American colleges reached their peak. If World War II was good for American higher education, the Cold War was a bonanza. The hot war meant boom and bust – providing a short surge of money and students followed by a sharp decline. But the Cold War was a prolonged effort to contain Communism. It was sustainable because actual combat was limited and often carried out by proxies. For universities this was a gift that, for 30 years, kept on giving. The military threat was massive in scale – nothing less than the threat of nuclear annihilation. And supplementing it was an ideological challenge – the competition between two social and political systems for hearts and minds. As a result, the government needed top universities to provide it with massive amounts of scientific research that would support the military effort. And it also needed all levels of the higher education system to educate the large numbers of citizens required to deal with the ideological menace. We needed to produce the scientists and engineers who would allow us to compete with Soviet technology. We needed to provide high-level human capital in order to promote economic growth and demonstrate the economic superiority of capitalism over communism. And we needed to provide educational opportunity for our own racial minorities and lower classes in order to show that our system is not only effective but also fair and equitable. This would be a powerful weapon in the effort to win over the third world with the attractions of the American Way. The Cold War American government treated higher education system as a highly valuable public good, which would make a large contribution to the national interest; and the system was pleased to be the object of so much federal largesse (Loss 2011).

On the research side, the impact of the Cold War on American universities was dramatic. The best way to measure this is by examining patterns of federal research and development spending over the years, which traces the ebb and flow of national threats across the last 60 years. Funding rose slowly from \$13 billion in 1953 (in constant 2014 dollars) until the Sputnik crisis (after the Soviets succeeded in placing the first satellite in earth orbit), when funding jumped to \$40 billion in 1959 and rose rapidly to a peak of \$88 billion in 1967. Then the amount backed off to \$66 billion in 1975, climbing to a new peak of \$104 billion in 1990 just before the collapse of the Soviet Union and then dropping off. It started growing again in 2002

after the attack on the twin towers, reaching an all-time high of \$151 billion in 2010 and has been declining ever since (AAAS 2014).²

Initially, defense funding accounted for 85 % of federal research funding, gradually falling back to about half in 1967, as nondefense funding increased, but remaining in a solid majority position up until the present. For most of the period after 1957, however, the largest element in nondefense spending was research on space technology, which arose directly from the Soviet Sputnik threat. If you combine defense and space appropriations, this accounts for about three-quarters of federal research funding until 1990. Defense research closely tracked perceived threats in the international environment, dropping by 20 % after 1989 and then making a comeback in 2001. Overall, federal funding during the Cold War for research of all types grew in constant dollars from \$13 billion in 1953 to \$104 billion in 1990, an increase of 700 %. These were good times for university researchers (AAAS 2014).

At the same time that research funding was growing rapidly, so were college enrollments. The number of students in American higher education grew from 2.4 million in 1949 to 3.6 million in 1959; but then came the 1960s, when enrollments more than doubled, reaching eight million in 1969. The number hit 11.6 million in 1979 and then began to slow down – creeping up to 13.5 million in 1989 and leveling off at around 14 million in the 1990s (Carter et al. 2006, Table Bc523; NCES 2014, Table 303.10). During the 30 years between 1949 and 1979, enrollments increased by more than nine million students, a growth of almost 400 %. And the bulk of the enrollment increases in the last two decades were in part-time students and at 2-year colleges. Among 4-year institutions, the primary growth occurred not at private or flagship public universities but at regional state universities, the former normal schools. The Cold War was not just good for research universities; it was also great for institutions of higher education all the way down the status ladder.

In part we can understand this radical growth in college enrollments as an extension of the long-term surge in consumer demand for American higher education as a private good. Recall that enrollments started accelerating late in the nineteenth century, when college attendance started to provide an edge in gaining middle class jobs. This meant that attending college gave middle-class families a way to pass on social advantage while attending high school gave working-class families a way to gain social opportunity. But by 1940, high school enrollments had become universal. So for working-class families, the new zone of social opportunity became higher education. This increase in consumer demand provided a market-based explanation for at least part of the flood of postwar enrollments.

² Not all of this funding went into the higher education system. Some went to stand-alone research organizations such as the Rand Corporation and American Institute of Research. But these organizations in many ways function as an adjunct to higher education, with researcher moving freely between them and the university.

