The Profits of Fear

by Charles Platt

Prologue: Nuclear News on Route 66

I'm cruising into the small town of Williams, Arizona, heading for the laundromat, when my pickup truck coughs and dies, leaving me stranded at the side of old Route 66. As I pause to consider my options, my cell phone rings. The inventor of the neutron bomb is on the line.

"Charles, this is Sam," he says, sounding elderly and erudite. "Did you hear about Edward?"

In his inimitable fashion, Sam Cohen, who really did invent the neutron bomb, is notifying me that Edward Teller has died after a long series of health problems. Sam was on first-name terms with Edward for about fifty years, since the days when they worked on nuclear weapons at Los Alamos during World War II.

It occurs to me that something must be seriously wrong with the world when a former guru of American nuclear policy seems to have so much time on his hands, he can find nothing better to do than chat with a semi-retired, little-known science journalist sitting in the middle of nowhere in a dead pickup truck carrying an unprocessed cargo of dirty laundry.

Once upon a time Sam Cohen conferred with cabinet members, briefed congressional committees, and argued international strategy with U. S. presidents. He participated in the most influential think-tank that ever existed, and his bid to reform modern warfare earned him a Medal of Peace from Pope Paul VI. During a relentless campaign to deploy downsized nuclear weapons of vastly reduced

destructive power, he received an audience from Dwight D. Eisenhower, who was polite but uninterested, preferring big bombs to small ones. He managed to get a memo through to John F. Kennedy, whose position turned out to be similar to that of Eisenhower. He spent some time with Richard M. Nixon, whose position turned out to be similar to that of Kennedy. Finally he scored a hit with Ronald Reagan, who initiated a project along the lines that Cohen had in mind, until George Bush, Senior, reversed the policy at a total cost approaching \$1 billion.

The story of how this happened is not just of historical interest. It exposes pathologies in the Federal Government that devour our resources and jeopardize our security just as much now as they did then. For those who wonder how neoconservative think tanks managed to incite empire-building conceits that fomented a renewed war in Iraq, Cohen's experiences fifty years ago turn out to be unexpectedly relevant.

1. The Drama

America's first and most notorious think-tank was RAND, an independent entity that became hugely influential on postwar military policy. Named by concatenating the words "research and development," RAND attracted world-class scientists such as John von Neumann, Herman Kahn, Edward Teller—and Sam Cohen. While Cohen's academic credentials were less impressive than those of most of his colleagues, he made up for them with qualities that many RANDites lacked: Commonsense coupled with undiplomatic, in-your-face honesty, regardless of any consequences to his own career.

In Cohen's words, RAND's objective was "to challenge the stultified mentality of the military brass who already had begun planning for the next war on the basis of the last one, even though we had entered the Nuclear Age. Their experience in nuclear war was zero. For that matter, RAND's experience also bordered on zero, but their intellectual arrogance convinced them this was no major handicap."

(Quotes in this text are taken from personal conversations with Sam Cohen and from his autobiography.)

While RAND's own official history claims that its studies were distinguished by "scrupulous nonpartisanship with rigorous, fact-based analysis," Cohen's assess-

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ment of his former colleagues is a bit less flattering. He remembers them as "people who thought they had a God-given ability to know the unknowable. At best, their behavior was hallucinatory. At worst, they were just crooks and liars."

Formulating scenarios for deploying and using nuclear weapons in opposition to the Soviet Union was the highest-stakes game in military history. Nuclear analysts who advised everyone up the chain of command to the President of the United States were conscious of controlling immense power; and inevitably, it colored their judgment. The title of Herman Kahn's notorious book, *Thinking the Unthinkable*, accurately conveyed the mood of horrified fascination that infected some people who immersed themselves in the macabre study of megatons and megadeaths.

Kahn in particular became intoxicated by his role as a doomsayer. He actually seemed to enjoy delivering bad news, and with good reason: It made him famous. One of his fundamental messages was that national survival depended on deterring aggression from potential enemies, and a deterrent was only effective if you were willing to use it. Therefore, instead of being afraid to think about nuclear war, we had to show the world that we were perfectly willing to deal with the consequences, even if they entailed a dark age lasting ten thousand years. We had to "stop worrying and love the bomb," as Stanley Kubrick put it in his subtitle to the nuclear black comedy Dr. Strangelove—and some grim one-liners from *Thinking the Unthinkable* actually were used as dialogue in the movie.

The problem was that Kahn's intoxication with his subject matter and his doomsayer status tempted him to cut corners on his science. One of his most influential papers claimed that the Russians could and perhaps would launch a pre-emptive strike against American air bases, wiping out the nation's ability to defend itself, and forcing it to capitulate. Sam Cohen had been a friend of Kahn's during their college days—in fact, he had brought Kahn into RAND—but friendship couldn't blind him to the defects he saw in the study. He recalls finding calculations of bombing accuracy based on guesswork, assessments of Soviet military strength that seemed grossly exaggerated, and estimates of bomb damage that Kahn had simply invented. "I suspected that Herman had put out his study more for effect and notoriety (which he sure got) than for substance," Cohen wrote later. "And I wasn't the only one on to Herman. There were plenty, in and out of RAND, who knew what he had done was basically fraudulent. The trouble was that he already had made his mark and a huge impact on Washington officialdom, which in those days liked hearing horror stories like this."

The study was fraudulent, but Washington liked hearing horror stories like this.

To anyone who wondered how horror stories about an elevated communist threat could possibly be popular, the answer was that they served the needs of hundreds of thousands of people who worked for the Federal Government or enjoyed its largesse. Bad news justified bigger military budgets, which enriched defense contractors, boosted employment in key congressional districts, and increased the influence of cold warriors in the Pentagon. Bad news united the nation and weakened opposition to legislation which rode in on the coat tails of anticommunist hysteria. Most of all, bad news enhanced nuclear drama, which inflated the importance of government in general and the Executive Branch in particular.

Kahn was by no means the only one with a flare for dramatic scare tactics. When Nikita Khruschev hammered his desk with his shoe in a temper tantrum at the United Nations General Assembly, or John F. Kennedy suggested that he might have to bomb Moscow if the Soviet Union didn't pull its missiles out of Cuba, anyone could see that nuclear drama had infected players up to the highest levels of government. Their performances became a prime-time phenomenon reaching a worldwide audience that numbered hundreds of millions. Hitler's rallies and Roosevelt's fireside chats were trivial by comparison. The Cold War was the ultimate endorphin rush for any public figure who enjoyed making dramatic pronouncements that could mold history, while legions of advisors experienced a contact high.

