Chapter 4

New Anxieties, New Solutions, and Nonnuclear Science

Other Sources of Cold War Anxiety

Nuclear holocaust and national defense were not the only causes of apprehension for the Cold War citizen. Other problems that fell under the auspices of science included overpopulation, food shortages, and the depletion of natural resources. While these issues were by no means new to the 1950s, they had certainly been aggravated by the baby boom that had been a natural outcome of the prosperity that followed World War II. Just as the U.S. population continued to produce offspring, they simultaneously worried that there would not be enough space, food, or resources to accommodate them all. Again, problems that had largely been created by scientific advancement—industrial pollution, medical advancements that allowed people to live longer (thus creating all sorts of shortages), and urban centers that required food, shelter, and waste management for high concentrations of people—required scientific solutions. These situations created an oddly ambivalent attitude toward science. While most of the population had great faith in science and scientists to address and resolve the problems it had created, the general public did not appear to hold science accountable for the existence of the problems to begin with, an attitude that is quite understandable in the face of the progress and benefits science had created.

According to the International Data Base of the U.S. Census Bureau,

the population of the United States in 1950 was 152,271,000; in 1955 it was 165,935,000; in 1960, it was 180,671,000. The increase in U.S. population was 28,400,000 in the span of a decade. This was unprecedented growth for such a short time frame, and it was a source of great consternation to the public and scientists alike. Here again we see the ambivalence that was a symbol of Cold War scientific advancement: it was impossible to deny that science had played a dominant role in the standard of living people were becoming accustomed to. The Great Depression still loomed large in many people's minds, and it was easy to enjoy the luxuries and privileges science offered when so many had done without for so long. Jobs were plentiful because of science; educational opportunities were available because of science; domestic tasks of all sorts were made quicker and more convenient because of science, leaving time to enjoy the good life created by science; people were healthier and more active in large part because of science; in general, life was easier and more prosperous because of science. Few people were willing to speak ill against the pragmatism of science when quality of life had been improved so palpably after years of hardship and war. But, lest this last statement lead the reader to believe that there was a conscious and willful resistance to science bashing, it is worth pointing out that the attitudes internalized about science did not leave the general population with a set of obvious choices about whether to accept or reject the principles, practice, and authority of science. Except for efforts of the popularizers of science discussed in chapter 3, people in large measure simply reaped the benefits of science with little active consideration of the source of their prosperity.

On the other hand, there seemed to be widespread interest in the latest developments in science, especially if the developments had an obvious personal impact. *Popular Science* ran a section entitled "I'd Like to See Them Make . . ." that featured product suggestions from readers. The "Them" in question clearly referred to the engineers, inventors, and designers who worked for corporate America but who had profited from the new technology and innovations created by science. Examples included car-trunk hatches that allowed passengers to reach the trunk from inside a car; easy-out wood screws for temporary fastening; no-squeeze caulking guns; locking rifles; and illuminated dustpan brushes that could light up areas such as ovens, closets, and the undersides of furniture. The amor-

phous "them" would function as a reference in many contexts to the brains that drove the country's prosperity and influence—namely, the scientists. So ubiquitous had technology become, and so comfortable had people felt in using the gadgetry that had become commonplace, that the antecedent-lacking pronoun required no explanation: people simply assumed the existence of a scientific brain pool that would provide the necessary solution or make the necessary device.

Within this climate thrived a popular scientific preoccupation with anything super. Consider, for example, the poem "Superman" by John Updike, written in 1954:

> I drive my car to supermarket
> The way I take is superhigh
> A superlot is where I park it
> And Super Suds are what I buy.
> Supersalesmen sell me tonic
> Super-Tone O, for relief.
> The planes I ride are supersonic.
> In trains I like the Super Chief.
> Supercilious men and women
> Call me superficial, me!
> Who so superbly learned to swim in
> Supercolossality.
> Superphosphate-fed foods feed me
> Superservice keeps me new.
> Who would dare to supercede me
> Super-super-superwho?

