DEFENDING PHILADELPHIA
A Historical Case Study of Civil Defense in the Early Cold War

SCOTT GABRIEL KNOWLES
Drexel University

The city of Philadelphia, today, is in the midst of revamping its plans for emergency preparedness. For a city of its size, age, and infrastructural complexity, this presents a number of critical challenges. This article examines the last era in which emergency preparedness—in the form of early cold war civil defense—stood at the forefront of the city's challenges. This article develops a historical case study of Philadelphia's civil defense efforts against atomic attack in the 1950s, especially in the earliest planning and implementation stages under retired Major General Norman D. Cota. Civil defense failed in Philadelphia, as it did across the nation, and this article considers in detail the role that Cota's "command-and-control" methods led to this failure.

Keywords: *civil defense; nuclear war; disaster; Philadelphia; emergency preparedness; Norman D. Cota*

Scott Gabriel Knowles is an assistant professor of history in the Department of History and Politics, Drexel University. He is currently working on a book titled Experts in Disaster: A History of Risk and Authority in the Modern United States.

In the post-9/11, post-Katrina United States, cities are imagining the worst in ways unseen since the early cold war. What would happen if, for example, terrorists bombed Philadelphia's Sunoco refinery? It's a grim vision. The plant might release as much as 355,000 pounds of hydrogen fluoride. This potentially deadly gas used in processing high-octane gasoline could form a ground-hugging cloud, hovering over the city and causing citizens to either take shelter at home or evacuate. Are walls and windows enough protection against the toxin? If not, what would it look like for millions of people to simultaneously flee the region? Bodies piling up in vulnerable neighborhoods, hospitals overwhelmed, highways jammed, panic-stricken thousands, chaos—with 4.4 million people living within 25 miles of the plant, this is clearly Philadelphia's worst case scenario (Shaffer, 2005).

In September 2005, with Hurricane Katrina still fresh in everyone's disaster imagination, Philadelphia's managing director Pedro Ramos was quizzed on the prospects for success in the event of a citywide evacuation. "We haven't had that type of discussion since early in the cold war," Ramos told the *Philadelphia Inquirer* (Lin, Fifield, & Shiffman, 2005). Mayor John Street made a pledge to assess the city's dangers, in particular to convene a panel of experts who could evaluate the risks and revise the city's preparedness plans. The result was the Emergency Preparedness Review Committee (EPRC), which started its work early in 2006 and released its report in July (City of Philadelphia, 2006). The report is ambitious and comprehensive, addressing the current state of emergency preparedness in communications,

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health and human services, regional and federal partnerships, community involvement, continuity of government, critical infrastructure, public-private involvement, and evacuation. The report concludes with a call for action within 90 days in setting priorities, timelines, and developing partnerships to jump-start the city's rather dusty, in some cases nonexistent, current emergency plans. Many questions remain as to how to go from assessment to action, but this is undoubtedly the period of most urgent study and planning for disaster that Philadelphia has witnessed in a long, long time.[1]

As managing director and EPRC co-chair, Ramos pointed out correctly, but perhaps unintentionally, there is a valuable historical precedent to be found in the city's civil defense preparations for atomic war in the early cold war. City emergency planners might be well served by examining the effort more than half a century ago to revitalize a moribund WWII civil defense, retooling it for the worst case horrors of the nuclear age. Much has changed since then, but perhaps not remarkably, much has also remained the same—an enemy who might strike with technological ferocity at any time, a sprawling industrial region, a lack of money and support from state and federal partners, and a fearful but unengaged public. This article traces the founding and development of Philadelphia civil defense in the early cold war. It is a story of a great success in making plans and a great failure in transforming those plans into workable disaster preparations, in large part because of the adoption of a command-and-control structure that paid little attention to the realities of Philadelphia's urban infrastructure, its local culture, and its political realities. Today's Philadelphia disaster experts might consider the successes and failures in this history, by way of historical analogy, as they decide how to act and act quickly on the EPRC report.

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Destroying Philadelphia

At 5:30 a.m. on February 13, 1951, Philadelphia Mayor Bernard Samuel received a telephone call from Pennsylvania Governor John Fine, informing him that "enemy planes were being tracked in the general direction of the Philadelphia-Camden area and that appropriate segments of the armed forces had been alerted and were actively defending that area." Between 5:35 and 5:40 a.m., news broadcasters broke through regular programming and announced that three American cities had just been attacked with atomic weapons. Just minutes later, two 80-kiloton atomic bombs exploded within 3 seconds of each other over the city. Six years after the bombings of Hiroshima and Nagasaki, two years after the Soviet Union's first atomic detonation, Philadelphia joined the atomic age (Federal Civil Defense Administration [FCDA], 1952, p. 2).[2]

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The first blast occurred roughly 2,500 feet in the air above the intersections of Sepviva Street, Wheatsheaf Lane, and the Pennsylvania Railroad in the industrial northeast section of the city. The second bomb similarly exploded in the air over a point near the intersection of 61st and Market Streets in densely populated West Philadelphia. The damage pushed out in concentric rings of destruction. Total chaos and death ranged more than three fourths of a mile in every direction from each ground zero, with nearly every structure destroyed at this range and every person killed; structures were damaged beyond repair, and deaths and injuries were widespread more than a mile and a half from each blast. Total damage spread out in a radius of 4 miles from each bomb, blanketing an enormous swath of the city in death, fire, debris, and misery. By 7:50 a.m., the mayor—as civil defense coordinator for Philadelphia County—had received a preliminary briefing on the situation and sent a message to President Truman with the grim news: Thousands were dead, and as many as 150,000 were seriously injured. Enormous fires were raging out of control, with one threatening to leap the Schuylkill River and destroy the central business district and City Hall (FCDA, 1952, p. 4; Philadelphia County Civil Defense Council, 1951, pp. 1, 6). Though center city would be saved, the final death toll in Philadelphia would rise to 164,100 by the end of the first day, and the total injured would number 293,000. In a city with more than 2 million citizens, 22% of them had been killed or maimed in the first major attack on the United States of World War III.

Scenarios like the one just described seem to issue from some lost *War of the Worlds* panic, or perhaps a nightmarish figment of the cold war imagination. However, this "hypothetical test exercise" for Philadelphia was a real one, devised by federal civil defense planners and used in the winter of 1951 as a device to evaluate Philadelphia's readiness for atomic attack. Although horrifying to imagine, General Norman D. Cota, Philadelphia's first executive director of civil defense, confidently concluded that Philadelphia would dust itself off and be functioning again as the workshop of the world within 5 days after the attack. Such optimism reflects the will among many U.S. defense policy strategists of the era to "win" a nuclear war—thought possible in part through fostering the willingness of civilians to rationally (or irrationally) face down the nuclear threat and prepare themselves to live in its aftermath. In truth, Philadelphia's proposed survival from atomic attack was just as hypothetical as its destruction in 1951 and throughout the cold war. Mayor Samuel lamented after the test exercise that his city had only "paper plans," not real resources and infrastructures with which to defend itself from atomic annihilation ("Remarks of Mayor," 1951). Still, faced with little choice but to defy federal directives and consign their city to doom, Samuel, Cota, and the mayors and local civil defense officials who would follow them attempted to convert Philadelphia's paper plans to real protection. This article examines the founding, functioning, and ultimate failure of their attempts to establish a workable civil defense regime for early cold war Philadelphia.