Imagine for a moment that at some time during the 1960s, the communist threat had suddenly disappeared. Politicians, policy wonks, and pundits would have found themselves instantaneously demoted from star status. They would have been forced to fall back on humdrum traditional issues in government such as placating special-interest groups or juggling the budget. For an ambitious statesman, a four-star general, a RAND doomsayer, or a hungry defense contractor, the disappearance of communism would have precipitated a humiliating career catastrophe.

Of course the rich rewards from nuclear drama lasted only so long as it stopped short of nuclear war. Therefore, a major task for RANDites was to develop strategies to stabilize the nuclear deterrent and discourage anyone from doing anything stupid, such as launching a pre-emptive strike. Cohen argued that this would be such a singular, unprecedented act, analysts who imagined they could predict the circumstances and evaluate the outcome would be indulging in self-deception. Still, RAND's mission was to give answers based on "rigorous, fact-based analysis," and a new analytical tool named game theory was the method of choice.

Nuclear drama became history's greatest prime-time phenomenon.

Game theory began with the logical proposition that in a strategic two-player game, either player may try to obtain an advantage by bluffing. If the stakes are low, perhaps you can take a chance on trusting your opponent when he makes a seemingly fair and decent offer; but when the penalty for being deceived can be nuclear annihilation, taking a chance is out of the question. You work on the principle that the person you are dealing with may be utterly ruthless, unethical, and untrustworthy, no matter how peaceful his intentions may seem. You also have to assume that he may be smart enough to use game theory just like you; and therefore, he will assume that *you* are ruthless, unethical, and untrustworthy, no matter how peaceful *your* intentions may seem. In this way a supposedly rational system of assessment leads to a highly emotional outcome in which trust becomes impossible and strategy is based entirely on fear. This is precisely what happened during the decades of the Cold War.

Some key players during the 1950s really were ruthless and unethical—or at least, they talked as if they were. General Curtis LeMay had organized the fire-bombing of Tokyo during World War II, which took more lives than the atomic bombs on Hiroshima and Nagasaki. LeMay now ran Strategic Air Command, and when Cohen enjoyed a frank conversation with him, the main thing the general really wanted was "a bomb that will wipe out all of Russia. That's my number one priority. When you kill enough of them, they'll stop fighting."

Of course extremists such as LeMay were outnumbered by moderates, but according to game theory, you couldn't count on that. You had to assume that the Soviet Union might have LeMays of its own, and they might actually have enough clout to persuade their bosses to build superbombs.

So, when the United States had to decide whether to spend vast sums on a project to develop the hydrogen bomb, a characteristically rigorous, fact-based study from RAND concluded that it would be necessary, because no one could trust the Soviet Union to refrain from starting a similar project of its own. "Not that they would be masters of the world if they built such bombs and we didn't," says Cohen. "But we feared they would. The fear may have been a myth but under such circumstances myths become all-important facts."

The fear-driven mindset became so deeply embedded in American foreign policy, it precipitated non-nuclear misdaventures such as the war in Vietnam—which was based on the fear that if Vietnam fell to communists, neighboring nations would follow. This "domino theory" turned out to be utterly false, but a

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similar set of fears precipitated subsequent adventures in the Middle East. As Cohen puts it, "Our policies, which since World War II have gotten us into war after war—none of them successful or in our true interests—have remained the same."

Today, RAND has been eclipsed by dozens of newer policy institutes in Washington. Neoconservative organizations alone include The American Enterprise Institute, The Bradley Foundation, The John M. Olin Foundation, The Heritage Foundation, The Smith Richardson Foundation, The Jewish Intitute for National Security Affairs, The Center for Security Policy, The Hudson Institute, The Institute for Advanced Strategic and Political Studies, The Ethics and Public Policy Center, and The Foundation for the Defense of Democracies.

The Project for the New American Century appears to have been especially influential. In 2000 it published a position paper endorsed by Dick Cheney, just in time to influence presidential candidate George W. Bush. Titled "Rebuilding America's Defenses," the paper argued that the United States under Clinton had behaved as irresponsibly as Britain during the 1930s, when the British chose to kick back in a cheerful state of peacetime complacency instead of building up an arsenal to counter the emerging threat of Nazi Germany. "Rebuilding America's Defenses" urged the United States to use its unique wealth and power to intimidate potential foreign adversaries before they could grow big enough to intimidate us.

The terrorist attack on the World Trade Center almost seemed to validate this call to action—except that the attack was launched by a handful of religious nuts armed with box cutters. A bigger arsenal to fight foreign wars could never prevent guerrilla actions of this type. Nevertheless the fate of the Trade Center somehow helped to justify deployment of stealth bombers, cruise missiles, tanks armored with depleted uranium, and many more state-of-the-art munitions including massive (conventional) bombs which George W. Bush described as inspiring "shock and awe." None of this could compare with the glory days of megatons and megadeaths, but the prospect of mobilizing a huge high-tech force (with a little old-fashioned torture on the side) still created perhaps a frisson of horrified fascination. More to the point it delivered an overdue dose of drama for those who still dreamed of playing an historically significant role on the global stage. When you factored in the fringe benefits, such as unifying an electorate that had been bitterly divided over an allegedly illegitimate presidential election, "Rebuilding America's Defenses" must have seemed irresistible.

Our policies have gotten us into war after war, none of them successful or in our best interests.

RANDites were the primary architects of the Cold War, but today's policy advisors may be more potentially dangerous, not just because there are more of them but because their recommendations are more likely to be implemented. When some RAND studies advocated a pre-emptive nuclear strike against the Soviet Union back in the late 1940s, no one in government was willing to embark on such an adventure, partly because the consequences were so unpredictable and potentially horrific. More than fifty years later, when neoconservatives advocated a non-nuclear pre-emptive strike against Iraq, their suggestion quickly became a reality, because—initially, at least—the risk seemed so trivial.