Science and technology, through progressive techniques, methods, materials, and processing, had managed to superize American culture. Technology was like a magic wand that could effortlessly transform normal, run-of-the-mill objects, services, and people into superstuff. Things were super and so were people. Superman was a popular cultural icon; supermarkets thrived in a growing suburban landscape since it was no longer necessary to shop in small stores tucked away in urban streets and alleys; Eisenhower had built an interstate system in record time so people could travel with ease, efficiency, and speed along the superhighways that

traversed the American countryside.[1] The country was preoccupied with the pace and products science made possible, and people had the money to spend on the new gadgetry and services that were available.

Yet underneath this veneer of carefree indulgence lurked a growing concern about the byproducts of widespread affluence: many harbored a vague concern that the very prosperity that had defined postwar life was leading to certain disaster, not only through the threat of nuclear war, but also through overpopulation, food shortages, pollution, and resource depletion. It is one of the great ironies of the postwar baby boom that the economic stability, job availability, and medical advancement that allowed society to procreate freely and safely also created the unintended consequences that such benefits engendered. And while most people chose to actively ignore these consequences, there was enough mounting concern about the palpable changes taking place in society to inspire nervousness and outright fear. It is difficult to generalize about the state of the American collective consciousness during the early Cold War, but the popular press of the time suggests that people tended to fall into one of several camps: there were those who merely enjoyed the benefits and conveniences of modern life, operating under the assumption that we were in control of any technical problem that might arise; there were those who felt that nuclear war was imminent and that they should enjoy their fleeting prosperity while they could; there were those who foresaw large-scale environmental problems and turned to science for reassurance; and there were those who took a moderate view of the situation, recognizing potential social and environmental effects, educating themselves about them, and taking steps where they could.

The society reflected in popular cultural magazines, on the radio, and in other widespread media sources was limited. The newly acquired comfort and privilege brought on by the postwar years was enjoyed largely by a well-established middle class and was, as we might expect, represented as primarily White Anglo-Saxon Protestant. While this is not universally true, it is important to note that the popular media projected this class as the norm, and they were therefore the primary target audience for most educational and informative pieces. This in turn led to the formation of dominant attitudes in this influential segment of society, making their vantage point an important one in the overall establishment of civic discourse and policy. New initiatives such as the GI bill allowed for the ex-

pansion of a capitalistic middle class, one larger than the country had ever seen before. Veterans who came from lower-income families prior to their involvement in World War II found themselves in the happy position of receiving either free or greatly reduced tuition for educational opportunities and other governmentally sponsored programs.

In fact, the GI Bill of Rights, which was signed into law in 1944, was one of the most important and influential pieces of American wartime legislation ever passed, and it had a tremendous impact on the quality of life of millions of Americans following the war. This unprecedented bill, originally presented to Congress by Franklin D. Roosevelt in 1943, included such benefits as educational supplements, life insurance, medical care, and pension and reemployment rights. In January 1944, the American legion proposed, and ultimately received, an expansion of the legislation to include both a provision for a centralized veterans' administration and one guaranteeing federal loans for homes and farms. By 1955, some 4 million veterans had used the home loan benefits, more than 5 million had received the readjustment allowance, and 7 million had taken advantage of the education and training opportunities (including 25,000 African Americans given a chance to attend college for the first time). The bill also provided millions of Americans with opportunities for education, home and business ownership, and other advantages that would have been otherwise unavailable. One major reason for the development of the bill was the interest in readjustment, a concerted emphasis on the reacclimation of veterans from a combat to a civilian way of life. Part of the concern was economical: the need for returning veterans to become part of the workforce again necessitated, the government believed, continued education and financial incentives for those coming home from the war.

