THE NEW DEAL GOES TO WAR: THE ROLE OF THE ALPHABET AGENCIES IN WORLD WAR II MOBILIZATION

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ABSTRACT

Although the New Deal alphabet agencies are best known for their roles in combating the economic emergency of the 1930s, many of these agencies served important strategic functions during the military emergency of the 1940s. This paper examines the important strategic contributions of the alphabet agencies—particularly those in the newly created Federal Works Agency—during the Second World War.

When the Federal Works Agency went to war the chief weapons it employed were those forged by more than 10 years of experience in large scale public works.

-Federal Works Agency 1942 Annual Report (p. 2)

Introduction

On July 1, 1939, the Federal Works Agency (FWA) was created to oversee and coordinate the activities of five major New Deal alphabet agencies—the Works Projects Administration, the Public Works Administration, the Public Buildings Administration, the Public Roads Administration, and the United States Housing Authority. During the previous 15 months Nazi Germany had seized Austria and Czechoslovakia's Sudetenland and had begun its severe persecution of Jews, while Mussolini's Italian forces captured Albania. On September 1, 1939, two months after the FWA's creation, the Second World War officially began with the German invasion of Poland. In the United States, unemployment hovered around 15 percent. After six years, while providing some measure of short-term "relief," the New Deal alphabet programs had failed to end the Great Depression. Ironically, war production spending, under the guise of neutrality prior to December 1941 and through direct U.S. involvement with the conflict after that date, eventually pulled the nation out of the economic malaise.

Though the war's abatement of depressed economic conditions in the United States is well documented by economists and historians, the key issue addressed in this paper is: To what extent did the 1930s expansion of the federal government's public works bureaucracy help facilitate the nation's mobilization for war in the 1940s? While most accounts of the New Deal alphabet agencies focus on their attempts at fighting the economic emergency of the Great Depression, many of these same agencies played important strategic roles during the military emergency that followed. This paper examines the roles and contributions of the alphabet agencies—specifically those in the Federal

Works Agency—during World War II. This short article, which relies heavily on the alphabet agencies' annual reports, by no means provides a complete documentation of the New Deal agencies wartime activities. Rather it is meant as a starting place for future research on this largely unexplored topic.¹

Federal Works Agency Creation and Background

Though the Roosevelt Administration did not claim to have a militarily strategic motivation for consolidating these five alphabet agencies into the FWA just as war was breaking out in Europe, the move clearly offered benefits—at least serendipitous ones—for wartime mobilization. While recent history demonstrates that increasingly centralized government control is generally detrimental to economic prosperity, few would argue that such a political structure is the most effective way to achieve military success. The January 2003 creation of the United States Department of Homeland Security (DHS) to coordinate the antiterrorism activities of 22 distinct agencies is a recent example of the expected strategic gains to such consolidation. In the words of the DHS Secretary, Tom Ridge, "We are safer because our homeland security professionals now have a single department leading them and our states and cities have a place to turn for financial, technical and operational support." The FWA offered similar militarily strategic gains during the Second World War.

Roosevelt originally proposed the creation of the FWA on April 25, 1939.³ Offering no allusion to its potential strategic importance, the President simply claimed it "necessary and desirable to group and consolidate under a Federal Works Agency those agencies of the Federal Government dealing with public works ... which administer Federal grants or loans to State and local governments or other agencies for the purposes of construction."⁴ With public opinion largely in opposition to the United States entering another European war, it is not surprising that Roosevelt asserted that the creation of the FWA was simply a money-saving, efficiency measure, projected to save approximately \$20 million per year.

Still, the FWA's first annual report, released in the autumn of 1940, was not shy about brandishing the agency's new strategic mandates and the defense gains it could bring to the table. The report noted that:

When a great industrial nation prepares for defense, the backbone of this defense lies far behind the front lines, in farms, factories, and workshops where the materials for war are manufactured. As America is now well aware, modern warfare is a battle of machines as well as of men. Ships, airplanes, tanks, trucks, radio equipment, warehouses, arsenals, ordnance depots and proving grounds, naval bases and air fields are required if the Nation is successfully to be defended... Such mobilization of manpower and industry requires a great deal of building. The several military and naval appropriations authorize the construction of extensive public works and utilities.⁵

Before discussing the wartime roles played by the FWA sub-agencies, the following section briefly discusses the history of each agency and their respective prewar mandates.