The overwhelming consensus among policy makers, journalists, and scholars who study civil defense is that it failed, unequivocally, to provide anything approaching realistic protection from nuclear war for the average U.S. citizen and his or her property. This article proceeds from this general premise. However, it is a failure with a rather long history, stretching from the early cold war years into the Reagan era, and one with geographical dimensions stretching from small towns and rural America to the nation's major cities. As such, it bears considering how local politics, infrastructure and urban geography, and culture—especially in a city as critical to the national economy as Philadelphia—shaped the implementation of civil defense ("Civilian Defense Unit Opens Here," 1950). Civil defense in Philadelphia failed not solely because of lack of funding or an apathetic citizenry, the two explanations most frequently cited by its frustrated promoters and by many historians. A close look at Philadelphia's civil defense initiatives in the early years of the cold war reveals a critical and underexamined barrier to success. Namely, the top down command-and-control orientation of civil defense plans came into conflict with the realities of Philadelphia politics and governance, the existing urban infrastructure, and the city's cultural contours, resulting in critical lapses of trust, authority, and efficacy for civil defense officials.[3]

Civil Defense for Philadelphia: General Cota Leads the Way

The atomic bomb conferred previously unimagined power to destroy enemies on America's top military leaders, foreign policy experts, and scientific establishment. The concept of protecting the home front from nuclear weapons also emerged in the early cold war, a task that most often fell to state and local civil defense planners. As early as 1946, the United States Strategic Bombing Survey, in its study of the Hiroshima and Nagasaki bombings, concluded that civilians could be protected from atomic warfare, especially if the strategy of planning for urban evacuation was coupled with planning for shelters. In 1948, President Truman established the Office of Civil Defense Planning (OCDP), under the leadership of former Northwestern Bell Telephone Company President Russell J. Hopley. The result was the *Hopley Report*, a document that comprehensively spelled out the organizational requirements of a workable civil defense, down to the state and local levels. The *Hopley Report* recommended that ultimate control over civil defense be located in the executive branch of the federal government but insisted that state and local governments would bear most of the responsibility in actual practice, an idea that would prove influential. Still, there was lack of consensus over the extent to which preparations should be extended. The National

Security Resources Board (NSRB) was given authority over civil defense in 1949 amid serious criticism of the unsavory concept and projected costs of establishing a civil defense that was perpetually preparing the nation for war.

Developing world events would soon add urgency to the call for civil defense, however, with the Soviet Union's first test of an atomic bomb in August of 1949 and Truman's announcement in early 1950 that the United States (and presumably Russia as well) was working on a hydrogen weapon that would dwarf the fission bombs used on Japan. Late in the year, Truman signed the Federal Civil Defense Act of 1950, moving federal responsibility for civil defense again, this time under the auspices of the FCDA, and formally codifying the role for technical planning and leadership with the federal government and actual operations under the state and local governments (Kerr, 1983, pp. 20-30). Governors developed civil defense plans for their individual states, a process Pennsylvania Governor James Duff had already begun in December of 1949 by naming eight members to a defense committee chaired by Judge Vincent A. Carroll. Judge Carroll established an office in Philadelphia in April 1950, and its first goals were to help the Air Force build observation posts and air raid warning stations and to recruit volunteers statewide ("Civilian Defense Unit Opens Here," 1950).

The city of Philadelphia's political boundaries are the same as its county boundaries, and as the governor left local planning to the county level, this made Mayor Samuel the de facto first director of the Philadelphia County Civil Defense Council. The expected planning and leadership demands of such a job were enormous, far beyond what a big city mayor could accomplish while still governing effectively, and so Samuel established a council to take on the job, starting to staff it in the early summer. In a call for readiness and for a $500,000 emergency appropriation from city council, Samuel described the situation as he saw it. "Realizing the great scale and spread of disasters that could happen here if a Third World War occurs," he argued,

> immediate plans are being developed for the coordination and pooling of all the Defense resources of the Philadelphia metropolitan region. . . . A single atomic bomb exploded over the Philadelphia area would overtax all of the present combined disaster resources of this great and prosperous region. ("Mayor's Message," 1950)

Appointing the council was a positive step, but clearly much planning remained to be done.

What followed was a long, fearful summer in Philadelphia, full of chatter about atomic war, especially with the outbreak of the Korean War in June. Philadelphia County Civil Defense Council members, for example, were among a crowd of 300 who took in a public lecture at the Franklin Institute on June 12, in which they heard Lieutenant Colonel Marcus R. King of the Air Force describe scenes of atomic destruction—20,000 killed and 50,000 injured, City Hall's clock tower collapsing, thousands of fires, debris hurled like missiles through the city streets. "If City Hall were 'ground zero,'" King mused, "winds of 1000 miles an hour would rage briefly within 1000 feet, and up to 85 miles an hour two miles from the center of the blast" (McCullough, 1950a). The Red Cross designated six regional relief centers, warning that an atomic attack would necessitate a full city evacuation and speculating that a hydrogen bomb attack "would probably destroy the entire area" (McCullough, 1950b). Military bases and industrial plants began renewing WWII-style antisabotage protocols ("Evacuee Areas Selected," 1950; Rosen, 1950). Ships arriving at the Port of Philadelphia from "communist-held ports" or flying the flag of a "communist-dominated nation" were searched for atomic bombs. Geiger counters would be used, according to the collector of customs, though he ominously noted to the press, "Nobody's been able to tell me how to detect an A-bomb" ("Port on Alert," 1950). Calls were made to thoroughly screen applicants, using background checks and fingerprinting, to catch communists who might try to infiltrate the new civil defense organization ("City Defense to Screen Reds," 1950). *The Evening Bulletin* even published an article describing steps for personal protection in the event of nuclear attack, instructing readers to "drop to the ground instantly with back to the light. . . . Keep in a knot at least ten seconds. After that get up and look around" ("Here's What to Do," 1950).

The public was anxious, impulses to organize were there, but the mayor waited for leadership from federal and state authorities. Tired of waiting, and signaling to the press that he was looking for the right military officer to lead civil defense, he decided to "forge ahead" at summer's end ("Mayor's Message," 1950).