At the same time, however, the Cold War provided a strong public rationale for broadening access to college. In 1946, President Harry Truman appointed a commission to provide a plan for expanding access to higher education, which was first time in American history that a president sought advice about education at any level. The result was a six-volume report with the title *Higher Education for American Democracy*. It's no coincidence that the report was issued in 1947, the starting point of the Cold War. The authors framed the report around the new threat of atomic war, arguing that "It is essential today that education come decisively to grips with the world-wide crisis of mankind" (President's Commission 1947, vol. 1, p. 6). What they proposed as a public response to the crisis was a dramatic increase in access to higher education.

The American people should set as their ultimate goal an educational system in which at no level – high school, college, graduate school, or professional school – will a qualified individual in any part of the country encounter an insuperable economic barrier to the attainment of the kind of education suited to his aptitudes and interests.

This means that we shall aim at making higher education equally available to all young people, as we now do education in the elementary and high schools, to the extent that their capacity warrants a further social investment in their training (President's Commission 1947, vol. 1, p. 36).

Tellingly, the report devotes a lot of space exploring the existing barriers to educational opportunity posed by class and race – exactly the kinds of issues that were making liberal democracies look bad in light of the egalitarian promise of communism.

9.3 Decline of the System's Public Mission

So in the mid twentieth century, Americans went through an intense but brief infatuation with higher education as a public good. Somehow college was going to help save us from the communist menace and the looming threat of nuclear war. Like World War II, the Cold War brought together a notoriously individualistic population around the common goal of national survival and the preservation of liberal democracy. It was a time when every public building had an area designated as a bomb shelter. In the elementary school I attended in the 1950s, I can remember regular air raid drills. The alarm would sound and teachers would lead us downstairs to the basement, whose concrete-block walls were supposed to protect us from a nuclear blast. Although the drills did nothing to preserve life, they did serve an important social function. Like Sunday church services, these rituals drew individuals together into communities of faith where we enacted our allegiance to a higher power.

For American college professors, these were the glory years, when fear of annihilation gave us a glamorous public mission and what seemed like an endless flow of public funds and funded students. But it did not – and could not – last. Wars can bring great benefits to the home front, but then they end. The Cold War lasted

longer than most, but this longevity came at the expense of intensity. By the 1970s, the U.S. had lived with the nuclear threat for 30 years without any sign that the worst case was going to materialize. You can only stand guard for so long before attention begins to flag and ordinary concerns start to push back to the surface. In addition, waging war is extremely expensive, draining both public purse and public sympathy. The two Cold War conflicts that engaged American troops cost a lot, stirred strong opposition, and ended badly, providing neither the idealistic glow of the Good War nor the satisfying closure of unconditional surrender by the enemy. Korea ended with a stalemate and the return to the status quo ante bellum. Vietnam ended with defeat and the humiliating image in 1975 of the last Americans being plucked off a rooftop in Saigon – which the victors then promptly renamed Ho Chi Minh City.

The Soviet menace and the nuclear threat persisted, but in a form that – after the grim experience of war in the rice paddies – seemed distant and slightly unreal. Add to this the problem that, as a tool for defeating the enemy, the radical expansion of higher education by the 1970s did not appear to be a cost-effective option. Higher ed is a very labor-intensive enterprise, in which size brings few economies of scale, and its public benefits in the war effort were hard to pin down. As the national danger came to seem more remote, the costs of higher ed became more visible and more problematic. Look around any university campus, and the primary beneficiaries of public largesse seem to be private actors – the faculty and staff who work there and the students whose degrees earn them higher income. So about 30 years into the Cold War, the question naturally arose: Why should the public pay so much to provide cushy jobs for the first group and to subsidize the personal ambition of the second? If graduates reap the primary benefits of a college education, shouldn't they be paying for it rather than the beleaguered taxpayer?

The 1970s marked the beginning of the American tax revolt, and not surprisingly this revolt emerged first in the bellwether state of California. Fueled by booming defense plants and high immigration, California had a great run in the decades after 1945. During this period, the state developed the most comprehensive system of higher education in the country. In 1960 it formalized this system with a Master Plan that offered every Californian the opportunity to attend college in one of three state systems. The University of California focused on research, graduate programs, and educating the top high school graduates. California State University (developed mostly from former teachers colleges) focused on undergraduate programs for the second tier of high school graduates. The community college system offered the rest of the population 2-year programs for vocational training and possible transfer to one of the two university systems. By 1975, there were 9 campuses in the University of California, 23 in California State University, and xx in the community college system, with a total enrollment across all systems of 1.5 million students – accounting for 14% of the college students in the U.S. (Carter et al. 2006, Table Bc523; Douglass 2000, Table 1). Not only was the system enormous, but the Master Plan declared it illegal to charge California students tuition. The biggest and best public system of higher education in the country was free.

