

# Ash Carter Autobiography (2006)

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*To stimulate the thinking of students about their own careers and lives, the Kennedy School of Government asks its faculty to provide short autobiographies. The following is mine.*

One of the marvelous things about the Kennedy School is that few here have linear biographies. The Kennedy School is an eclectic place that requires faculty to combine many academic disciplines, in my case scientific and non-scientific, and many different modes of thought, in my case both those of the University and those of the policy-making world.

## **Two Intellectual Worlds**

High school in Philadelphia had left me hungry intellectually. I attended a large public school with thousands of students. In the afternoons I had sports practice and games every season. Then, in the evenings and weekends, I worked at various jobs. First, I worked at a car wash at age eleven. Eleven was the earliest age at which you could get working papers in Philadelphia. I was shortly fired from my first job for wise-mouthing the owner. In subsequent years, I worked pumping gas and repairing cars at a gas station on North Broad Street (pumping gas for 29.9 cents per gallon!), as an orderly in a hospital, as a mate on a fishing boat, and even as a counselor on a suicide prevention hotline. I had little time for myself and even less to do the reading and research that I was craving.

Therefore when I rather unexpectedly was accepted into a good college, Yale, I was determined to make the most of it. I disdained the “preppies” and other privileged students who seemed to regard college as an opportunity to enjoy freedom at long last. I was an intensely serious student, what would probably be called today a “grind.”

At Yale I ended up pursuing two entirely different majors – physics and medieval history. There was no relationship between them in my mind except that both fascinated me. I liked dusty archives, learning to decipher manuscripts in medieval script, and learning all the languages necessary to read the primary and secondary historical literature, especially Latin. I wrote a senior thesis on the use of Latin by contemporary monastic writers to describe the vibrant world of 12th century Flanders in which they lived. I also enjoyed English legal history and the foundations of the Common Law as established in the 11th through 13th centuries. I also did a lot of work on the hagiography of Saint Denis, patron saint of the French monarchy during its formative period in the 9th century.

Physics was entirely different: clean and modern, logical and mathematical. I was lucky enough to be asked by a professor to assist him on an experiment in elementary particle physics at the then-new Fermilab outside of Chicago, home of the world’s largest particle accelerator. I would fly back and forth from New Haven to Chicago, feeling very serious and very important. We were involved in the search for the quark, a sub-atomic particle then only theorized. I eventually wrote my senior thesis, which was later published, on the “charmed quark.”

As far as course choice was concerned, I had no interest in between the extremes of medieval history (history, language, philosophy) on the one hand, and science (physics, chemistry, mathematics) on the other. It may sound shocking to Kennedy School students, but I have taken exactly zero social science courses in my entire life. My arrogant view at the time was that life would eventually teach me political science, sociology, psychology, and even economics, but it would never teach me linear algebra or Latin. It seemed best to get my tuition's worth from the other topics and get my social science for free!

The end of college brought the usual crisis of what to do next. Such a bimodal distribution of training and interests made the problem more acute. The default solution was to go to medical school, since my father was a physician and I had worked in hospitals back in Philadelphia.

Fortunately, I was rescued from this dilemma by the awarding of a Rhodes scholarship, entitling me to free study at Oxford University. Many Rhodes scholars pursue a second Bachelors degree or a Masters degree at Oxford, but I was still a man in a hurry. I decided I would use the free funding to get my doctorate in theoretical physics. Oxford did not have enough money to have world class experimental facilities in elementary particle physics, but it had a great theoretical physics department. All you need for theoretical physics is a pencil and paper and the ability to sit for hours of intense concentration with a page of equations in front of you. I worked on the theory of quantum chromodynamics, the quantum field theory then postulated to explain the behavior of nuclear reactions and the structure of the sub-atomic zoo of particles. Unfortunately, it was a mathematical theory so complex that its equations could not be solved. I found a way to solve its

equations in certain special circumstances, thus allowing it to be tested against experiments. Oxford was a very lively intellectual community. The expatriate Americans would spend long hours debating the topics of the day. Much of my otherwise lacking social science training occurred by osmosis in the pubs with Rhodes friends.