The GI bill was a key contributor to the rise of the white middle class (though it also significantly aided members of other ethnic groups) and to the economical and educational establishment of postwar society. Educational opportunities were often technical, and American colleges and universities were turning out engineers, designers, and other technicians in vast and unparalleled numbers. The relationship between wartime progress and peacetime employment prospects was a close one. Technical industries had found a lucrative market in federal and civil sectors alike, and their role in the development of wartime technologies was frequently showcased. Take, for example, an advertisement in *Scientific American* for

Hevimet, a Carboloy metal alloy, which featured an artistic rendition of a battleship in the throes of combat at sea:

> They *stay* "on target" with Hevimet.
> Keeping an aerial camera or a naval gun "on target" is a tough proposition in a gusty sky or rolling sea. It is a job for accurate balancing and gyroscope controls . . . and therefore an ideal spot for Hevimet, super-heavy Carboloy created-metal. (*SA*, May 1952, 44)

This advertisement is a common example of how closely linked commerce, employment, and war were in the American mind. The freshness of wartime technology still lingered and was therefore an efficacious advertising technique, but it also reflected a patriotic pride in the United States' technological prowess—to the extent that product development and military application seemed a logical (and effective) marketing connection. This said, industry at all levels of the labor landscape had ballooned as a result of the war, and there was a certain implicit connection between war and prosperity that Americans naturally embraced. It would perhaps have seemed crude to explicitly suggest that war was good for business, especially in light of a half million American deaths during World War II, but this was an undeniable truth of the postwar years, and Americans were well aware of it. Things were good; things were good because war and capitalism are happy bedfellows. But perhaps this advertisement from the Atomic Power Division of Westinghouse Electric Corporation reflects the connection even more explicitly:

> How Would You Solve This Problem?
>
> You read a lot of magazines. You see a lot of ads. You've seen many of the printed messages from companies seeking trained scientific men. Everybody runs them. We do, too. And they help attract important and valuable men. But somehow they don't seem to measure up to the situation we have here. None of the usual words or phrases gives exactly the picture we'd like people to see.
>
> We Need Engineers
>
> You see, we have a contract with the Atomic Energy Commission. We aren't making bombs or turning out isotopes. We are building a nuclear en-

> gine for a submarine—and our next big job is to build one for a large naval vessel. Maybe this sounds more like war work and less like putting atomic energy to useful work for mankind. But—the next steps will be atomic power equipment for peacetime purposes. (*SA*, March 1953, 36)

In fact, this does sound like war work, and it did attract "important and valuable men" to the industry—people who actively participated in establishing the companies that became major contributors to the economic expansion of the 1950s and the extremely audible sounding board for the Cold War ideology. The very language of the advertisement is a less-than-subtle indicator of how important getting the rhetoric right actually was: "None of the usual words or phrases gives exactly the picture we'd like people to see." The picture, it turns out, is one that carefully welds an inflexible joint between the benefits of military technological development and domestic economic stability. Imagine the excitement that a corporation like Westinghouse must have felt at securing a contract for such a project: not only would it make the company richer and more powerful than it already was, it would put it on the map as the business that developed the first nuclear submarine. Yet it was important also to craft the message in such a way that people (especially the "important and valuable men" who might actually have a civic conscience about such matters) did not see companies like Westinghouse as merely opportunistic war machines concerned more about the profit and profile such a contract would engender than the sweeping military involvement the contract explicitly set forth. "How would you solve this problem?" By suggesting that once the military incorporation of new technology makes the Free World impervious to outside threats, we can turn our attention to the "next steps," namely, "atomic power for peacetime purposes."

In a February 1953 *Scientific American* advertisement—this one geared less to the recruitment of scientific workers and more toward issues of domestic security—Fenwal Electric Temperature Control and Detection Devices appealed to the safety factor of technological development, asking the responsible question, "What do YOU want to protect?" Several items are listed as falling under the watchful eye of Fenwal's technology: "plane passengers and crew" (by providing reliable heater controls for temperature regulation); "lives, cargoes, and ships" (by supplying accurate