And this was the problem. What allowed the system to grow so fast was a state fiscal regime that was quite rare in the American context – one based on high public services supported by high taxes. After enjoying the benefits of this combination for a few years, taxpayers suddenly woke up to the realization that this approach to paying for higher education was at core un-American. For a country deeply grounded in liberal democracy, the system of higher ed for all at no cost to the consumer looked a lot like socialism. So, of course, it had to go. In the mid-1970s the country's first taxpayer revolt emerged in California, culminating in a successful campaign in 1978 to pass a state-wide initiative that put a limit on increases in property taxes. Other tax limitation initiatives followed ([Martin 2008](#)). As a result, the average state appropriation per student at University of California dropped from about \$3400 (in 1960 dollars) in 1987 to \$1100 in 2010, a decline of 68 % ([UC Data Analysis 2014](#)). This quickly led to a steady increase in fees charged to students at California's colleges and universities (It turned out that tuition was illegal but demanding fees from students was not.) In 1960 dollars, the annual fees for in-state undergraduates at the University of California rose from \$317 in 1987 to \$1,122 in 2010, an increase of more than 250 % ([UC Data Analysis 2014](#)). This pattern of tax limitations and tuition increases spread across the country. Nationwide during the same period of time, the average state appropriation per student at a 4 year public college fell from \$8500 to \$5900 (in 2012 dollars), a decline of 31 %, while average undergraduate tuition doubled, rising from \$2600 to \$5200 ([SHEEO 2013](#), Figure 3).

The decline in the state share of higher education costs was most pronounced at the top public research universities, which had a wider range of income sources. By 2009, the average such institution was receiving only 25 % of its revenue from state government ([National Science Board 2012](#), Figure 5). An extreme case is University of Virginia, where in 2013 the state provided less than 6 % of the university's operating budget ([University of Virginia 2014](#)).

While these changes were happening at the state level, the federal government was also backing away from its Cold War generosity to students in higher education. Legislation such as the National Defense Education Act (1958) and Higher Education Act (1965) had provided support for students through a roughly equal balance of grants and loans. But in 1980 the election of Ronald Reagan as president meant that the push to lower taxes would become national policy. At this point, support for students shifted from cash support to federally guaranteed loans. The idea was that a college degree was a great investment for students, which would pay long-term economic dividends, so they should shoulder an increasing share of the cost. The proportion of total student support in the form of loans was 54 % in 1975, 67 % in 1985, and 78 % in 1995, and the ratio has remained at that level ever since ([McPherson and Schapiro 1999](#), Table 3.3; [College Board 2013](#), Table 1). By 1995, students were borrowing \$41 billion to attend college, which grew to \$89 billion in 2005 ([College Board 2014](#), Table 1). At present, about 60 % of all students accumulate college debt, most of it in the form of federal loans, and the total student debt load has passed \$1 trillion.

At the same time that the federal government was cutting back on funding college students, it was also reducing funding for university research. As I mentioned earlier, federal research grants in constant dollars peaked at about \$100 billion in 1990, the year after the fall of the Berlin wall – a good marker for the end of the Cold War. At this point defense accounted for about two-thirds of all university research funding – three-quarters if you include space research. Defense research declined by about 20 % during the 1990s and didn't start rising again substantially until 2002, the year after the fall of the Twin Towers and the beginning of the new existential threat known as the War on Terror. Defense research reached a new peak in 2009 at a level about a third above the Cold War high, and it has been declining steadily ever since. Increases in nondefense research helped compensate for only a part of the loss of defense funds (AAAS 2014).