2. The Most Moral weapon

Sam Cohen might have remained relatively unknown, troubled by ethical lapses in government and the military but unable to do anything about them, if he had not visited Seoul in 1951, during the Korean war. In the aftermath of bombing sorties he witnessed scenes of intolerable devastation. Civilians wandered like zombies through the ruins of a city in which all services had ceased. Children were drinking water from gutters that were being used as sewers. "I'd seen countless pictures of Hiroshima by then," Cohen recalls, "and what I saw in Seoul was precious little different. . . . The question I asked of myself was something like: If we're going to go on fighting these damned fool wars in the future, shelling and bombing cities to smithereens and wrecking the lives of their surviving inhabitants, might there be some kind of nuclear weapon that could avoid all this?"

Here was a singularly odd idea: To re-engineer the most inhumane and destructive weapon of all time, so that it would *reduce* human suffering. Cohen's unique achievement was to prove that this could in fact be done.

His first requirement was that wars should be fought as they had been historically, confining their damage to military combatants while towns and cities remained undamaged and their civilian inhabitants remained unscathed. This concept seemed quaint in a new era where everyone and everything was at risk of being vaporized in a nuclear exchange, but Cohen saw no reason why nukes had to be massively destructive. Technology existed to make them so small, they could cause less damage than even some conventional weapons.

Cohen wanted to re-engineer the most inhumane weapon of all time, to *reduce* human suffering.

Ideally he wanted to reduce blast damage to zero, to eliminate the whole-sale demolition of civilian housing, services, and amenities that he had witnessed in Seoul. He saw a way to achieve this if a fusion reaction released almost all of its energy as radiation. Moreover, if this radiation consisted of neutrons, which carry no charge, it would not poison the environment with residual radioactivity.

The bomb would still kill people—but this was the purpose of all weapons. If wars were liable to recur (which Cohen thought was probable), soldiers were going to use weapons of some kind against each other, and everyone would benefit if the weapons minimized pain and suffering while ending the conflict as rapidly as possible.

Cohen came up with a design for a warhead about one-tenth as powerful as the atomic bombs dropped on Japan. If it was detonated at 3,000 feet above ground level, its blast effects would be negligible while its neutron radiation would be powerful enough to cause death within a circle about one mile in diameter. This was the battlefield weapon that came to be known as the neutron bomb.

Such a weapon obviously would be more civilized than large-scale hydrogen bombs, and would also be more humane than conventional bombs, because it would create an all-or-nothing, live-or-die scenario in which no one would be wounded. A stream of neutrons cannot maim people. It will not burn their flesh, spill their blood, or break their bones. Those who receive a non-lethal dose will recover after a period of intense nausea and diarrhea, and Cohen estimated that their risk of subsequent cancer would be no greater than the risk we experience as a result of exposure to second-hand cigarette smoke. As for the rest, death would come relatively quickly, primarily from shock to the central nervous system. As he put it in his typically candid style, "I doubt whether the agony an irradiated soldier goes through in the process of dying is any worse than that produced by having your body charred to a crisp by napalm, your guts being ripped apart by shrapnel, your lungs blown in by concussion weapons, and all those other sweet things that happen when conventional weapons (which are preferred and anointed by our official policy) are used."

After assessing every aspect and implication of his concept, he reached his modest conclusion: "The neutron bomb has to be the most moral weapon ever invented."

Neutrons will not burn their flesh, spill their blood, or break their bones.

3. A Nuke by Any Other Name

Since the United States refused to abandon South Korea, and a handful of neutron bombs might force the North Koreans to surrender with the same rapidity as the Japanese after Hiroshima and Nagasaki, Cohen thought his concept should receive an enthusiastic welcome, especially considering that it would create virtually no radioactivity or collateral damage. He began by making a presentation to some former colleages of Robert Oppenheimer at CalTech.

They quickly enlightened him. The neutron bomb suffered from a terrible stigma: It was nuclear. Ever since the United States had bombed Japan, American strategists believed that using any nuclear device against any Asian people "would bring down on us the wrath of the civilized world," as Cohen put it. To the guys at Caltech, this was "an article of faith. It also became a basic tenet of U. S. policy, and still is."

The theory was not supported by evidence, but seemed so entrenched, Cohen was forced to conclude that if battlefield nuclear weapons were going to be used anywhere, "it would have to be somewhere other than Asia and against a different kind of people; namely, in Europe against Caucasians."

With this in mind he approached some Pentagon planners who were developing scenarios for defending Europe against a hypothetical Soviet invasion. Here he ran into a different kind of opposition, because military people did not remotely share his interest in minimizing damage. On the contrary, they wanted to do as much damage as possible. Typically they would send reconnaissance aircraft to take pictures after an attack, to evaluate their success at blowing up buildings, setting fire to factories, knocking down bridges, and sinking ships. If they used neutron bombs that caused no damage at all, how would they know whether their strikes had been effective? Neutron bombs wouldn't even cause bloodshed in the usual sense, because enemy soldiers would keel over and die wherever they happened to be—even inside armored vehicles and shelters. An accurate body count would be impossible.

As for a weapon that was "more ethical," this seemed of little interest to anyone. As for it being smaller and cheaper than big bombs, this was actually a disadvantage. Vast appropriations had been allocated for intercontinental ballistic missiles, giant bombers, and submarines capable of delivering the kind of mega-

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bombs that people such as Curtis LeMay insisted were necessary. A bargain-basement alternative that didn't require expensive delivery systems could bankrupt defense contractors and cause massive unemployment.

Meanwhile, to the peace movement, the neutron bomb was unacceptable because—well, it was still a bomb. Cohen was like a parent of two belligerent tenyear-olds who sees them brandishing guns at each other, takes the guns away, and gives the kids cans of pepper spray instead. "There," says the parent, "now you can't kill each other, or shoot the cat, or blow holes in the living room." Clearly this is an improvement, but, the kids are still fighting. As a realist, Cohen might argue that kids always pick fights with each other, and your best hope is to minimize their risk of injury. To a peace activist, fighting itself is inherently wrong, and anyone who supplies any kind of weapon is an enabler, perpetuating the sickness instead of eradicating it.

From an activist's point of view the neutron bomb suffered an additional, unique defect. It would kill people without damaging real estate, implying (incorrectly) that Cohen regarded real estate as being more important than people. In an era where the counter-culture had turned "capitalism" into a tainted word, the neutron bomb became stigmatized as "the ultimate capitalist weapon," as if a bomb that only killed people was somehow worse than conventional weapons that inflicted terrible wounds and created environmental devastation and killed people.