I had no doubt, however, that I wanted a career of thinking and writing in academia, then meaning theoretical physics. I therefore went back to the United States to start to climb the academic ladder in physics, beginning in the usual way with a postdoctoral appointment. I wrote several papers. The one of which I am proudest and which is still frequently cited, was on “time reversal invariance,” the proposition that the world could run backwards according to the same laws by which it runs forwards. While this may seem like a bizarre question to ask, such a symmetry in nature, if it exists, is actually a very fundamental property of our universe.

### **A Turning Point**

I was happily building an academic career in theoretical physics when a serendipitous opportunity arose which opened up an entirely new vista for me. The year was 1979 and the Cold War was ratcheting up to a new peak of tension and the nuclear arsenals to new levels of potential destructiveness. My field of physics dated itself to the wartime Manhattan Project, and many of the senior figures in my field had long participated in the furtherance, but also in the control, of military technology. It was their view that their successor generations had a responsibility to remain involved in these matters. Thus, several senior figures in the field urged me to take a one-year leave of absence from

theoretical physics to join a study team of scientists being assembled at the Congressional Office of Technology Assessment. We were supposed to analyze all of the various ways that the MX intercontinental ballistic missile could be protected from a nuclear first strike from the Soviet Union. The Carter administration had chosen a Rube Goldberg scheme in which 200 MX missiles would be hidden amongst 4,600 shelters in the Southwest desert. This “basing mode” would have too many holes for the Soviet Union to attack all at once, and if constructed it would have been the largest civil engineering project in human history. My team’s task was to examine the alternatives. And I mean every alternative. We looked at putting MX missiles into everything that moved over, on, or under the surface of the earth. At one point, I even examined the possibility of putting the 200,000 pound MX missile on balloons and having them fly continuously over the United States so the Soviets would not be able to track them. Had they been built, these 14 million cubic foot airships would have been the largest blimps since the Graf’s Zeppelin! With the Cold War over it is now hard to believe that such things were taken seriously. But I had the luck to work on what was then a very hot issue with a very talented team of scientists. The experience left me with a minor beam of limelight – a vivid sense of how superficial and even dishonest the “analysis” behind important public policies can be, and above all a deep concern with the problems of international security.

This last was entirely new to me. Heretofore I had not been interested much in public affairs nor studied them nor participated in student politics at Yale or Oxford. But the enormity of the Cold War’s dangers could not be ignored. I decided I had to change careers. I also flattered myself into believing that the two poles of my training, physics and history, came together in the

effort to cope with the Cold War. I thought I might have something unique to contribute.

Having made this decision, what to do next? I couldn't just return to university life. I decided I should go to the heart of things, the Pentagon. I joined the "systems analysis" department in the Office of the Secretary of Defense. These were what McNamara called his "whiz kids." My job covered strategic nuclear forces, strategic defenses including missile defenses, space and intelligence systems, command and control systems, and nuclear weapons. I could easily understand these technologies and some of the policy issues that arose. I enjoyed the job and actually liked working at what we denizens of the Pentagon all jokingly called "ground zero."

### **Coming to the Kennedy School**

But I was pretty far down in the bureaucracy and felt stifled by it. Was there any way I could mix academics, my first career, with international security affairs, my second? There were very few places where that seemed possible and both were in Cambridge: MIT and Harvard. After a brief time at MIT, I came to Harvard's Kennedy School. Within a few years, I got tenure at what was considered a tender age. For me this was a dream come true: the ability to think and write about world affairs, to teach students to do things better than their parents' generation had, and on occasion to illuminate and influence policy.

Three things stand out in my mind from my early career at the Kennedy School. When I first came to the Kennedy School, I was embroiled in the debate over President Reagan's so-called "Star Wars" scheme. In his rhetoric at least, President Reagan had