With his council in place, Mayor Samuel asked retired Army Major General Norman D. "Dutch" Cota to assume the position of executive director of the Philadelphia Civil Defense Council. It was common for cities and states to seek out retired military officers for civil defense leadership in the early cold war. This fact reveals the shared belief among policy makers such as Mayor Samuel that disaster planning was best practiced in a military mind-set, under the assumption that citizens would react badly in chaotic situations and would need the discipline, order, and motivation only a military officer might provide (Dynes, 1994, pp. 141-158). With the war over, and the prestige of the military higher than every before in the nation's history, it made sense to hire a war hero for the job. General Cota was well known for his exploits as assistant division commander of the 29th Infantry at Normandy on D-Day. The then 51-year-old Cota had landed on Omaha Beach, and realizing the suicidal nature of remaining so exposed, he organized the scattered landing units he encountered and got them moving to safety. According to lore, in finding the 5th Army Ranger Battalion, Cota cried out "Rangers, lead the way!" This slogan was adopted as the motto of the Army Rangers, and Cota's actions on D-Day were later immortalized in the 1962 film *The Longest Day* (Miller, 1989, pp. 1-11). Here was a decorated officer, a bona fide warrior, tested and calm under fire.

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Heroics aside, an irregular heartbeat and diabetes had brought him to the Valley Forge Hospital in Pennsylvania at war's end, and in 1946 Cota retired from the Army at the rank of major general. Cota and his wife, Connie, liked the Philadelphia area and were encouraged by Republican Governor Edward Martin—a former military colleague when Cota had commanded the 28th Infantry Division, a unit from Pennsylvania—to settle in the area, which they did in the Philadelphia suburb of Ardmore. Most likely with Governor Martin's assistance, the general was named director of the Philadelphia office of the War Assets Administration (WAA), a federal agency in charge of disposing of the enormous stockpile of postwar military surplus. At the height of the effort in this role, Cota oversaw as many as 3,000 employees, but by late 1948, the work was mostly complete. Now, less than 5 years after the war's end, he would return to government service, given the daunting task of preparing the nation's third most populous city for the unthinkable (Miller, 1989, pp. 93-94, 185-190).

On assuming the role of executive director for civil defense in Philadelphia, Cota made a few demands of the mayor. First, he was to be on "equal footing with his cabinet officers." He also requested "a full time paid staff consisting of the necessary clerical help, and at the proper time . . . a full time staff." The mayor was to remain the responsible officer as coordinator, and Cota would act more or less as his chief of staff. His duties "were to be confined to planning, submitting recommendations and carrying out the policies and decisions made by the Coordinator" (City Council of Philadelphia, 1952a). Lastly, he wanted a robust public relations operation, and he requested that it be handled by the mayor's office, feeling that he was not experienced enough to succeed in this critical function (City Council of Philadelphia, 1952a, pp. 6-7). With these assurances from Mayor Samuel, General Cota assumed the post on September 1, 1950.

Urban civil defense planners across the nation faced a thorny situation in the early cold war. They were charged with long-range planning, hardening the city against attack over the long term. They also needed to anticipate the immediate hour-by-hour and day-to-day demands of an actual attack, if it were to happen. Which was more important: establishing a disaster response plan to meet the medical, fire, security, and leadership needs of an unfolding disaster or investing in physical infrastructures of warning, shelter, and escape? Ideally, Cota would not have to choose, but when the city council's first appropriation came in at $250,000, half of the mayor's request, the ideal was nullified. It was time to prioritize the risks, but on what basis should priorities be established? Complicating the matter was the expanse and diversity of the city itself, with its more than 2 million residents, and its infrastructure, spread over 135 square miles and containing dense residential neighborhoods, vast industrial sectors, and a downtown with modern

high-rise buildings. Crisscrossed by rivers, roads, railways, wires, pipes, and the original grid dating back to William Penn's days, Philadelphia presented a puzzle of exposed citizens and vulnerable infrastructural pieces. Was it worthwhile to protect one type of infrastructure over another, the water system over the electric grid, for example? Was it possible, or ethical, to protect some neighborhoods over others?

Making it even worse was the realization that atomic blasts and radioactive fallout would pay little attention to city or county lines. From the beginning, in fact, Cota thought of civil defense as a regional problem and worked to involve the surrounding counties in his planning. But on what legal authority would a region be defined? Unfortunately, direction from Washington, D.C., was confusing on each these questions. Planners in Truman's FCDA mulled over the possibilities of dispersing urban populations, evacuating them in advance of a suspected attack, or sheltering them in blast and fallout shelters. Shelters seemed the most realistic option but still posed serious problems, potentially trapping and suffocating citizens underground as firestorms raged above. Location and equity of shelter protection, postattack radiation, and the cost of it all—estimated at $300 million by FCDA Director Millard Caldwell—all added up to an FCDA policy of sheltering that Truman only lightly pushed and congress refused to fund (Garrison, 2006, pp. 39-41). In other words, the FCDA had ideas, it had pamphlets and organizational charts and hypothetical test narratives, but when it came down to nuanced local planning, Philadelphia would have to stand largely on its own.

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Rejecting the theoretical debates over dispersal, evacuation, and shelter, General Cota first moved to establish a command-and-control structure—a means of sending orders out from one central commander to designated subcommanders, then out to functional units, with appropriate channels of feedback—that would seek to integrate both long-range planning and day-to-day disaster response functions. He set into motion a civil defense plan that proved straightforward and was, in a word, *military*. Cota would later recall his early agenda for Philadelphia civil defense:

> Now, here in Philadelphia we had to act, we couldn't wait for the formulation of an overall planning by the Government nor by the State. We had to do first things first, or at least we had to begin to do first things first, and we had to establish an efficient Air Raid Warning System. Certainly if you cannot get the warning, all your other problems don't amount to very much. Secondly, we had to organize a sound Civil Defense organization with necessary control and communication facilities. . . . Third, we had to put in effect a thorough and sound training program based on sound warden organization, and number four, we had to introduce a modest training program . . . [with] the . . . auxiliary police and auxiliary fire organization, trained to control traffic and fight fires, and also to guard against the destruction of vital property, and lastly, we had to have a foresighted plan for the future. (City Council of Philadelphia, 1952a, p. 13)

Advance warning, command and control, training and organization, firefighting and security, and advance planning, if you ever got to it—these were the critical elements of the Cota plan for the defense of Philadelphia.