Overall, the neutron bomb displeased almost everyone, and its chances for development and deployment seemed essentially zero. Still, Cohen was relentless. He continued promoting the concept to anyone who would listen, and by chance his proselytizing reached the ears of a former nuclear weapon planner named Jack Morse. The situation now changed radically, because Morse had the political savvy and connections that Cohen lacked.

4. What's a Neutron?

Morse began promoting Cohen around Washington, and Cohen found himself making presentations to politicians instead of the defense contractors, academics, RANDites, and Pentagonians he had dealt with before. His education in the processes of nuclear policy entered an entirely new phase.

Conter-culture activists stigmatized the neutron bomb as "The ultimate capitalist weapon."

Senator Clinton Anderson, Chairmain of the Joint Committee on Atomic Energy (JCAE), denounced the neutron bomb primarily because it was being studied for possible development at the Livermore laboratory in Northern California, whereas Anderson represented the state of New Mexico, which was the home of Los Alamos National Laboratories. Any new project that would benefit Livermore at the possible expense of Los Alamos was a nonstarter so far as he was concerned. Its supposed benefits to the United States or humanity in general were of secondary importance.

Senator Thomas Dodd liked the neutron bomb mainly because he hated communism, and a weapon that would kill communists while leaving their territory in pristine condition for American occupation seemed a great idea. He presented a memo endorsing the bomb to John F. Kennedy, but Kennedy wasn't interested. When Dodd persisted, the Kennedy administration became so impatient with him that Dodd feared they would deprive him of support in his upcoming campaign for re-election. At this point he dropped the whole issue. He reminded Cohen that although the fight against communism was important, "the first duty of a politician is to be elected."

Senator John Stennis, then chairman of the Senate Armed Services Committee, paid extravagant lip service to the neutron bomb yet seemed disinclined to back his words with actions. In Cohen's estimation, "Had the bomb been a big ticket multibillion dollar item that could have been produced in Mississippi, his interest in it might have been different. But nuclear warheads, compared with the weapon systems that deliver them, are dirt cheap."

Representative Melvin Price was the most senior member of the JCAE, and had played a major role in formulating nuclear policy for more than a decade. Supposedly he was an expert on all things nuclear, but his response may have bothered Cohen more than any other. At the end of a briefing, Price asked only one question: "What's a neutron?"

Perhaps Cohen should have known what to expect, yet still he was appalled. Elected representatives on committees that established policy at the highest level were motivated by base self-interest, expediency, and petty rivalries. They were not only ignorant, but uninterested in educating themselves. Given a choice between saving public money and spending it, they preferred to spend it. Allowed the option of destroying a city or leaving it unscathed, they opted to destroy it. Forced

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to choose between maximizing human suffering on innocent civilians or minimizing it, they chose to maximize it.

Journalists were not much better. They could have learned the ethical basis for the neutron bomb easily enough if they cared to do so, but, they didn't care. They took the lazy way out, quoting cheap shots from peace activists' press releases, which never failed to tag the bomb as the "ultimate capitalist weapon." Cohen took grim solace when Leonid Brezhnev denounced him publicly as an "international war criminal," but the vilification he received in his own country was hard to endure.

Confronted with bad press, venal politicians, and world leaders who still seemed hooked on the drama of weapons that would cause as much destruction as possible, Cohen concluded that neutron bombs would be built only if the United States got itself into a conventional war that imposed an intolerable financial burden while creating unacceptable casualties among American troops. As the years passed, the Vietnam War certainly began to fit this description. "We had close to a half million American casualties in Vietnam," Cohen recalls, "and by this time the Livermore laboratory had put in a proposal to Washington stating that they could manufacture a couple hundred neutron bombs. Of course, no one can predict the number of bombs that would produce any specific result, but I believe that considerably less than 200 neutron bombs could have ended that war."

Since an outright retreat from Vietnam seemed unthinkable at this time, the situation invited a quick application of overwhelmingly superior military technology—which could now be achieved without targeting civilians or destroying the infrastructure that sustained them. Once again, however, Cohen found himself thwarted by theories and prejudices that made this unacceptable. The neutron bomb was still nuclear, the Vietnamese were Asian, yet even this wasn't the biggest issue. According to conventional wisdom, any small nuclear weapon was dangerous because the nation that used it would encourage other nations to use theirs, and a back-yard nuclear squabble would escalate to a full-scale nuclear war.

This was like the theory that anyone who used marijuana would wind up using heroin. No evidence existed to support it. No national leader had ever threatened to respond with a big nuke if someone else launched a small one. Still, everyone was afraid that it could happen, and Cohen couldn't prove that it wouldn't.

He believed that fewer than 200 neutron bombs could have ended the Vietnam war.

In a presentation that he made to the State Department, Cohen tried to get his audience to reconsider their prejudice against anything nuclear. He asked everyone to consider a hypothetical bomb that would be "semi-nuclear," using a very small charge to accelerate a cluster of projectiles. The nuclear detonation would harm no one directly. It would be like gunpowder moving a bullet. Would this be acceptable?

As Cohen remembers it, the State Department officials were unanimous in their response. The United States should never be the first to use any nuclear-based device. Since Cohen's hypothetical weapon was nuclear-based, it could not be used.

He countered by proposing another idea. Physicist Freeman Dyson had suggested a spaceship powered by small nuclear bombs. The spaceship would be blasted into orbit by a couple of explosions from a location such as a Pacific atoll, where nuclear weapons had been tested many times. Once the spaceship was in orbit, it could drop conventional bombs on North Vietnam. Would *that* be acceptable?

No, it would not. Any kind of nuclear explosion was taboo if it was connected directly or indirectly with the delivery of a weapon.

All right, Cohen said, what if the spaceship was powered by a nuclear reactor? Better still, what if the United States sent one of its nuclear-powered aircraft carriers to launch conventional bombing missions from the North China Sea?

Even a nuclear-powered aircraft carrier was too much for some State-Department officials to accept—although subsequently, such aircraft carriers were deployed routinely for this purpose. By then, however, Cohen had given up trying to deal with the State Department. He said, "I could rebut people like these logically, and show how prejudiced they were, but their antinuclear phobia was of such enormous magnitude, they became totally irrational. It affected their science."