promised to make the tens of thousands of the Soviet Union's nuclear weapons (a number then growing rapidly) "impotent and obsolete" by building a missile shield over the United States. From a technological point of view, this prospect had been studied for many years by the defense community, including by me. Billions had been spent on it. It had proven to be one of the most difficult military missions of all, and thus far none of the systems devised were very capable of blunting the effects of a nuclear onslaught, still less making it "impotent." The new ingredient President Reagan injected, besides the rhetoric, was the possibility of basing such defenses in space and using lasers, particle beams or other exotic technologies to shoot down attacking missiles. These were technologies I understood very well. Accordingly I did yet another study for the Congressional Office of Technology Assessment, this time from Cambridge. I found that while missile defenses might serve some specialized purposes like defending American missiles, there was no reasonable prospect of defending the country or population as a whole. Moreover, a balanced technical analysis of the "Star Wars" schemes for lasers and so on in space easily revealed that these technologies had staggering practical problems and could be evaded by the Soviet Union. I wrote this up in a fairly sober and straightforward fashion, never imagining the storm it would cause. The report was the first of many to throw cold water on the "Star Wars" idea. Within the scientific and technological community there was substantial consensus that my analysis was correct. But mine was the first authoritative report to say that the emperor had no clothes. It found its way into the Oval Office itself. I found myself in the middle of a political storm, with most of the scientific community on my side but one very powerful individual, the President of the United States, on the other. Well, it was certainly a way of getting one's name and work known quickly.

A second problem I worked on in my early years at the Kennedy School was related to the first. As the Soviet Union broke up, it became apparent that the danger of a Soviet missile attack was being replaced by a new and unprecedented danger: the possibility that the Soviet Union's nuclear arsenal might fall into entirely new and unaccustomed hands. This was the first time in the history of the nuclear age that a nuclear power had disintegrated. New countries and new governmental systems were coming into possession of nuclear weapons, and in the economic and social chaos of Russia it was entirely possible that terrorists, mutineers, or just plain criminals would also inherit the nuclear legacy of the Soviet Union. I found that two senators, Sam Nunn of Georgia and Richard Lugar of Indiana, shared my concern. I assisted them in drafting what came to be known as the Nunn-Lugar legislation offering direct U.S. assistance through the defense budget for safeguarding and eliminating the Soviet Union's weapons of mass destruction. This story is told at some length in my book with Bill Perry, *Preventive Defense: A New Security Strategy for America*.

### **Directing CSIA**

Third, during this time I succeeded founding director Paul Doty and Joseph S. Nye, Jr. as director of the Kennedy School's Center for Science and International Affairs where Steven Miller was Executive Director. At the Dean's request, I gathered the School's environment and natural resources and science, technology and public policy programs into the Center. I tried to make the researchers associated with the Center happy and productive, and to help train a new generation of scholars and policy makers in this field. I raised a great deal of money and attended a dinner at the Kennedy School almost every night on one subject or another.

During this time I also began my friendship and collaboration with the then co-director of Stanford University's sister center (CISAC), William J. Perry. Bill, like me, was technically trained. A generation older than I, he was a wise mentor and altogether admirable in both intellect and character. He later became my boss at the Pentagon and continues to be a close friend and academic collaborator.

I was thus at the helm of CSIA when the 1992 presidential elections occurred. I was not then and still am not enough of a political animal to be part of any presidential campaigns. But when the first Democrat in twelve years was elected, a number of my friends in the defense community began to approach me about my willingness to serve once again in the Pentagon. In particular, I knew the then-chairman of the House Armed Services Committee, Les Aspin, who was President Clinton's pick to be Secretary of Defense. Next, Les picked Bill Perry to be his deputy. Les and Bill immediately asked me to join the team.

My five years as CSIA director had been fulfilling, but I was getting restless. Academic administration was beginning to have a "been there, done that" feel to me. I felt I could responsibly leave the Center, at least for a short time. I had squirreled away a rather fantastic sum of money, almost \$3 million, above and beyond the grants and endowment income the Center usually received. So I was leaving my successor a Center in very good shape – good morale, good substance, good finances. In very short order, I found myself in Washington.

## **To the Pentagon**

On January 22, 1993 there were three new people in the Pentagon: Les Aspin, Bill Perry, and myself. Over subsequent weeks, additional appointments were made until the team filled itself out. The process was every bit as chaotic as one might imagine in a democracy and I cannot say that my first few months as Assistant Secretary of Defense were particularly happy ones.

For starters, I was not Assistant Secretary of Defense; I was only a nominee awaiting Senate confirmation. Still, Secretary Aspin asked me to come to the Pentagon and work every day as an advisor, though not yet with the powers of an assistant secretary. This I agreed to do. For the next five and a half months, I lived in a hotel room near the Pentagon, commuting home on weekends (when I could get away) to see my five-year old son and my daughter who was then not one year old. Since I had left the Kennedy School, I did not feel I could accept a paycheck from Harvard during this period of ambiguous status. Nor could I accept my salary from the Pentagon. So here I was, a young man with no money whatsoever and a family to feed, working sixteen hour days, and not getting a paycheck.