Background of the FWA Sub-Agencies

The Works Projects Administration (WPA), which was established in 1935 under the name Works Progress Administration, was the quintessential "relief" agency of the New Deal.⁶ The agency took over the primary mandate of the Federal Emergency Relief Administration and became the principle provider of grants to states for general unemployment relief. Essentially, the WPA provided government jobs to those workers most in need who could not find private employment. Employment-creating WPA projects were not to compete with the private sector and relief workers were required to actively seek private employment and to accept reasonable job offers from private employers.

The Public Works Administration (PWA) was created under the National Industrial Recovery Act of 1933 to similarly provide unemployment relief. The differences between the WPA and PWA were subtle and—as was the case with many of the alphabet agencies—there was a great deal of overlap between the mandates of these two agencies. The differences in philosophy of the WPA's chief administrator Harry Hopkins and the PWA's chief administrator Harold Ickes during the 1930s have been widely documented by New Deal historians. While the WPA's primary objective was to provide employment with an eye almost exclusively toward short term relief—some critics derided WPA work as "leaf raking"—the PWA, which was housed in the Interior Department, generally built public works infrastructure such as schools, hospitals, city halls, libraries, waterworks, flood control projects, hydroelectric power and other projects that focused on longer-term economic concerns.⁸

The United States Housing Authority (USHA), which was created from the PWA's Housing Division in 1937, had a mandate of "slum clearance and expanded low-rent housing construction." This mandate pertained not just to urban areas, but rural ones as well. In either case to qualify to live in USHA housing tenants had to meet low-income requirements. Though employment relief (providing construction jobs) may have played a small role in its decisions on which projects to fund, the USHA's chief economic focus was on longer-term structural reform—providing housing in traditionally poor areas, not just those hardest hit by the Great Depression.

The agency that would eventually become the Public Roads Administration (PRA) was created in 1893 as the Bureau of Public Roads of the Department of Agriculture. Under the Federal Highway Act of 1921, the agency was assigned to develop a system of "strategic highways" for national defense purposes. Unlike many of the other Depression-fighting agencies that continued into the 1940s then, military objectives were not entirely new to the PRA. During the 1930s, however, the bureau, still under the auspices of the Department of Agriculture, was primarily concerned with rural economic objectives such as the construction of "farm-to-market" roads.

Like the PRA, the Public Buildings Administration (PBA) predates the Great Depression as its origin dates to the 1830s construction of the Federal Treasury Building in

Washington. During the 1930s, the PBA filled an employment relief role while building structures such as post offices, hospitals, and other federal buildings. Prior to its being subsumed by the FWA, the services carried out by the PBA were under the auspices of the Treasury Department's Procurement Division and the Branch of Buildings Management of the National Park Service, which was housed in the Interior Department.

With respect to specific organizational changes, as with the recent Department of Homeland Security's appointment of Secretary Tom Ridge as chief coordinator, the FWA set up an Office of the Federal Works Administrator with John Carmody as chief administrator. Carmody was a veteran New Dealer who had previously worked in the Civil Works Administration, the Federal Emergency Relief Administration, the Rural Electrification Administration, as well as on the National Labor Relations Board. As administrator of the FWA, Carmody's primary duty was to "give general direction and supervision to the work of the constituent units of the FWA, to coordinate their functions and to exercise all the functions formerly assigned the Secretaries of Agriculture, Interior, and Treasury with respect to units transferred." The FWA's 1941 Annual Report described the gains of its creation as follows:

With the creation of the Federal Works Agency the work of several building organizations of the Government became more clearly defined as each was more definitely related to its specific functions. A firm central administrative control of building programs was promoted to the end that each man down the line to the resident engineer on the job knew what was expected in the way of performance on the work for which he was responsible. Through coordination and planning centered for interpretation and assignment in the Administrator's Office, an orderly performance was attained. Bureaucratic boundaries were dissolved as men and ideas began to circulate within the Agency as a whole. ¹³