He continued to promote his beliefs within RAND, yet even in this academic enclave, where horrified fascination had been a routine corollary of thinking the unthinkable, the climate had changed. "Everyone at RAND was now totally against battlefield nuclear weapons," Cohen recalls. "In fact most of them were now against all nuclear weapons. They subscribed to the same mythology as everyone else, that if you get into a conflict where one nuclear device is detonated, there will be an escalation process that is unstoppable. There was nothing in history to justify

Their antinuclear phobia made them so totally irrational, it affected their science.

this. They just concocted the idea as being an inevitability. They knew it as a fact of deep religiosity."

Cohen had been an irritant for many years, but now his relentless campaigning in favor of battlefield nukes caused him to be perceived as dangerous. He was fired from RAND in 1969. He continued working in various consultancy roles for the government and for defense contractors, but life was never quite the same again.

5. Warfare as a Biological Function

Long after the Vietnam War reached its miserable end, Sam Cohen's cheer-leading for the neutron bomb achieved unexpected results. More than twenty years had elapsed since his epiphany in Korea, and the best opportunities for deployment had passed; but he became a policy advisor for incoming president Ronald Reagan, who liked his ideas. Two friendly senators then led a successful effort that overcame resistance within the Pentagon.

Alas, the way in which the neutron bombs were built totally perverted Cohen's original plan for them.

Two sizes were devised. Both were configured to explode near ground level, so that instead of minimizing blast damage they would maximize it to satisfy the enduring military need to blow things up. The larger of the two designs was actually so big, Cohen calculated that it would inflict devastation on the same scale as the first atomic bomb at Hiroshima. Worse still, since the weapons honored the "no Asian targets" rule and were intended to defend American allies in Europe, their blast damage would destroy the friendly territory that they were supposed to protect.

Cohen was not particularly surprised when Europeans refused to allow the warheads on their soil. The neutron bombs remained in the United States, where they served no function because they could not be deployed rapidly if a Soviet invasion took place.

This, then, was the final insult. After the neutron bomb had been maligned and misunderstood, it was misapplied, and became just another profligate military boundoggle. Cohen made no secret of his dissatisfaction. His rants were not calcu-

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lated to make friends or influence people, and he was forced into an early retirement in 1985.

Stocks of American neutron bombs were retained for a couple more years, but George Bush Senior finally made a policy decision to eliminate *all* battlefield nuclear weapons, and thus "the most moral weapon ever invented" was scrapped without benefiting anyone other than the defense contractors who built it.

Cohen was left wondering about the real motives of people who mold military policy. He ran across a book from the Pentagon library titled "The Sexual Cycle of Human Warfare" by a former British colonel named Normal Walter. Although Walter was not trained as a scientist, his view of warfare was basically sociobiological. He argued that in our evolutionary past, inter-tribal conflicts enabled elders to discipline younger, competitive males and reduce their numbers. According to this theory, war became institutionalized by older males who wanted to maximize the number of single females by culling the number of younger males.

The hypothesis was unprovable, but Cohen certainly saw that warfare satisfied an emotional need. In his words, "We just plain like to fight wars. We adore the military, and over the decades countless millions of young Americans have entered the services to fight. They were more than willing, and their parents accepted it. It's in the genes. We're being driven by forces that we can't afford to understand."

He now describes himself as "an extreme military isolationist. This may sound extreme for a Jew who really hated the Nazis, but the way I feel today, if I had been FDR when World War II broke out, I wouldn't have gotten us into it. I would have shied away and waited for things to resolve themselves."

Since no one is likely to re-engineer human nature, Cohen's ultimate conclusion is that government policy should impose financial limits on our human weaknesses. The defense budget should be cut to the point where we would be unable to afford any battles overseas. "Otherwise," says Cohen, "we're going to go on poking our nose in all over the world, supposedly to preserve freedom. And each time we will kill countless innocents and make lives miserable for those who survive."

He would apply a greatly reduced military budget primarily to defend the nation at home, using measures such as a realistic anti-ballistic missile (ABM) defense. By "realistic" Cohen means small nuclear warheads that would explode over an American city to knock down all incoming missiles. Unlike the non-nuclear

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devices proposed in Ronald Reagan's Strategic Defense Initiative, which had to be accurate enough to "hit a bullet with another bullet," a nuclear system would be relatively simple, relatively affordable, would not require any technological breakthroughs, and would enjoy a good chance of working.

Unfortunately this would not only violate our ABM treaty but would trigger the same old visceral aversion to anything nuclear—even in response to a nuclear attack. As Cohen puts it, "Apparently it's okay for the other side to destroy us with nuclear weapons but it's fundamentally wrong for us to defend ourselves with non-destructive (to ourselves or anyone else) nuclear weapons."

Thus the real-world chance of such a system being developed remains close to zero.

6. The Global Consequences of Child Abuse

The first time I heard Sam Cohen's name was in 2000 when I happened to catch Michael Reagan's AM hate show, or "talk show" as he prefers to call it. Just for once, he wasn't denouncing homosexuals or the homeless. He had read a book titled *Shame*, which was Sam Cohen's autobiography, and he seemed to think it was one of the most bizarre and remarkable memoirs he had ever seen. Not only did it expose hypocrisy, incompetence, and mendacity in government on an astonishing scale, it exposed the author himself with equal candor. Supposedly Cohen had pursued a lifelong obsession with radiation weapons primarily as a neurotic response to a miserable childhood dominated by a demonic mother.

This was odd enough to attract my interest, so I ordered my copy of *Shame* from amazon.com. When it arrived I was in a perfect state of mind to read it, because I was reaching the end of my tenure as a senior writer on *Wired* magazine and was beginning to feel a bit of a has-been. *Shame* was the ultimate exercise in has-beenism, chronicling a career that had elevated Cohen to a position of immense influence in national policy-making before he suffered his downfall into obscurity. My modest arc through the tawdry world of journalism was trivial by comparison.

The title of the book refers to Cohen's own feelings of shame regarding his uncompromising and sometimes mean behavior toward contemporaries with whom

A childhood dominated by a demonic mother encouraged his obsession with radiation weapons.

he disagreed. He doesn't just implicate other cold warriors as having mixed motives; he goes into excruciating detail regarding the origins of his own.