9.4 Conclusion

The American system of higher education came into existence as a distinctly private good. It arose in the nineteenth century to serve the pursuit of sectarian advantage and land speculation, and then in the twentieth century it evolved into a system for providing individual consumers a way to get ahead or stay ahead in the social hierarchy. Quite late in the game it took World War II to give higher education an expansive national mission and reconstitute it as a public good. But hot wars are unsustainable for long, so in 1945 the system was sliding quickly back toward public irrelevance before it was saved by the timely arrival of the Cold War. As I have shown, the Cold War was very very good for American system of higher education. It produced a massive increase in funding by federal and state governments, both for university research and for college student subsidies, and – more critically – it sustained this support for a period of three decades. But these golden years gradually gave way before a national wave of taxpayer fatigue and the surprise collapse of the Soviet Union. With the nation strapped for funds and with its global enemy dissolved, it no longer had the urgent need to enlist America's colleges and universities in a grand national cause. The result was a decade of declining research support and static student enrollments. In 2002 the wars in Afghanistan and Iraq brought a momentary surge in both, but these measures peaked after only 8 years and then went again into decline. Increasingly, higher education is returning to its roots as a private good.

So what are we to take away from this story of the rise and fall of the Cold War university? One conclusion is that the golden age of the American university in the mid twentieth century was a one-off event. Wars may be endemic but the Cold War was unique. So American university administrators and professors need to stop pining for a return to the good old days and learn how to live in the post-Cold-War era. The good news is that the impact of the surge in public investment in higher education has left the system in a radically stronger condition than it was in before World War II. Enrollments have gone from 1.5 million to 21 million; federal

research funding has gone from zero to \$135 billion; federal grants and loans to college students have gone from zero to \$170 billion (NCES 2014, Table 303.10; AAAS 2014; College Board 2014, Table 1). And the American system of colleges and universities went from an international also-ran to a powerhouse in the world economy of higher education. Even though all of the numbers are now dropping, they are dropping from a very high level, which is the legacy of the Cold War. So really, we should stop whining. We should just say thanks to the bomb for all that it did for us and move on.

The bad news, of course, is that the numbers really are going down. Government funding for research is declining and there is no prospect for a turnaround in the foreseeable future. This is a problem because the federal government is the primary source of funds for basic research in the U.S.; corporations are only interested in investing in research that yields immediate dividends. During the Cold War, research universities developed a business plan that depended heavily on external research funds to support faculty, graduate students, and overhead. That model is now broken. The cost of pursuing a college education is increasingly being borne by the students themselves, as states are paying a declining share of the costs of higher education. Tuition is rising and as a result student loans are rising. Public research universities are in a particularly difficult position because their state funding is falling most rapidly. According to one estimate, at the current rate of decline the average state fiscal support for public higher education will reach zero in 2059 (Mortenson 2012).

But in the midst of all of this bad news, we need to keep in mind that the American system of higher education has a long history of surviving and even thriving under conditions of at best modest public funding. At its heart, this is a system of higher education based not on the state but the market. In the hardscrabble nineteenth century, the system developed mechanisms for getting by without the steady support of funds from church or state. It learned how to attract tuition-paying students, give them the college experience they wanted, get them to identify closely with the institution, and then milk them for donations when they graduate. Football, fraternities, logo-bearing T shirts, and fund-raising operations all paid off handsomely. It learned how to adapt quickly to trends in the competitive environment, whether it's the adoption of intercollegiate football, the establishment of research centers to capitalize on funding opportunities, or providing students with food courts and rock-climbing walls. Public institutions have a long history of behaving much like private institutions because they were never able to count on continuing state funding.

This system has worked well over the years. Along with the Cold War, it has enabled American higher education to achieve an admirable global status. By the measures of citations, wealth, drawing power, and Nobel prizes, the system has been very effective. But it comes with enormous costs. Private universities have serious advantages over public universities, as we can see from university rankings. The system is the most stratified structure of higher education in the world. Top universities in the U.S. get an unacknowledged subsidy from the colleges at the bottom of the hierarchy, which receive less public funding, charge less tuition, and

receive less generous donations. And students sort themselves into institutions in the college hierarchy that parallels their position in the status hierarchy. Students with more cultural capital and economic capital gain greater social benefit from the system than those with less, since they go to college more often, attend the best institutions, and graduate at a much higher rate. Nearly everyone can go to college in the U.S., but the colleges that are most accessible provide the least social advantage.

So, conceived and nurtured into maturity as a private good, the American system of higher education remains a market-based organism. It took the threat of nuclear war to turn it – briefly – into a public good. But these days seem as remote as the time when schoolchildren huddled together in a bomb shelter.

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