Despite the creation of the FWA, however, the day-to-day operations of the five sub-agencies were mostly unaltered. While collaboration between alphabet agencies was made easier with the oversight of a central coordinator, each carried out its own projects, had its own hierarchy of administrators, received its own budget, and submitted its own annual report to the FWA. Table 1, which lists each agency's chief commissioner, also shows that most agency leaders were carried over from before the reorganization. The one exception was the PWA, where Colonel E.W. Clark, previously the agency's executive assistant, was named temporary administrator (Ickes, as Secretary of the Interior had previously acted as the PWA's head) and was eventually replaced by M. E. Gilmore, another long-time employee of the PWA. In short, each alphabet agency's Depressionera structure (and leadership) remained largely intact after the July 1939 reorganization. Thus, it is worthwhile to evaluate the wartime behavior of the individual agencies rather than just the FWA as whole. Despite the creation and oversight of the FWA, the individual alphabet agencies retained a great deal of autonomy.

In 1942, shortly after the United States became directly involved in the war, Major General Phillip B. Fleming replaced Carmody as the FWA's chief administrator. Further,

during the 1942 and 1943 fiscal years, the WPA and PWA were scaled back dramatically and eventually liquidated. In their place, two new exclusively wartime agencies—the War Public Works (WPW) and War Public Services (WPS)—were created within the FWA to alleviate shortages of public utilities such as water and sewage, power, hospitals, schools, and childcare services, and to ensure the health, safety, and welfare of Americans engaged in national defense.

TABLE 1
Annual Spending of the Federal Works Agency and Associated Agencies (thousands of dollars)

1010	WPA	PWA	PRA	PBA	USHA	WPW	WPS	FWA total
1940	1,959,106	889,771	312,859	61,183	184,730			3,394,969
1941	1,826,795	183,094	297,997	80,784	276,667			2,664,994
1942	1,233,533	45,374	283,545	139,963	165,800			1,977,650
1943	282,144	31,879	306,424	44,744		322,771	108,339	1,096,301
1944			217,024	19,699		73,669	77,323	387,715
1945			167,870	14,008		74,764	98,383	355,025

Source: FWA Annual Reports, 1940-1945.

An Overview of FWA Expenditures during World War II

Table 2 reports the annual expenditures of the FWA as well as each constituent subagency. Though these expenditures generally declined throughout the war (while being replaced with non-FWA federal war production spending), these specific alphabet agencies spent almost \$10 billion during fiscal years 1940-1945 (July 1939-July 1945). Thus, during worldwide military conflict, the FWA spent around \$77 per capita, most of which went to the production of public works infrastructure related to wartime mobilization. In comparison to the 1930s New Deal time period, spending by the five alphabet specific agencies subsumed by the FWA was \$92 per capita for the aggregate time period 1933 to 1939. Despite a lack of attention from contemporaries and historians, then, these New Deal economic agencies continued to operate during the Second World War with budgets that, while diminishing, were far from trivial.

TABLE 2
Alphabet Agency Chief Administrators by Fiscal Year, 1940-1945

1940 1941 1942	WPA Harrington* Hunter Fleming/Field	PWA Clark# Gilmore Gilmore	PRA MacDonald* MacDonald* MacDonald*	PBA Reynolds* Reynolds* Reynolds*	USHA Straus* Straus* StrausΩ
1943 1944 1945	WPW Snyder Snyder Snyder	PWA Gilmore	PRA MacDonald* MacDonald* MacDonald*	PBA Reynolds* Reynolds* Reynolds*	WPW Kerr Kerr Kerr

^{*} Indicates was the agency's chief administrator prior to formation of the FWA.

Source: FWA Annual Reports, 1940-1945

[#] Clark was executive assistant of the PWA in 1939 and was named temporary head of the PWA for fiscal year 1940.

 $[\]Omega$ On February 24, 1942 the USHA was incorporated into National Housing Agency.