By his account, his childhood was hell. When he suffered nasal congestion as a result of allergies, his mother gagged him to the point of suffocation in a misguided attempt to force him to breathe through his nose. When his allergies caused him to rub his eyes, his mother tied his hands behind his back. When he came down with a cold, he would be forced to lie under a heap of blankets to "sweat out the infection," even in midsummer when the temperature was in the 90s.

Worse was his mother's fanatical belief that infrequent bowel movements or constipation would slowly and fatally poison the body. In the interests of intestinal hygiene she compelled her child to consume a diet largely consisting of vegetable juices. Cohen recalls that this regimen induced nausea and uncontrollable diarrhea, including many episodes where the unfortunate boy literally shat in his pants during school lessons.

Like many abused children, Cohen developed fantasies of revenge. A central feature of these fantasies was his belief that if he so wished, he could emit harmful rays from his eyes capable of frying the brains of his enemies. "I went out of my way for years to avoid looking people in the eyes, especially if I were angry with them for some reason," he recalls.

To what extent did his abuse and his delusionary response affect his choice of career as a nuclear weapons designer? He responds: "I've got more than a hunch that what I've been describing has been a powerfully determining factor, if not the determining factor, in what I've done with my life." He notes the similarity between the symptoms of nausea and diarrhea that he endured, and the nausea and diarrhea that would be experienced by victims of the weapons that he designed.

When I read these strange and disturbing speculations in *Shame* they confirmed my long-standing opinion that most people who rise to positions of great influence are carrying baggage that would shock us if we knew its contents. I remember a summer day in New York City, when I was walking past the Museum of Modern Art, and I realized that the man walking toward me, with a beautiful model on his arm and two Secret Service agents behind him, was Henry Kissinger, Richard Nixon's former Secretary of State. I had no special feelings regarding Kissinger, but as I looked at his face from a few feet away, I felt an overwhelming aver-

Like many abused children, Cohen developed fantasies of revenge.

sion reflex. Instinctively I sensed that this man was as twisted as a serial killer. He had the malign intensity of Charles Manson, fuelled with considerably more intelligence. (To some extent Cohen seems to share my outlook. "An absolute scoundrel," he remarked to me once about Kissinger. "I can hardly wait to read his obit.")

I remember also listening to a speech by renegade British politician Ken Livingstone, a one-time Member of Parliament whose disarming candor rivals even that of Sam Cohen. "Politics really does turn out to be even worse than your worst nightmares," Livingstone concluded, after listing the corruption and deception that he dealt with on a daily basis.

It seems to me axiomatic that most primary actors on the global stage are disturbed people, because an obsessive lust for power is itself a pathology, and in a competition among thousands or millions of power seekers, only the most pathological are likely to win. The difference between them and Sam Cohen is that Cohen fell into the world of government almost by accident, and admits his neuroses no matter how bizarre they sound.

I believe that his obsessive honesty helps to explain why the New York publishing house that commissioned his autobiography turned around and rejected the manuscript, forcing him to distribute it online, which virtually guaranteed the book's obscurity. To the well-intentioned liberals who constitute the primary population of publishing companies, Cohen's text said, in effect, that the behavior of nuclear policy makers was delusional bordering on insane. Scientists had based their recommendations on half-baked ideas and faked data. Trillions of dollars had been squandered, and national security had been jeopardized by prima-donnas and opportunists who systematically betrayed our trust in the pursuit of their base self interest.

Cohen realized that his readers might be skeptical about all this. In his preface he wrote, "That such deadly instruments of death and destruction have been in the hands of people who really didn't know what they were up to, never did, and still don't—this has to be hard to swallow."

Still, he stretched credulity even further as he insisted that the most supposedly contemptible weapon of the twentieth century, portrayed as serving the needs of capitalism by killing people while preserving real estate, actually was the most moral weapon ever invented. Finally, in a coup-de-grace that could hardly fail to repel any book editor who had perhaps expected a scholarly or academic

He seemed to suggest that the behavior of nuclear policy makers was delusional bordering on insane.

work, Cohen explained in some detail that he developed his "most moral weapon" because on some visceral level he liked the idea of inflicting the same nightmare of vomit and diarrhea that had been inflicted upon him by his mother.

No surprise, then, that he was exiled from the East Coast literary establishment in much the same way that he had been exiled from the military establishment, and for much the same reason: He wouldn't stop telling people things that they didn't want to hear.

Personally I felt that his book was an immensely courageous document, for precisely the reasons that had made it almost unpublishable. I wanted very much to meet the author, and since he was in retirement I thought he might be willing to spend a little time talking to a journalist. I sent a snail-mail letter offering to do what I could to publicize, review, or promote *Shame*, although, I warned Cohen, I might be able to do nothing at all. A few days later he called to tell me he would be pleased to talk to me when I next visited Los Angeles.

7. The Problem of Selling Sam

At this time I was still one of the three senior writers at *Wired*, although I didn't expect my contract to be renewed. At the end of the 1990s the editorship had changed, and the magazine was heading in a more conventional direction. I have never been very interested in writing conventional journalism, and Sam Cohen obviously wasn't a conventional subject for a feature. Still, I went to visit him at my own expense with the intention of putting together a proposal for a piece about him.

Looking back, I don't remember his house very clearly. I failed to document my perceptions thoroughly because I thought I was making only a preliminary visit and would return for a longer, deeper session if my proposal resulted in a commission.

I remember Cohen in his study, as amiably irascible as I expected and had hoped he would be. I have an image of him lurking in a room of many windows, with a lot of dark varnished wood. I think of him on a La-Z-Boy recliner, scowling at CNN. He was ironic, funny, fatalistic, but still fundamentally an idealist and very much a patriot.

He wouldn't stop telling people things that they didn't want to hear.

He told me that I was the only reader who had bothered to write to him about his book, which did not surprise me, since print-on-demand publishing means precisely what it says. It prints copies only if there's a demand, but it never creates a demand, and therefore it is unlikely to print many copies.

Nevertheless "Sam" (as he insisted that I call him) was not embittered, merely saddened by his lifetime experience in government. With some pride he showed me the Medal of Peace that he had received from the Pope in 1979. As a Jewish atheist he had little interest in the Catholic Church, but coincidence had placed him in communication with its clergy, and he was happy to take whatever recognition they chose to offer.