The city was divided into four regions, roughly corresponding to the northeast, northwest, southeast, and southwest sections of the city. Every region was assigned a headquarters, and an additional command center was placed in City Hall. Command resided in the mayor, but Cota was the true organizational chief. He named his four staff officers, all military men, all retired from service, to manage the four zones: Colonel Beeson Hunt, Army; Rear Admiral Robert Lee Porter, Navy; Lieutenant Colonel Murl Corbett, Marine Corps; and Harold V. Murdock, Air Force. Authority over the four regions fell to these four retired officers (Calpin, 1950). Planning was broken down into eight operational units, supervised by city officials and local businessmen. These included: (a) education and training, Dr. Louis Hoyer, schools superintendent; (b) security, Samuel Rosenberg, director, Philadelphia Department of Public Safety; (c) communications, Arthur Williams, Bell Telephone Company; (d) engineering, utilities, and public works, Lawrence Costello, Department of City Transit; (e) medical and health services, Dr. Rufus S. Reeves, Department of Pubic Health; (f) evacuation, transportation, and emergency welfare,

N. Newlin Bailey, executive assistant, Reading Company; (g) technical, Dr. Henry B. Allen, executive vice-president and secretary, the Franklin Institute; and (h) auxiliaries, Ralph W. Pitman, vice-president, Central-Penn. National Bank (City Council of Philadelphia, 1952a, pp. 86-87; Philadelphia County Civil Defense Council, 1950).[4] Each of the divisions would have a representative assigned to each of the four regions. In this way, if 1, 2, or even 3 quadrants of the city were destroyed, the remaining quadrant or quadrants could function independently, able to carry out all critical functions, with a clear line of authority from the officer in command out to the city under his control.

Filling out the roster of his organization included Thomas Buckley, deputy director and director of the Philadelphia Department of Public Works. Mrs. E.A. Van Valkenberg was made representative of the women's organizations and was placed in charge of registering volunteers. Public relations fell to Clement V. Conole of the Philadelphia Chamber of Commerce. Finally, Cota established a Mutual Aid, Regional Civil Defense Advisory Commission to integrate Philadelphia's planning with that of surrounding counties and municipalities. This list included judges and mayors from Doylestown, Phoenixville, Media, Norristown, Atlantic City, Burlington and Mercer Counties, Trenton, Burlington City, Camden, and Woodbury (Philadelphia County Civil Defense Council, 1950).

By February of 1951, Cota had staffed his command-and-control structure. All of his regional and divisional directors submitted their individual plans, air raid posts and wardens were selected, and volunteer recruiting and training was underway (City Council of Philadelphia, 1952a, p. 12). Cota and members of his staff attended a test exercise for Chicago along with 700 civil defense representatives from across the nation in September, and when federal planners asked if Philadelphia was ready for a test early in 1951, the governor, the mayor, and General Cota agreed that it was time ("City and State Defense," 1950).

As we saw in the introduction to this article, a hypothetical atomic attack for Philadelphia was played out on February 13, 1951. One month later, the Philadelphia County Civil Defense Council hosted a 3-day test "critique" at the Philadelphia Convention Hall. Invited were hundreds of local and state civil defense officials, along with federal planners such as Colonel Irl D. Brent, author of the test narrative. Although not open to the public, the press covered the test critique, and in this way Philadelphians first received a comprehensive vision of what an attack on their city might look like and how well they were expected to fare.

The critique's first day started with a prayer. This was followed by a speech from the mayor, who pointed out that

> the Philadelphia County Civil Defense Council has developed plans to meet a hypothetical atomic attack. . . . Although these plans are only on paper, they are the result of practical, measured thinking. . . . They represent the combined voluntary efforts of men and women from administrative, business and professional fields, as well as the physical facilities of the organizations they represent. ("Remarks of Mayor Samuel," 1951)

The governor spoke as well, followed by a representative of the U.S. Civil Defense Commission. The recently named director of the Pennsylvania Civil Defense Commission—Dr. Theodore Distler—spoke next and was followed by the chamber of commerce president's speech on the nation's "stake" in Philadelphia. Next up, Colonel Brent read the chilling and detailed hypothetical test narrative to the audience. Armed with the sober details of the mass murder, precise destruction radii, and blast heat predictions that drew whistles from the crowd, Brent's narrative captured the imagination of those assembled. Brent's hypothetical challenge was followed by General Cota, who was to present the civil defense plan for the city and his solution to the city's proposed atomic apocalypse ("Agenda: Philadelphia," 1951).

General Cota related in detail how the hypothetical attack had wreaked havoc on the city. The Control Center in Region 3 was completely destroyed. Key personnel had great difficulty getting from their homes to their assigned posts. Many were injured, and many determined it necessary to stay home with loved ones rather than report for duty. Almost 2 hours after the attack, the Command Center was operating at only 50% effectiveness, and it would take

another day before the extent of the damage was known. The all-clear air raid signal was only disseminated with great difficulty because of downed power lines and destroyed telephone communications. The public, therefore, had no idea if the attack was over. An overwhelming panic was rampant in Regions 1 and 2.

Then, Cota turned to the positive, the actionable elements of his command-and-control plan that had survived the bombing. The mayor and the executive director were presumed to have survived the attack and would be spending the next days and weeks allocating aid, issuing bulletins, and communicating with the public on the radio. These commanders would be talking with advisors about the legality of requisitioning of food, medicine, and supplies. They would be closing off neighborhoods, preventing looting, and issuing "shoot to kill" orders, directing auxiliary firemen and police, checking on industrial plants, locating burial grounds, and raising funds from city council for the homeless and the wounded. "By the end of five days," Cota asserted, "Philadelphia was beginning to dig itself out of the ruins. This was made possible by prior civil defense planning by local, state, and federal Governments." The plan was solid; the city would survive (Philadelphia County Civil Defense Council, 1951, pp. 5-7).

It's here that the hypotheticals ended, both on the attack and on the response. Cota proceeded to honestly state the facts on the ground, and they bear quoting at length:

> Ladies and gentlemen you must remember that this hypothetical problem was solved by the application of PLANS only. Plans are only plans. They become effective only when the tools are made available to carry them out. On February 13, 1951, many of the tools used in this solution were not in existence. As the various Division Directors present their solutions to you, they will tell you the resources they used in their solution that were not actually available. They will tell you very frankly that they could not have solved this exercise with the tools at present available to them.
>
> Only one Control Center can now be operated. This Control Center is above ground; its communications consist solely of telephones without regular or volunteer operators, and police, fire, and ham radio sets. This Control Center was the one that was hypothetically destroyed by the bomb blasts on February 13th. . . . Regions are unorganized. . . . No means of identification have been issued to civil defense personnel or for use on vehicles. Recruitment has only begun. It is not organized. Shelters have not been selected nor marked. Instruments for the detection of lethal radiation are not available for training or use. The installation of air raid warning sirens has not been completed. Training, except for the school teachers and school children, has been limited in general to basic subjects such as first aid.
>
> Civil Defense, like Military Defense, is a waste of money and resources unless it is organized and trained before an enemy attacks. Does anyone know when an enemy will attack? Think of the lives that will be saved by intelligent Civil Defense preparations ahead of time.
>
> Why does this condition exist? The answer is simple. Lack of funds, equipment, and directives from higher civil defense authorities. (Philadelphia County Civil Defense Council, 1951, p. 7)

Despite this devastating assessment, Cota remained optimistic that with more time to plan, more financial resources, and more political support from above, he could whip civil defense in Philadelphia into shape. Though the city council had appropriated only $250,000 the previous year, the mayor had only days before he optimistically asked the governor for $9 million (McCullough, 1951). There was also talk of real federal funding finally materializing. And now, almost certainly with these new nightmares made public, the city would leap up to its responsibility, volunteers would stream into civil defense recruiting stations, and Philadelphia's paper plans would become real.