The alphabet agencies went through two distinct stages of transition from economic to defense goals-separated by the Japanese attack on Pearl Harbor-from the time of their creation in July 1939 to the end of hostilities in 1945. As Waddell notes, much of the mobilization for war took place during the so-called "prewar defense" period between September 1939 and December 1941.16 "Because the turn to war during this period was so interminably slow, the struggle for control of mobilization policy ... pitted New Dealer and other civilian-state forces against the military-state forces that made such a striking entrance into U.S. politics as the war drew near." 17 Brinkely also documents the struggles between the old New Dealers and the generally more conservative military leaders being put into positions of increasing power in the early 1940s.¹⁸ Not surprisingly, none of this struggle comes across in the FWA Annual Reports, which are rife with enthusiasm for the new defense mandate, even before the attack on Pearl Harbor. A primary motivation of the administrators writing the reports was likely to highlight the contributions made by the FWA to defense in hopes of not being marginalized as the economic emergency waned. In mid-1940, FWA chief administrator Carmody said, "With national defense foremost in the thoughts of the American people, the work and construction program of the Federal Works Agency takes on added significance.... Substantial public facilities have been developed, helpful services rendered, needed employment created, and the well-being of the people safeguarded. This is the contribution which the Federal Works Agency is making to the internal defense of our Nation."19

As the preceding quote from Carmody demonstrates, the FWA had to delicately balance its 1930s economic goals against its new defense mandate before the Japanese attack on Pearl Harbor. Although the need for economic relief, recovery, and reform—the "three R's" Roosevelt outlined in a 1934 fireside chat—between 1939 and 1941 was, in fact, more widespread than any other time in United States history outside of the 1930s, defense related industrial activity began to make substantial gains in eroding the decade-long economic crisis. The PWA's 1940 annual report, for example, claimed "the sound of hammer and saw on [the PWA's] great construction program is being succeeded by the hum of commercial and defense activities." Though the FWA had already undertaken many defense-oriented projects in late 1939 and early 1940, the successful German blitzkrieg between April and June of 1940, in which Nazi forces conquered Denmark, Norway, Holland, Belgium, and France, initiated a significant spike in defense projects carried out by the FWA, many of which were authorized by the Emergency Relief and Appropriations Act of June 1940.

By and large, both during the pre-Pearl Harbor mobilization and during the nation's direct military involvement, the FWA was given three general defense mandates. Congress directed Carmody, and later Fleming, in their capacities as the Federal Works Administrator, to (1) build and expand the system of strategic roads to better serve the needs of national defense, (2) construct sufficient defense worker housing, and (3) support the workers in such housing by providing public works assistance to cities that saw a large influx of workers which, in some cases, doubled or tripled the area's population. The rest of this paper offers an overview of the FWA's work toward each of these three

mandates as well as a micro examination of what is perhaps the best-known alphabet agency, the WPA.

Strategic Roads

During the First World War, the value of an efficient and viable system of strategic roads to transport military goods and personnel—something the nation sorely lacked—became apparent. In 1921, the Army began to coordinate the construction of the so-called "Pershing Network" of militarily strategic highways through the Bureau of Public Roads. By 1940, the network was in need of an update. "As events in Europe have indicated the necessary reappraisal of our own defense position, the War Department ... reviewed its previous designations of highways of maximum strategic importance and [issued] a revised map, indicating the location of approximately 75,000 miles of such routes." The War Department ordered roads on the network be able to support 9,000-pound wheel loads and be at least 18 feet wide, and preferably 24 feet. "Failure to supply promptly the new and improved highway facilities required for efficient access to, and movement within, the military and industrial mobilization areas will retard and partially defeat the effectiveness of defense preparations in their most fundamental and immediately important aspects." 23

The PRA was immediately assigned to conduct a survey of these roads in conjunction with the various state highway departments and to remedy all shortcomings the network possessed. The survey found that 10 percent of bridges—around 2,400 in total—lacked the strength to carry the H-15 load needed for military loads. An additional 500 bridges fell below the minimum 18-foot width and 12.5-foot overhead clearance required for military transport. Furthermore, 4,000 miles of strategic roadways were less than 18 feet wide and would need to be widened to carry military loads. An additional 14,000 miles of roads—almost 20 percent of the strategic network—was in need of strengthening to bear the heavy loads of military convoys. The PRA was also ordered to widen shoulders at frequent intervals so that military convoys could park to rest or make repairs.²⁴ In addition to shoring up the network of strategic roads, the FWA was assigned to reinforce the transportation infrastructure around 150 "points of military concentration"—cities or areas which were singled out for their tactical importance by the War Department.²⁵