I stepped outside his house to photograph the medal. The house was on a large plot in Brentwood, overlooking Los Angeles—a beatific location, not far from the old O. J. Simpson estate, and within commuting distance from RAND. I tried to imagine Cohen among the theorists, questioning their commonsense and debunking their data. Really I was surprised that he had lasted there as long as he had.

I asked him how his friends would characterize him, if I talked to them. "I think they would tell you I'm a loyal friend to them, but a stupid asshole who has gone out of his way to make trouble," he told me after a moment's reflection.

After I went home and wrote my proposal to profile Sam, it was rejected with the same inevitability that Sam himself had been rejected. "Selling Sam" remains problematic at best, since his views are so unconventional, his style is so uncompromising, and his self-revelatory tendencies are so unsettling. My editor simply remarked that he "sounds wacky."

In a way I was relieved, because writing for magazine publication almost always entails compromises, and I didn't feel like compromising in this instance. I set aside my notes but continued to enjoy occasional phone calls during the months and years that followed, whenever Sam felt like haranguing me with ideas for books or opinion pieces. Phone calls seemed to be his primary recreation, and I imagined him working his way steadily through his Rolodex each month, hitting my name as he reached the P section. I felt honored to be there.

Years later, when I mentioned Sam Cohen to Mark Frauenfelder, Mark said that if I were willing to write something for his blog, he would try to sell copies of it. I said, no, let's not try to sell it; the money will be trivial, and charging a down-

He showed the Medal of Peace that he received from the Pope in 1979.

load fee will limit the audience. Let's give the text away. My reason for writing this, after all, has nothing to do with money.

8. The Profits of Fear

One benefit of the aging process—perhaps the only benefit—is that it enables historical perspective.

I was born in 1945, and can remember very clearly the nuclear hysteria of the 1950s and the 1960s. During the Cuban missile crisis I hung out with my teenage friends and discussed our options if we received a four-minute warning of nuclear attack. "I know what I would do," a rather lovely girl told me with a sexy smile, almost making me hope that Nikita Khruschev would launch a pre-emptive strike. As children of the Bomb we lived in everyday fear of annihilation for more than a decade, and during that time nuclear weapons remained *the* news topic in the western world, like a hit album that never dropped out of the charts.

Today, global nuclear war exists as a topic of interest only in *Terminator* movies, and even they have lost their former appeal. The weapons are still there, our leaders can still use them, but the Union of Concerned Scientists doesn't lose much sleep worrying about them anymore.

During presidential elections throughout the Cold War, our primary, overriding concern was that a candidate should be sane enough to "have his finger on The Button." Today, that "Button" phrase has become archaic. I can't remember when I last heard it. There was some residual concern about Ronald Reagan's qualifications to command nuclear forces (partly because of his advanced age), but I don't think the issue was mentioned at all when Bill Clinton or George W. Bush were running for office.

Over a period of decades, we gradually realized that our nuclear fears had been unwarranted. The hypothetical scenarios of game theory had entailed a lamentable ignorance of human psychology. No leader or militarist in the Soviet Union or the United States had been crazy enough to start a nuclear war, and we came to the conclusion that none ever would.

As children of the Bomb we lived in everyday fear of annihilation, for more than a decade.

As the mood of the nation became slightly less belligerent, and a new generation insisted that we should "Give peace a chance," statesmen pandered to pacifists by staging occasional summit conferences or arms reduction negotiations at which they embraced one another as if their prior threats and warnings had never happened. In reality of course it was the other way around: The peace process never really happened. After the very last treaty was signed, both superpowers still owned more than enough weapons to annihilate each other, because it is not in the nature of people who seek power to relinquish it voluntarily.

Sam Cohen illustrates his skepticism toward nuclear treaties by telling the story of a negotiation in which Soviet representatives did not even know how many nuclear warheads their own nation possessed, because the Politburo didn't trust them with this information. The only way the treaty could be concluded was when the United States volunteered to guess the number of Soviet warheads, using its own intelligence data, which were classified. Divulging classified information to a potentially hostile foreign nation is a treasonous act, but that was what the United States had to do, to create a document that made mutual arms reduction look plausible. Its only real achievement was a photo op during the signing ceremony.

George Orwell suggested in his novel 1984 that a totalitarian state would benefit most from a war which seems threatening yet is never sufficiently dangerous to defeat the nation and can be prolonged almost indefinitely. An ongoing conflict of this type provides an outlet for destructive energy and justifies material sacrifices while discouraging dissent. Whether this scenario is applicable to American government may be debatable, but certainly the Cold War satisfied all of these criteria.

Orwell imagined a regime that stopped "the pendulum of history," but in reality any status-quo becomes unstable with time, and the threat of communism turned out to be emptier than anyone had realized. I remember a TV interview with George Bush Senior, who was slumped in his chair with his chin in his hand, not saying much, as an interviewer asked why he didn't have a more emotional reaction to the wonderful news about the Berlin wall coming down. "I guess I'm just not an emotional kind of guy," Bush responded.

Yet he was reacting with obvious emotion. He was visibly depressed, with good reason, since the self-destruction of the Soviet Union caused a massive reduction in his own importance. After being empowered by nuclear weapons like his predecessors, he suddenly found himself as a Commander in Chief with no enemy to fight.

The self-destruction of the Soviet Union caused a massive reduction in presidential importance.

No one cared anymore that his finger was on The Button, because he had lost any excuse to use it.

I think Bush understood very clearly a fundamental fact of politics: Our leaders are less valuable to us at times when we feel more secure. When a president has no foreign threat from which he can claim to protect the nation, his remaining primary task is simply to create national prosperity. Sure enough, as the economy tanked near the end of Bush's first term, there was no further use for him at all. He was terminated by uppitty voters who were annoyed by the rise in unemployment and weren't afraid anymore.

Freedom from fear made us a bit smarter—at least, smart enough to elect Bill Clinton, a feelgood guy who seemed sleazy and corrupt but was unlikely to cause much trouble. With no foreign threat to empower him, Clinton's domestic policy initiatives failed, and he was reduced to the status of a second-rate celeb attracting National Enquirer coverage. Instead of worrying about him starting a nuclear war, we spent months wondering whether an intern had given him a blow job. This was highly beneficial to We, the People, who, freed from fear, set about generating prosperity for ourselves on an unprecedented scale.