Command and Control Versus Urban Realities: The 1952 Civil Defense Hearings

While civil defense planning rolled on in Philadelphia, so did the wheels of political change. Corruption, not particularly new to Philadelphia politics, was a major campaign issue in the 1951 mayoral race. Philadelphia had a long tradition of Republican party control, a situation that put the city right in line with the mood of the national electorate in the immediate

postwar years when Congress in 1946 and then the presidency in 1952 flipped from New Deal Democratic to Republican control. In 1947, Richardson Dilworth—a decorated WWII veteran and attorney—ran for mayor against Bernard Samuel with the slogan "Sweep the rascals out!" During the campaign, Dilworth accused 128 city officials of receiving bribes and payoffs—accusations that led the city council to create a "Committee of Fifteen" to investigate. Though Dilworth lost the election, the resulting investigation turned up a staggering figure of $40 million missing from the city's coffers. A grand jury followed up, and scandal after scandal came to light during the next 4 years. The Philadelphia Republican machine was against the ropes (Clark & Clark, 1982, pp. 651-652).

Dilworth ran for city treasurer, and his fellow Democrat and friend, retired Air Corps Colonel and lawyer Joseph S. Clark, ran for city controller. Both elected, they turned their energies to advocating a new city charter for Philadelphia. This home-rule charter changed city government in several key ways. Most importantly, it created a city more independent of the state legislature, with a "strong-mayor" form of government. The charter also required a Civil Service Commission to review government appointments, taking this form of patronage, and potential cronyism, away from the mayor. Important new advisory boards and commissions, such as the City Planning Commission, were also created by the new charter (Clark & Clark, 1982, pp. 654-655). The voters of Philadelphia approved the home-rule charter in May 1951 and later in the year elected Clark as mayor, Dilworth as district attorney, and Democrats for 15 of the 17 city council seats. Reform was the word of the day; Bernard Samuel and his administration were a memory. Civil defense remained, but it too was not immune to reform and the prevailing political mood.

When the new mayor began to examine the bureaucracy he inherited, he was naturally interested to find out what civil defense organization was in place. General Cota and his team had been busy indeed, but busy doing what was difficult for Clark to know, as Cota had yet to make a public report or even a detailed written report to the mayor or city council. The test critique earlier in 1951 provided the most public exploration of Cota's ideas, but almost a year had elapsed since then. Even before taking office, Clark and some members of council had volunteered in one or another capacity in civil defense duty. They were, in short, unimpressed with what they had seen thus far. Constituents were writing letters, complaints were coming in: "I volunteered but no one has contacted me. . . . How do I get information? . . . I don't hear the air raid sirens at my house. . . . What can I do to protect my family?"

In an effort to get General Cota on the record and to gain a fuller understanding of his civil defense objectives and strategies, the city council—at Mayor Clark's request—summoned him and his top aides for three public hearings at City Hall in February and March of 1952. In three separate hearings during 2 weeks, General Cota and his top staff testified before the Special Committee to Investigate the Civil Defense Program, chaired by Councilman Paul D'Ortona. General Cota appeared first and opened with a recitation of the history of civil defense going back to the 1948 *Hopley Report*, quoting from it to emphasize a point he would frequently return to in the hearings, namely that

> if you are going to have Civilian Defense, the demand for Civilian Defense had to come from the people. In other words, it had to come from the local communities up, and that is the way the American people wanted it. (City Council of Philadelphia, 1952a, pp. 3-4)

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He went on to explain how civil defense had been established at the federal, state, and ultimately local levels with his appointment in 1950. He impressed on the committee his feeling that atomic attack was a regional problem, not confined to the Philadelphia city limits. He reiterated his belief that federal and state guidance and financial commitments had been entirely insufficient. He decried lack of public interest. Still, it was all worthwhile according to Cota, as he spelled out his pressing concern that civil defense will "some day in the future be called on to function under fire, and I mean under fire, under actual bombing. . . . To wait for another Pearl Harbor before organizing, training and equipping Civil Defense forces will be too late" (City Council of Philadelphia, 1952a, pp. 15-16).

The committee explored two primary concerns in the hearings: (a) gaining a full understanding of Cota's command-and-control structure and (b) measuring the degree to which the civil defense plan had been enacted to date. It is painfully clear from the committee transcripts that the examining council members never fully grasped the intricacies of Cota's plan. It is likewise clear that the general himself knew the outlines of the plan but had delegated the details to his subordinates. The first difficulty arose in trying to understand the relationship between Cota as executive director and the mayor. Cota explained the division of power, emphasizing his role as making plans and recommendations and the mayor's role in acting on this advice. The entire Civil Defense Council met every Wednesday at 10:00 a.m., division directors would report on progress, Cota would make a report, then he and the mayor would meet for a private briefing in the mayor's office. The committee began to ask about the specific way this relationship worked, asking for example what actions the mayor had taken after receiving reports from the general in August and September calling for more public relations activities. The mayor, they learned, had told Cota to hold the status quo with elections coming up; he had told him to "sit tight." This caught the committee's interest:

Council [C]: These reports of August 1951 and September 1951 were detailed reports making recommendations primarily for the purpose of alerting the public to the real danger?
Cota [CO]: Yes.
C: You got no reply to either report from the Mayor?
CO: No.
C: And the Mayor suggested to you that the matter be in status quo due to the coming in of the new administration?
CO: Yes.
C: What was the enemy doing during that period, or even during the next five minutes while you are sitting here? (City Council of Philadelphia, 1952a, p. 22)
C: Is it not your duty as the head of this organization, if you make recommendations, to see if they are carried out, or if they are not carried out, why they were not carried out?
CO: I'd like to make one thing very clear, the responsible officer in Civilian Defense is the Mayor, he is the Director of the Civilian Defense setup, appointed by the Governor . . . after I make my recommendations I felt I had done my duty. (City Council of Philadelphia, 1952b, pp. 76-77) [*sic*]

Further questioning revealed that information within the Civil Defense Council was highly compartmentalized. Specific knowledge on a particular function, communications or education, for example, resided only with the officer in charge of that division. Cota himself was unable to address a great number of the specific questions put to him about the actual functioning of his regions and divisions. It turned out on questioning that meetings between Cota and his top aides were often informal, where issues were "thrashed out" but no written records were kept. This was, he went on, the way he had always worked.