This would have been okay for a short period of time, but as the months dragged on, the confirmation process slowed. Congress was using the confirmation process, as both parties frequently do, to harass the new Democratic administration. The ultimate in exasperation for me came when a few members of the Senate began accusing some nominees, including me, of exercising the authorities of their offices before confirmation. Indeed, I was in the Pentagon every single day and was part of many of Secretary of Defense Aspin's inner council discussions. Despite a

conscientious effort never to cross the line into official acts, the line was perilously wide, and on at least one occasion I almost surely did cross that line by putting my signature on a document that could reasonably be construed as “giving an order” even though I was not yet empowered by the Senate to give orders.

My confirmation was put “on hold,” meaning that I was left to dangle longer in purgatory, maybe even to be accused of yet some other transgression! All my friends who knew the U.S. Senate said I shouldn’t worry, that it wasn’t “personal,” but “only politics.” But for me it was worrisome indeed -- and very personal. By May I was so annoyed at the process that I wrote a letter to Aspin that I was going home to Boston and would not be back unless and until I was confirmed. In early July I was indeed confirmed, and my family and I, by now deprived of all of our savings, moved from our beautiful old rambling Victorian house in Winchester to a small brick house in North Arlington.

I was Assistant Secretary of Defense for International Security Policy – responsible for all strategic matters such as proliferation of weapons of mass destruction and dual use technologies around the world; dealing with the collapse of the Soviet Union including its fearsome arsenal; and for the U.S. nuclear arsenal and other strategic capabilities like missile defenses. I was also chairman of NATO’s High Level Group. All this was quite heady and initially quite comical, as I had worked previously in the bowels of the Pentagon and had long been a member of the Defense Science Board, advising successive Secretaries of Defense on technical and classified matters. But I had never held high office. Suddenly, a huge and eager staff and a simply overwhelming set of responsibilities surrounded me. It was a steep learning curve.

Government service at that level frequently feels like a whirlwind. Your many bosses – the President, the Secretary of Defense, the Congress – can surprise you at any time with a new request. Public service at senior levels in Washington is a little bit like being a Christian in the Coliseum. You never know when they are going to release the lions and have you torn apart for the amusement of onlookers. And then, of course, if your job is world affairs, reality intrudes even in Washington. Crises and emergencies and conflicts erupt around the world on their schedule, not yours. Nothing could be further from the academic schedule, when you can find time to think and reflect and plan out your day.

On the other hand, it is absolutely vital to have an agenda in government. If you simply cope with what comes over the transom, you are not serving your trust properly. The career professionals in the government are sometimes exceedingly gifted and they are always deeply grounded in the issues and experienced at policy-making. But they also sometimes lack freshness and a vision of how policy could be different and better. Despite its flaws it is one of the strengths of the American system that we ventilate the upper levels of our government periodically. Even though there are amateurs and even hacks who make it into high positions through this system, on balance it seems to me exceedingly healthy and the senior officials who go “in and out” exceedingly valuable. I served with several other Kennedy School faculty in the Clinton administration. I was proud to see the contributions they made. Joe Nye, for example, was for a time another assistant secretary of defense. He and I “divided the world.” Joe had served in government before, and I learned a lot from watching him. Among his many accomplishments was renewing our defense alliance with Japan, the key to our entire

security policy in East Asia. David Ellwood was an Assistant Secretary over in the Department of Health and Human Services, advising President Clinton on how to deal with those at home who are less fortunate than we are in government or at the Kennedy School.

I had several definite personal commitments resulting from work I had done at the Kennedy School to guide me. First, I wanted to implement the Nunn-Lugar program in whose birthing I had participated. Second, I had new ideas on how to combat proliferation, an approach I called “counterproliferation.” Third, I wanted to establish new relations in the defense field with all of the new states of Eastern Europe and the former Soviet Union, to try to solidify as soon as possible the security gains associated with the end of the Cold War. I also had my share of emergencies to deal with, like the North Korean nuclear crisis that brought us to the brink of war in the summer of 1994. I spent much of that year believing that the odds of a horribly destructive war were not less than 50-50.