You might think that no one could object to a booming economy, yet the way it happened was unwelcome in segments of industry, government, and even the mass media, where status and prosperity had been linked with stability. Disruptive technology threatened old-school industrial titans such as AT&T, Kodak, Warner, and IBM. Old-school billionaires found themselves outranked by disrespectful upstarts, and old-school stock analysts began to look like idiots. Meanwhile the Internet empowered voters by setting up an uncontrollable conduit of information, circumventing the traditional symbiosis between media conglomerates and legislators. Some writers even contemplated a future in which further advances in technology might render government obsolete altogether.

You didn't have to be a techno geek to calculate the sum of these vectors. When people in power feel threatened by rapid change, they apply the brakes. Initially we saw some straws in the wind: Microsoft was humbled by the Justice Department, Clinton signed the Communications Decency Act, Greenspan punished investors for being exuberant to a degree that he found irrational, legislators of both parties crafted laws to throw hackers and file sharers in jail, the State Department attempted to outlaw strong encryption, and prosecutors collaborated with their friends in the traditional news media to publicize endless cases of predators,

Our leaders are less valuable to us at times when we feel more secure.

pedophiles, thieves, and con artists infesting the Internet. The message was relentless: New technology should not be trusted. Even Bill Joy, cofounder of Sun Microsystems, decided that some aspects of future science would be so dangerous, they should be brought under control even though they didn't exist yet.

At the time when I visited Sam Cohen, in late 2000, I didn't realize how much further the backlash would go. I certainly did not imagine a faith-driven initiative in which primitive zealots would pervert foreign policy, cripple scientific research, curtail social freedoms, and revive international adventurism to entrap the nation in a new state of perpetual Orwellian war.

Eventually I saw George Bush Junior standing on an aircraft carrier, dressed like an Air Force pilot, shouting "Bring it on!" And unlike his father, he didn't look depressed at all, even though he was ordering thousands of young soldiers into a conflict that was quite capable of killing them, while threatening to undo all the prosperity that we had created for ourselves during our freedom from fear.

Many journalists dislike Bush Junior. They complain about him toadying to the religious right, and they make fun of his syntactical blunders—but no one treats him as if he's unnecessary, and the National Enquirer doesn't go near his sex life. Also, unlike his father, Junior got himself re-elected by a significant margin, even at a time when economic growth seemed questionable.

My only question is why this fear-based charade still works, and I guess the answer is that the fear makes us stupid enough to allow it to work.

Bush Junior still plays the nuclear-drama card once in a while, when he issues warnings about nations such as North Korea, but he never even mentions Moscow as a significant threat, because no one would take it seriously. We have given up sitting around wondering what we will do if there's a four-minute warning of armageddon. Instead, we have been induced to worry about primitive explosives in the hands of semi-literate fanatics who might kill perhaps a few thousand of us in tall buildings or a few dozen of us in public transit systems. Such numbers are utterly trivial compared with the mass annihilation that seemed plausible and imminent during the 1950s and 1960s. They are small even by comparison with highway traffic fatalities, yet the anxiety induced by the possibility of domestic terrorism has become comparable with bygone fears of communism. This makes no sense at all, but fears are seldom rational, especially when they are manipulated by elected representatives who somehow continue to command some trust and respect.

The message was relentless: New technology should not be trusted.

In a system such as this, clearly there was no place for Sam Cohen. He invented a device that would win wars without destroying anything—and tried to sell it to military leaders whose greatest desire was to destroy as much as possible. He found a way to end conflicts quickly, with minimal drama—and offered it to political leaders who have more to gain from conflicts that create maximum drama and drag on for years.

If policy makers in Washington had wanted to curtail human suffering and the appalling wastefulness of military expenditures, the neutron bomb offered them an option. Some found it provocative, a few were willing to pursue it, but a majority chose to let it disappear into obscurity, along with the man who created it.

Epilogue: An Exercise in Futility

I'm driving a rented car north out of Boston on a stormy night in July 2005, trying to find Route 128 on my way to a conference, when my cell phone rings. It's 8:30 pm, I'm tired and hungry, and once again the inventor of the neutron bomb is on the line.

I pull onto the shoulder and talk to Sam for a while. He complains about his state of health, and tells me that he is no longer able to walk very easily. He reminds me that he is almost 85, and says that the future does not look good, either for himself or the nation generally. As always he is concerned about national security. He worries that our adventures in the Middle East will have long-term repercussions for which we are ill-prepared. He points out that the current adventures in Iraq would have been rendered totally unnecessary if neutron bombs had been used on Iraqi battlefields during Desert Storm. That war could have been ended decisively instead of leaving the door open for a renewed round of insanely expensive, divisive, conventional hostilities.

I ask him if he feels certain that the neutron bombs which were built during the Reagan administration were really destroyed under Bush Senior. He replies that in some ways the United States is an odd nation. U. S. presidents often say things that they don't mean, but a small army of underlings works tirelessly to make sure that reality conforms with public statements. All edicts are faithfully carried out. The weapons were destroyed.

The neutron bomb offered an option to curtail human suffering and military spending.

On the other hand, Sam has no doubt that China and Israel built their own neutron bombs, probably using information that was leaked to them in an attempt to stabilize their situation by assuring their defense. "If this is the case," he says, "those nations now are equipped with weapons superior to anything we have." He pauses and chuckles. "And more humane than anything we have."

He asks me if I am still planning to write about him for a web site, and I say I'm close to finishing the piece. "I hope you realize," he tells me, "that writing this will be futile. It won't change anything."

I answer that I work on the principle that if a piece of journalism reaches only one person who finds it significant, the effort is worthwhile.

"I suppose I have to agree," he says. "That's always the basis on which I operated."

Sam Cohen failed to change the world. Policies are still being initiated by analysts whose intellectual arrogance convinces them that they can know the unknowable. Data are still being manipulated to prove the unprovable, and wars are still being fought to serve the selfish interests of narcissists who profit from fear while enjoying their starring roles in the drama of international politics. Sam lost all of his battles with the establishment—yet if the experiences he has shared provide any of us with any insight at all, they will not have been wasted.

Charles Platt, August 2005.

Sam Cohen's autobiography, *Shame*, is still available from sources online.