CO: You are asking how I run my staff, and by God, I run a lot and I think I know how to run it.
C: We are not criticizing you, General, on that score. I don't think it is necessary, however, for vital information as far as the safety of the people of Philadelphia is concerned . . . [to] be kept locked in some one's head.
CO: I think you will find the division directors have the information.
C: If all the reports are made orally and at staff meetings, it seems to me the information is locked in some one's head. (City Council of Philadelphia, 1952b, pp. 110-111)

With an executive director relying on staff officers to advise him, what might happen if these advisors were killed? More damaging, what good was such a command-and-control arrangement if the top commander—the mayor—was unwilling to command during election season?

With an executive director relying on staff officers to advise him, what might happen if these advisors were killed? More damaging, what good was such a command-and-control arrangement if the top commander—the mayor—was unwilling to command during election season? The committee was decidedly unimpressed.

The committee was even more unimpressed when it learned about the command structure at the volunteer "warden" level. The city's wardens were organized geographically, with several zone wardens for every region, a smaller number of post wardens below them for 4 to 6

block areas, and block wardens for every block in the city. This might have seemed uncritical, until the responsibilities of the wardens were explained. The list was daunting, including

> [to oversee] the Civilian Defense organization's self-protection program, to assemble data . . . on occupants of buildings, buildings and facilities and equipment, and to make and require reports of actual damage, and call for all needed assistance from the next higher headquarters, to cooperate with the officials responsible for equipment and police and firemen, communications and transportation, and medical and health and welfare and rescue service . . . to be a leader and keep calm and still rumors and know his neighborhood. (City Council of Philadelphia, 1952b, p. 116)

The warden, it seemed, was the real lifeblood of the civil defense effort. In the wardens, presumably well-known local figures, resided the detailed knowledge of the neighborhoods. The warden knew the buildings and the people; he or she wielded local control in the midst of disaster. Therefore, it came as an unpleasant surprise to learn how dismally the warden recruiting and training was proceeding. In Region 1, Admiral Porter admitted that 12,000 wardens were needed, and 417 were signed on, with no way to be sure if any of these had completed the required training. Furthermore, it was revealed that the training program consisted of a 6-hour course, much of it taken up with watching civil defense films.

Moving on, the committee turned to an evaluation of the progress made in enacting the civil defense plan, flawed as it might be: How much equipment was in place? Was critical infrastructure protected? How many staff had been selected and trained? What about volunteers and public education? The picture was bleak. In addition to the bad news about warden recruitment, it seemed that a similar picture existed for all volunteer positions. In Region 3, for example, Colonel Hunt reported that he had recruited 790 air raid wardens to spot enemy aircraft. When asked whether this was a full staff, he replied that 15,000 were actually required. An auxiliary police force of 3,000 was needed, and he had 68 signed up, and for auxiliary firefighting he had 8 men, for a region of the city with a population of half a million (City Council of Philadelphia, 1952b, pp. 177-179).

An auxiliary police force of 3,000 was needed, and he had 68 signed up, and for auxiliary firefighting he had 8 men, for a region of the city with a population of half a million.

The report on infrastructure was not much better. Schools were designated as "improvised" hospitals, but only 79 had been established, and medical supplies were nonexistent. Emergency vehicles were needed, 2,580 of them to be exact, but none existed. Most pieces of heavy equipment of any type were limited to those owned by city departments, and these had not been marked or identified yet. Private taxicabs and "volunteer" cars were hoped to be available in the event of an attack, but no solid numbers were known. Industrial plants were asked to organize themselves, but it was unknown how many of them had done so. The same was true of office buildings and retail establishments in center city. Even the regional command centers were problematic, each of them with exposed windows, one of them on an upper floor of a school, and none of them underground. It was reasonable to assume from this that a couple of well-placed bombs would actually knock out every command center. Put to the test, none of the regional officers were willing to state that their region was ready for an atomic attack. In sum, the likelihood of success for Cota's command-and-control plan was highly questionable, and his other civil defense objectives—to build a warning system, establish a volunteer-based warden system, and train auxiliaries—were grossly unfulfilled.

Unsurprisingly, Cota blamed the usual suspects. Asked by the committee how much money he needed, the general answered $12 million, but in fact had only spent just less than $300,000 to date. Volunteers were impossible to find. City organizations were uninterested. City merchants such as Wanamaker's were reluctant to post civil defense placards so as not to arouse their customers' fears. Industrial plants were quiet on their preparations and not required to report. The state was no help; the federal authorities were even less. Only Cota and his staff knew the risks, knew the civil defense plans, and apparently even they were a bit hazy on the plans. The committee chairman concluded that Philadelphia civil defense was a wreck, noting that "we have all generals and no soldiers" (City Council of Philadelphia, 1952b, p. 200). In its postmortem on the hearings, the *Philadelphia Inquirer* reported that "Philadelphia's defense setup was depicted as a virtual failure," pointing out in a damning

headline: "Gen. Cota Is Uncertain On Setup" ("Civil Defense in Phila.," 1952). Cota resigned within the year, no doubt finding that Omaha Beach was easier to manage than cold war Philadelphia's civil defense.

Defending Philadelphia

It is not a surprise, when one studies the dismal state of civil defense across early cold war America, to see that General Cota failed to reach his goals. It is worth lingering, though, over the ways he imagined the challenge of defending Philadelphia from atomic attack. It is even more instructive to understand the factors Cota saw as crucial to his failure. As the literature on civil defense makes clear, congress and President Truman were confused and sent confusing messages to the states and cities during the early cold war. President Eisenhower was perhaps even more problematic for local civil defense officials. Eisenhower rejected shelters—on the basis of their expense—and endorsed evacuation as national civil defense policy. However, this policy was shown to be farcical once the fallout effects of hydrogen weapons were made public. And appropriations from Washington, D.C., continued to be absent, or minimal, throughout the Eisenhower years. Eisenhower instead placed his trust in nuclear weapons themselves to deter the enemy and in local missile defenses to shoot down enemy planes. These ideas seemed logical, too, until Sputnik, intercontinental ballistic missiles (ICBMs), and a growing Soviet stockpile invalidated them in the late 1950s.