Though I never breathed a word of it to anyone in Washington (otherwise I would immediately become a lame duck), I believed I could only stay in Washington for one term with the Clinton administration. I was at the Pentagon all day and half the night. I was very frequently out of the country, traveling with the President, the Vice President, the Secretary of State or the Secretary of Defense on their foreign trips; or leading delegations myself. I had a secure telephone next to my bed that could ring at any moment. But I also had children who were but one and five years old when we came to Washington. As 1996 approached, Ava was nearing kindergarten age and I had spent very little time with her since she was a baby. Will had gone through the first years of

elementary school with a dad who rarely came to his school events and who could hardly stay awake during Saturday soccer games. They deserved a great deal more. We had rented our home in Winchester to a succession of very nice families, but the market rents did not cover the mortgage and no one takes care of your lawn and house like you do. We were a young family and we were going broke.

I had long since resigned my tenure at Harvard. Harvard only allows a two-year leave of absence. I had not felt that I could abandon ship in the Pentagon after two years. I was in the middle of too much. I had built too much, and my superiors depended on me too much. Therefore, I would have to be re-appointed at the Kennedy School in order to come back after four years. By that time I was coming to feel that I had accomplished, or at least launched, much of what I had set out to do four years earlier, and I could even feel the first signs that I was becoming less energetic and creative and more bureaucratic in my thinking. I had twice been awarded the Pentagon's highest award, had been the "hero" of a front page, weeklong series in The Washington Post, and I was reasonably proud of what I had done. I felt ready to leave.

The hardest part about leaving the Pentagon was leaving the people. Not only was my staff wonderful and talented, but I had colleagues all over Washington with whom I had worked and taken risks for the right policy on many occasions. Most wrenching to me was leaving my foreign colleagues. In almost every country around the world I had a counterpart with whom I had worked under dangerous and difficult circumstances. We liked each other and respected one another; in a funny way we had come to depend on each other to hold our countries' policies together. I would miss all these things terribly.

## **Preventive Defense**

When I got back to Cambridge things were at first rather disorienting. I was used to feeling at the center of world affairs and had grown accustomed to a fast pace. Now it was back to a slower pace and to learning about what was going on in the world from the newspapers. But very quickly I rediscovered the amazing energy and intellect of our faculty and students. I even began to have ideas again. Then, after four years of never even writing a letter for myself, I began to write again. Like those charts that show monkeys slowly standing erect until they become homo sapiens, I got my intellectual life back. My boss and friend Bill Perry also left the Pentagon and returned to Stanford. We resumed our collaboration on a host of world problems that were bothering us. We founded the Preventive Defense Project, a research collaboration of scholars at Harvard and Stanford. We wrote a book entitled *Preventive Defense: A New Security Strategy for America* that spelled out our view of the post-Cold War world and how to avert its dangers. I began to teach the first defense policy courses that the Kennedy School had offered for years. The students seemed to like them. I certainly did.

I remained strongly involved in Washington affairs as the only member of both the Defense Science Board and the Defense Policy Board and as a frequent advisor to those whom I used to serve more directly. I was permitted by Harvard to re-enter government, officially but part-time, during 1998-2000 to serve as Bill Perry's deputy North Korea policy coordinator, running policy towards Korea and even traveling to the bizarre capital of Pyongyang. I chair the Policy Advisory Group of the Senate

Foreign Relations Committee, working once again for Richard Lugar, who is in my opinion one of the very wisest leaders of a generation on national security matters. I write books and articles on the problems that I think need careful and reflective analysis. I watch my Kennedy School students pop up in the highest places: when I walk the halls of the Pentagon, State Department, White House, and foreign and defense ministries around the world, they stick their heads out of the doors of the Pentagon's E-ring, the State Department's Seventh Floor, the White House's West Wing, and the anterooms of countless foreign ministries. They and their superior intellects and capacity for practical action are changing the world for the better. I am very proud of them. My family and I have no desire to return to Washington any time soon. I have too many intellectual projects underway, not to mention two child rearing projects underway. It has become a joke among all my friends that, intellectually, I have somehow managed to mix physics and medieval history. It might be an unorthodox combination, but it is an absorbing one.