Naturally, the construction and expansion of public roads served more than just a military purpose—with regard to public infrastructure, civilian and military goals clearly overlapped. For example, in 1940, the PRA built a bypass around Jackson, Mississippi. While the bypass sped the transport of military cargo around a congested urban center, it was from a civilian perspective dubbed "the most important single highway project ever undertaken in Mississippi."²⁶

Not surprisingly, many points along the Mississippi River offered great strategic importance in connecting Western war production centers and Southern ports such as New Orleans and Mobile with the industrialized Midwest and Northeast. Because bridges

across the river were prohibitively expensive to build, many of these roads had only ferries to carry traffic over the water. The congestion caused by such a transport system was deemed to be unacceptable in time of military crisis. For example, US 190—classified by the War Department as part of the strategic network—crossed the Mississippi near Baton Rouge exclusively by ferry. To remedy this, the FWA provided federal funding toward the construction of the \$10 million Baton Rouge Bridge, which was completed in August 1940. It is noteworthy that almost immediately after the bridge opened, the military moved army units across it during large-scale war games. Likewise, the FWA supported the construction of the so-called "Airline Highway"—a four lane elevated highway that connected Baton Rouge to New Orleans over the top of swamps that previous roads could not traverse. Such projects were "necessary to relieve the pressure on the arteries of the arsenal of democracy." 28

Of course the transport of war materials was not restricted to roads and highways as water also served as an important means of transporting military equipment. The PWA—which during the 1930s constructed what the agency affectionately called the "PWA Fleet" of aircraft carriers, cruisers, and destroyers—and WPA combined with the U.S. Army Corps of Engineers and the city of Richmond to build the Richmond Deepwater Terminal, which was completed in October 1940. The \$3.5 million project widened and deepened the James River to allow a city 100 miles inland to become an important ocean port that could send and receive ships up to 560 feet long.²⁹

Defense Housing

A vital part of the the FWA's role in wartime mobilization was to ensure adequate housing for workers in defense production. In the first year of the FWA's existence, American orders for military armaments rose dramatically, stimulating production and the availability of employment in communities such as Pensacola, Florida, and Newport News, Virginia, whose economies relied heavily on military production. This prompted a rapid migration of the previously jobless to such areas and caused severe housing shortages. Complicating matters, particularly prior to the attack on Pearl Harbor, the war's length and magnitude were highly uncertain making private investors reluctant to build additional housing in defense centers for fear that the emergency would disappear and rents would plummet due to oversupply. The risks were generally too high for private financing of adequate "emergency" housing. The Administration, hoping to potentially kill both the economic and strategic birds with one stone assigned the FWA to begin building additional defense worker housing in such a way as to achieve "the maximum ultimate recovery of funds expended and the maximum permanent public benefit to be derived from the new housing." ³⁰

In the summer of 1940, in the face of multiple German military successes, Congress authorized \$100 million to the Navy and War Departments for new defense worker housing. Of this, \$45 million was transferred to the FWA, which assigned the bulk of the construction work to the USHA and PBA. The 1940 FWA Annual Report indicates

that the Roosevelt Administration very much wanted to avoid a repeat of the housing inadequacies of World War I: "Among the lessons which the last World War taught ... was the necessity of providing decent accommodation for the workers engaged in war industries. Impairment of health resulting from overcrowding, inefficiency in work due to deplorable living conditions, increase in costs due to high labor turn-over attributable to inadequate shelter, maladjustments in living programs due to the high proportion of income going to rents skyrocketed by housing shortages—all combined to [cause] serious bottlenecks in the war plans." 31

Despite the earlier monetary authorizations, by late 1940, scores of communities involved in defense production were still experiencing the shortages of housing that the administration so wanted to avoid. In response, on October 14, 1940, the Lanham Act authorized an additional \$140 million for defense housing for the FWA. Furthermore, an additional \$450 million was authorized for the same purpose under the act in April and June of 1941. The act set a strict 59 day time-table in which the FWA would select and purchase sites, design the plans for the housing and conjoining community facilities, solicit bids, and award contracts to begin timely construction. One example of such a defense worker development was the "Linda Vista" project of 3,000 houses in San Diego. Like most FWA wartime housing projects, each Linda Vista unit was built in 47 clearly defined and specialized steps to speed production and keep costs down. By June 1941, the FWA was building around 5,000 homes for defense workers in expanding urban centers per month.³²