Nevertheless, it is still instructive to study General Cota's disaster plans and the assumptions he made about the city he was trying so earnestly to save. In doing so, it is best to remember that he saw his real enemy in this job as a public that lacked the "will to win." As he stated in the 1952 city council hearings, General Cota believed that for civil defense to work, the citizens of Philadelphia must rally around the effort. However, this was not a vision of grassroots community organizing or even a neighborhood-based preparedness model. Instead, General Cota saw Philadelphia as a volunteer army, an army of 2 million soldiers waiting to be inducted, trained, authorized, organized, and commanded. Why was this the dominant model, the military model? For Cota, there was likely no other way to conceptualize the problem. His disaster imagination had been trained in war, and he carried the war metaphor over to postwar Philadelphia. Command and control, at least on paper, offered the maximum assurance that the city could be simultaneously hardened against future attacks and managed in the horrible midst of atomic attack. Centralization of command and a strict compartmentalization of information would keep things simple and efficient, allowing the commander to act quickly and unilaterally in emergency. His was the opposite of a bureaucratic model, with interlocking institutions exercising checks and balances over one another, or a community-based model, with preparedness aggregating up from localized units.

Cota might have concluded that it was a city of churches, a city of neighborhoods, a city of factories and union halls, a city of businessmen, a city of African American and immigrant ethnic populations, a city of wards and ward-heelers, a city of policemen and firemen and civil servants.

Furthermore, with World War II so fresh in the public memory and military expertise so highly regarded and easy to locate, we can see why Mayor Samuel might have recruited a military man, his staff, and his ideas to solve the civil defense problems of Philadelphia. However, Cota had been away for a while. In fact, he did not even live within the city he was defending but rather lived in the suburb of Ardmore—a point that caused some public comment when he was appointed. Cota was also not a native Philadelphian, had never lived in the city, and thus had never been integrated into the city's local ward-based political culture or ethnic- and race-based neighborhood cultures. The military chain of command operates the same in occupied Germany as it does on Omaha Beach, portable and absolutely impervious to local conditions—this is the planning mind-set Cota brought to his adopted city. Had he thought a bit more about how Philadelphia was already organized before his arrival, Cota might have concluded that it was a city of churches, a city of neighborhoods, a city of factories and union halls, a city of businessmen, a city of African American and immigrant ethnic populations, a city of wards and ward-heelers, a city of policemen and firemen and civil servants. It was just about anything but a city of soldiers waiting for their general. Local

organization in the form of "block and post wardens" or "plant protection," organization based on identities and local knowledge, was, however, left to last on Cota's list, and in fact it never happened throughout the history of Philadelphia civil defense. Asked in the city council hearings if he had conferred frequently with the city's influential labor leaders, Cota mentioned that a couple had been named as advisors, but he could not remember ever talking to them. This is a remarkable admission, considering the overwhelming blue-collar orientation of the workshop of the world. A recognition that the city had racial, ethnic, and income differences also never surfaced in his writings or in his final disaster plan. He did recognize women and school children as special populations and actively recruited both. However, it's not clear what role children could really serve beyond dutifully performing "duck and cover" drills; organizing the city's wives and mothers was left to the only woman on his executive staff, and he knew little about the effort. Local constituencies were perhaps interesting, the existing organizational structures of the city worth noting, but both proved ultimately unimportant in the military model of defense. Command and control was seen to be the way to react to a war, despite the fact that the citizens of Philadelphia did not see themselves at war.

This imposition of a wartime command structure on a vibrant, living, peacetime city was Cota's fatal move, among the many fatal moves made by planners such as him throughout the cold war. It did not help that he was caught up in the greatest 20th-century overthrow of political entrenchment in Philadelphia. Appointed by a Republican, Cota was a marked man when the reform Democrats came to town. Apparently so fearful of charges of corruption that he spent even less than he was appropriated, Cota still represented an authoritarian cronyism that Philadelphians voted to throw out in 1951. Cota himself was never accused—nor should he have been—of profiting by civil defense. Still, a command-and-control organization with little oversight, an enormous appointed staff, and a constantly growing budget requirement did not sit well with the reform-minded Democrats of the Clark-Dilworth era. Lesson: Local politics matter, even in the face of Armageddon.

Lesson: Local politics matter, even in the face of Armageddon.

Cota's replacement, Paul Hartenstein, would prove a far more politically savvy civil defense coordinator. Public relations moved front and center during the next few years, with long lists of accomplishments offered to the press and published in reports to the mayor every year. Public evacuations, such as the 1954 "Operation Scram" exercise, gave the public a tangible product for their civil defense dollars, as did the millions and millions of brochures sent out through the schools, the supermarkets, and the local organizations. Hartenstein ran up against problems that Cota never quite got to, such as the unwillingness of property owners to turn over their private building basements to use for bomb shelters. However, Cota might have predicted such a problem based on the unwillingness of factory or department store owners to let him anywhere near their property. Why risk a public encroachment on your property when you were not required to accept one? Though shelters were built in public spaces such as subways, it would not be until 1969 that the city would boast enough fallout shelter space for every citizen, and this was helped by the rapidly declining population by this time.

Lastly, the 1950s were not years in which Philadelphians (or any urbanites for that matter) wanted to imagine themselves as heroically living through a nuclear war. A review of city planning literature in these years reveals two of the city's most famous planners—G. Holmes Perkins and Edmund Bacon—almost entirely silent on atomic planning.[5] The city was, according to Bacon, about to remake itself into a utopia of green space, easy transportation, and majestic plazas. Perkins, dean of the Penn Graduate School of Fine Arts, seemingly believed that nuclear war and urban planning were opposite concepts, not worth discussing at the same time. The 1960 City Planning Commission plan for Philadelphia does not mention, or even reference, atomic weapons in any way. When it was revealed in 1958 that an exercise such as the 1951 "hypothetical test" had taken place—except with a 2 megaton hydrogen weapon dropped on the city this time—the conclusion was that very little of the city would be left, perhaps only one third of the population uninjured. Rather than leading to a public outcry for more civil defense, budgets in fact continued to decrease, and public engagement continued to decline until the Cuban Missile Crisis in 1962. Cota's vision of a garrison city

was not in step with the dreams of prosperity and reform, of mobility, of work and home, of community that Philadelphians were developing in the 1950s. Each of these ideas would be challenged thoroughly in the 1960s, as the deindustrializing city tore itself into pieces. General Cota was not the only person to never realize that local knowledge and community might save the city.