Public Works Infrastructure in Defense Centers

In addition to roadways and housing, the general system of public works infrastructure was put under duress in many cities that experienced a migration of defense production workers. Title II, Section 202 of the June 1941 Lanham Act claimed that "in any area or locality an acute shortage of public works or equipment for public works necessary to the health, safety, or welfare of persons engaged in national defense activities exists ... the Federal Works Administrator is authorized ... to relieve such a shortage ... upon such terms and in such amounts as the Administrator may consider to be in the public interest." In total 4,000 projects were approved under the Lanham Act during the war at a cost of \$457 million, \$351 million of which was federally funded with the remainder funded by the affected communities.³⁴

For example, the Detroit metropolitan area, which converted most of its automobile plants into military factories, experienced the migration of hundreds of thousands of defense workers putting a "severe and widespread strain" on its public utilities.³⁵ It was the FWA's mandate to evaluate the needs of such communities and prioritize its public works improvements based on the strategic output and civilian need of each area. In some cases, defense centers arose in areas where no public works infrastructure existed. For example, in Oak Ridge, Tennessee, a major location for atomic research, "an entirely new city arose within a few months, complete with sewers, streets, waterworks, houses, schools and hospitals, all built at Federal expense."³⁶

With respect to alleviating shortages of water, schools, power, and general utilities in Detroit, Oak Ridge, and other military production centers, the PWA and WPA were the primary actors prior to the Japanese attack on Pearl Harbor. The newly created War Public Works (WPW) and War Public Services (WPS) were primarily charged with these duties after that time. In particular, the WPW was directed to alleviate shortages of public works that could hinder military production, while the WPS—which was created as an offshoot of the WPW in mid 1942—specialized in alleviating similar shortages in public services. For example, as families moved to industrial centers to help the war effort, schools became overrun by "defense-connected" pupils. In fact, over one-third of all WPS projects involved increasing capacity at schools in such defense centers.

As with all the FWA sub-agencies, WPS and WPW projects were subject to a strict military priority system for its projects. For example the FWA, under orders from the War Production Board, would not construct or enlarge any schools until the area's existing schools were being utilized to at least 200 percent capacity—that is, even breaking the school day into two shifts, the facilities could not meet student demands.³⁷

The WPS's largest role, both in funds and number of projects, was providing day care for the children of women who took jobs in factories or worked in government offices to help the war effort. According to the FWA's 1946 Annual Report, by 1942, "Manufactures had scraped to the bottom of the manpower barrel and were now turning to womanpower... the supply of young unmarried women was soon exhausted, and the only additional source from which recruits could come was the ranks of married women [many of whom] had young children for whose care ... some arrangement had to be made." By the conclusion of the war, the WPS had created day care centers in 386 communities. Without this service, many of the six million women who participated in the war effort could not have done so. Tables 3 and 4 break WPW and WPS expenditures down into percentages by category.

In addition to reinforcing cities' public works infrastructure, the FWA added to existing military utilities' infrastructure and took charge of procedures for civilian emergency defense. For example, the PBA built bomb and air raid shelters and released pamphlets with detailed instructions on what to do during such an emergency. Furthermore, the PBA, which adopted the slogan, "buildings for victory," was ordered in March 1940 to construct a new headquarters for the War Department. While the building was completed by the spring of 1941, it soon became clear that the wartime emergency would require an even larger building. Hence the agency began work on the Pentagon in Arlington, Virginia. In addition to these major buildings, the PBA constructed 29 smaller buildings to provide accommodations for 45,000 clerical and administrative military workers in Washington. These "temporary" buildings advanced from construction to occupancy in only 10 weeks. ⁴¹

A Brief Overview of the WPA

While the above sections have focused on specific categories of projects such as the construction of defense housing and strategic roads—much of which was provided by

TABLE 3
WPS EXPENDITURES BY CATEGORY

Category	Percent of Expenditures		
Child Care	42.0		
Schools	36.5		
Hospitals	13.4		
Recreation	6.1		
Other Services	2.0		

Source: 1946 FWA Annual Report, 28.

TABLE 4
WPW EXPENDITURES BY CATEGORY

Category	Percent of Expenditures		
Hospitals	26.5		
Water Systems	22.8		
Schools	21.7		
Sewer Systems	14.3		
Recreation	7.0		
Other	7.7		

Notes: Hospital expenditures includes nurses' homes and nurse training as well as venereal disease treatment facilities. Source: 1946 FWA Annual Report, 20.

the specialized USHA and PRA respectively, this section offers a brief overview of the activities of the WPA between the July 1, 1939, and June 30, 1943, when the agency was liquidated in what the Roosevelt Administration termed an "honorable discharge."

During the 1930s, the WPA initiated a variety of job training programs. Almost immediately after the hostilities began in Europe in the fall of 1939, the WPA adopted these programs toward defense activities. Between July 1939 and June 1940, more than 50,000 workers enrolled in WPA programs for defense production training in strategic industries. This project was co-sponsored by the Advisory Commission to the Council of National Defense and the United States Office of Education and was certified by the Secretary of War as important for defense purposes. In July 1940, after Germany's successful blitzkrieg, additional training programs were set up under sponsorship of War Production Board. In total, from July 1, 1940, to December 15, 1942, over 330,000 WPA workers received job training, the vast majority of which was related to national

defense. Though men were the participants in the majority of these training programs, in August 1942, 8,200 women were employed on WPA training projects where they learned welding, riveting, and other militarily important assembly-line jobs.

During the 1930s, the WPA had employed poets and writers on various projects. Such projects, which came under intense scrutiny during the 1930s, were largely discontinued during the war; however such skilled artisans were put to work on clerical assistance and graphic services related to the war effort. For example, more than 1,000 such WPA workers were employed in fact-finding and other militarily strategic research projects.⁴³

It was noted earlier that 1930s WPA projects were not allowed to compete with the private sector and that to be eligible to work in a WPA job, a potential worker had to show that he or she could not find employment elsewhere. The Emergency Relief and Appropriations Act of June of 1940 modified these limitations to "permit the operation of a larger number of [WPA] projects vital to the national defense work throughout the Nation." With unemployment dropping quickly, and practically nonexistent by mid-1942, this provision was necessary if the WPA was to successfully transform its mandate from economic to strategic.

Naturally, the conscription of young men into the war greatly changed the demographics of those employed on WPA projects. In October 1942, the median age of a WPA worker was 51—in February 1939 it had been 39. Also, by July 1942, women accounted for 40 percent of WPA employment.⁴⁵

Many specific defense contributions of the WPA during the wartime transition were also outlined in the agency's annual reports.⁴⁶ They include:

- Construction of 2,700 new military buildings and reconstruction or improvement of 11,700 others for military purposes between 1940 and 1943.
- · The construction of over 600 armories.
- The creation of hundreds of landing fields, hangers and landing strips for military use during and civilian use after the war.
- The widening of "strategic roads" in coordination with the PRA in cities such as Detroit, Michigan, and Columbus, Ohio, to facilitate movement of war materials.
- The construction or improvement of 180 utility plants at military establishments between July 1940 and July 1943.
- Engagement in scrap collection under sponsorship of War Production Board—between April 21, 1942 and March 2, 1943, the WPA collected 376,000 tons of scrap metal and 10,000 tons of rubber.
- The salvaging of 148,000 tons of rail—much of it from abandoned street cars—between October 1941 and April 1943.
- Employment of women on sewing projects such as the mending army clothing and preparing of draperies, curtains, and other furnishings for soldiers' recreation rooms at military establishments.
- · Employment of tens of thousands of workers at nursery school projects enabling women with children to take military construction jobs.

Discussion and Conclusion

As this work is meant as a beginning of a broader research agenda, any conclusions drawn from it must be considered preliminary. Furthermore, this paper focuses heavily on annual reports of the Federal Works Agency (FWA)—hardly an objective source of information. The intention of this article is simply to serve as a starting point on the important—though largely unexplored—topic of the New Deal alphabet agencies' activities during World War II. A further exploration of the topic would benefit from archival research from both the FWA and its respective sub-agencies.