Despite their inability to ever substantially overcome these difficulties, the civil defenders continued planning for Armageddon throughout the cold war in Philadelphia. That they retained the authority to do so raises deeper questions about the powerful role of disaster experts in the postwar era. How did experts with so little concrete protection to show for their efforts maintain their mandates to keep planning throughout these years? This article demonstrates the rhetorical and technocratic tools that disaster experts were developing to help them retain their standing, even when they lacked meaningful empirical proof to show that they were providing safety and security from disaster. At the federal level, the cold war planning experts wrapped themselves in secrecy and claims to a technical mastery of nuclear attack scenarios that proved unassailable for local officials and average citizens. The technological frontiers of nuclear war expanded rapidly in the early cold war as well. In the 1950s, fission bombs gave way to hydrogen bombs and bombers gave way to ICBMs. This uncertainty placed special emphasis on federal experts who had the president's ear and could influence federal civil defense policy based on shifting technological realities, even if this meant a confusing mishmash of orders trickling down during the decade to the states and cities. At the local level, General Cota may have resigned his post in disgust, but not before leaving a permanent imprint on the city's cold war civil defense. His mantra that citizens lacked the will to win and that bureaucrats lacked the will to fund proved plausible, thus durable. Though he was held up to public scrutiny in 1952, his command-and-control plan was never substantially altered, a fact applicable to civil defense across the nation. Failures notwithstanding, alternative modes of preparedness—community based, private sector based, or entirely federalized, to name a few—were never explored. There is some path dependence at work here, an unwillingness to change the plan once it exists because of lack of funding and sustained public outcry. Command and control, also, exerted a powerful psychological hold on planners who saw the pre-Vietnam era military as the paragon of efficiency and order in the face of chaotic conditions. Each of these factors in concert enabled an age of civil defense experts whose greatest achievement was the longevity of their authority rather than the utility of their plans. Nuclear war is not "winnable," but the battle for disaster authority is, and in this regard civil defense experts proved masterful.

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Each of these factors in concert enabled an age of civil defense experts whose greatest achievement was the longevity of their authority rather than the utility of their plans. Nuclear war is not "winnable," but the battle for disaster authority is.

These cold war experts may seem a relic of the past, but their planning functions and claims to authority have outlived them, resurgent in the post-9/11 age of "homeland security." We are again in an age of imminent disaster, both from terrorism and the failure of our technological systems—from collapsing skyscrapers in New York to the New Orleans levees. In the light of Philadelphia's early cold war planning, we should closely watch the transformation from plan to action outlined in the 2006 EPRC Report. The EPRC is broken down into subcommittees, including chemical, biological, radiological, nuclear, and explosive detection; continuity of government; critical infrastructure; health and human services; legal and intergovernmental; public information and community engagement; and vulnerable populations. Additional support in preparing the report came from James Lee Witt Associates, an emergency planning firm led by the former head of the federal Emergency Management Agency during the Clinton presidency. The breakdown of subcommittees reflects priorities that are consistent across time, infrastructure protection and health systems readiness, for example. New functions appear in the planning structure, though, that indicate a break with cold war command and control–style planning, especially in the form of community engagement.

The EPRC Report states a critical question that hung over the 1952 City Council hearings into General Cota's atomic disaster plan: Why train citizens? The answers stated in the report indicate the degree to which disaster planners during the past half-century have learned from social scientists to think about cities not as monoliths but rather in terms of communities,

local economic conditions, racial, ethnic, and gender factors, and the geographical realities of urban environments. The report states that in a disaster scenario we should only expect 1 firefighter for every 280 people and 1 paramedic per 385 people and that first responders generally will be overwhelmed perhaps as soon as 12 hours into a disaster. Such numbers should sound reminiscent of the Cota hearings, when City Council members were horrified to learn that Philadelphia would face similar challenges of understaffing after nuclear attack. Cota had originally planned to utilize block wardens to act as his grassroots cold warriors, but little was ever done to turn such plans into reality. The EPRC acknowledges that the reality of overwhelmed first responders demands emphasis be placed not on top-down management but rather on grassroots-up citizen preparedness, involving a sustained public education campaign and a free flow of disaster planning information from City Hall out to the neighborhoods. Therefore, the EPRC and the mayor stand at a critical moment of decision, especially considering that as of now there is no coordinated program for citizen emergency education in Philadelphia or in the surrounding metropolitan region. In theory, the EPRC report states the fact that command and control will never succeed without community action, the practice of this theory remains to be seen (City of Philadelphia, 2006, pp. 85-87).

Furthermore, the EPRC Report makes consistent demands for new technology and training, local, state, and federal collaboration, and constant funding streams that eerily echo Cota's unfulfilled plan. Just as in the early cold war, the EPRC seeks to raise awareness of risk to a constantly high level in governance and in the public mind. In conclusion, the report states that

> the integration of emergency management into daily operations is the means by which communities truly become resilient in their preparedness and response capabilities. This new culture will benefit individuals, departments, and agencies within the City government and throughout the community. (City of Philadelphia, 2006, p. 127)

With the benefit of hindsight, the planners should now know that it will be difficult to keep citizens engaged in planning for disaster if their preparedness hinges on taking orders from a corps of distant planning experts or standing at a constant state of attention. If the case study of early cold war civil defense in Philadelphia teaches anything, it is that the more a disaster plan strays from the realities of everyday urban life in the built environment, that is, not in the built environment that planners want, the more likely it is to gather dust and to become a hollow plan. If the dream of Philadelphia's new preparedness culture as outlined by the EPRC can be flexible and honest, if it is synchronous with local realities instead of command-and-control fantasies, especially in the face of difficulties and setbacks, then the EPRC will have learned well from history.

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Notes

1. This document is available online: http://www.phila.gov/ready/pdfs/EPRC_Full_Report_Updated_7_14.pdf.

2. The Philadelphia City Archives holds substantial records of the Philadelphia County Civil Defense Council and civil defense records from the Philadelphia Mayor's Office from World War II to the 1960s. I have drawn heavily from these records in the research for this article as they give valuable insights into the mind-sets and actions of Philadelphia's public officials in the midst of the largest disaster-preparedness moment in the city's history.

3. The literature on American civil defense has gone through two recent waves, one in the 1980s and one currently underway, resulting in a shelf of useful books. See Eden (2004), Garrison (2006), Grossman (2001), Kerr (1983), Krugler (2006), Leaning and Keyes (1984), McEnaney (2000), and Rose (2001).

4. These divisional units would change by 1952, with Medical and Health Services changing to Health Services and Special Weapons Defense in acknowledgment of biological and chemical weapons fears; Evacuation, Transportation, and Emergency Welfare changing to simply Transportation; and Technical and Auxiliaries Divisions disappearing in favor of new divisions for Fire, Welfare, Plant Protection, and Attack Warning. Cota would continue to staff his divisions with city officials, commissioners when possible, and local businessmen.

5. Jennifer Light (2003) and others have recently demonstrated the degree to which urban planners in the cold war were unsuccessful or unwilling to address the government's call for fallout shelters or blast shelters as part of the built environment. Such grim reminders of impending doom were out of step with both the preservationist mind-set found among some planners and the international modernism of others.

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