An underlying purpose of this research is to evaluate the strategic gains offered to United States' wartime mobilization by having the expanded 1930s New Deal public works bureaucracy—and particularly the FWA—in place during the Second World War. Unfortunately, ceteris paribus statistical analysis cannot be used to assess such a question, as we can never fully know how different—for better or for worse—the mobilization would have been in a counterfactual world without such a bureaucratic infrastructure. One thing is clear, however: the Roosevelt Administration, and particularly those within the FWA, consistently expressed that the existence of the 1930s economic agencies put the nation in an improved strategic position during the military emergency of the 1940s. The 1941 FWA Annual Report, for example, stated that its efforts "reflected experience in past years with public works, public buildings, public roads, and public housing, and with the methods of administration created by the [economic] necessities of the works programs. The organization and its personnel were trained and seasoned."47 The 1942 FWA Annual Report likewise claimed that the only changes in the public works projects of the 1930s and 1940s were in the "purpose" of the work. "This is the principle reason why the Agency was able to convert to a wartime basis without confusion ... to the attainment of efficient war production."48

Not only did the Administration consistently note the strategic gains to a centralized bureaucracy, but also, the 1930s investments in public capital clearly improved the physical infrastructure of the nation. "Even casual examination reveals that the great public building activity of recent years has prepared the public facilities at all levels of Government to assist in ... the defense program. The defense emergency has increased the value of the power projects, airports, housing developments, schools, and other community improvements erected in less perilous times by the Federal Works Agency."⁴⁹

Such sentiments were repeated with respect to defense worker housing. Beyond just producing 60,000 additional housing units during the 1930s, the economic agencies made important gains in techniques for the rapid production of mass housing. "Local housing authorities had learned how to build and manage public housing projects by direct experience. Through research and demonstration, Government housing agencies pioneered many of the methods private building was beginning to use on the eve of the emergency [including] large-scale low cost housing development, building entire communities in one operation, [and] made savings in the mass purchase of materials and equipment... These reservoirs of experience and trained personnel ... and irreplaceable

'know how' could all be harnessed to the job of defense housing under the direction of the Federal Works Administrator." Though difficult to quantify, such gains could be applied to almost all of the public works projects enacted by the FWA in support of the 1940s war effort.

Overall, with respect to the New Deal economic experiment of the 1930s, one can put forth three fairly reasonable propositions. First, from a Keynesian demand-side perspective, the New Deal agencies never succeeded in ending the economic depression—unemployment remained in the 15-25 percent range between Roosevelt's first day in office and the German invasion of Poland in September 1939. Second, from a supply-side perspective, the 1930s investments in public capital, job training, and other physical infrastructure increased the productivity of military production during the early to mid 1940s and civilian production in the years that followed. Finally, because the military returns to centralization are largely indisputable (and are arguably being exploited again today with the creation of the Department of Homeland Security), the bureaucratic infrastructure that was built up in the 1930s alphabet agencies likely aided the transition from a market- to command-oriented military economy during the Second World War. While past research has focused almost exclusively on the first proposition, it is hoped that this paper will stimulate more research toward the second, and particularly the third proposition.

Notes

- 1. It should be noted that agencies' annual reports serve two primary purposes: (1) to document facts such as how much was spent and what specific projects were completed and (2) to make the reporting agencies look good. Though this paper primarily is concerned with the first such aspect of these reports, some quotes from FWA Annual Reports are reproduced. Such quotes are offered with the *caveat* of clear subjectivity on the part of the writers of said reports.
 - 2. From testimony to the House Select Committee on Homeland Security, May 19, 2003.
- 3. Such a consolidation of public works had been discussed much earlier. In 1936 the President's Committee on Administrative Management recommended the creation of a Department of Public Works to coordinate various New Deal agency activity. Likewise, then Secretary of Commerce Herbert Hoover pushed for the creation of such a centralized authority during the 1920s. See Federal Works Agency, *Annual Reports* (Washington D.C.: United States Government Printing Office, 1940), 6-8.
 - 4. FWA 1940, 10.
 - 5. FWA 1940, 24.
- 6. For a thorough history of the WPA see Arthur E. Burns and Edward A. Williams, Federal Work, Security, and Relief Programs (New York: Da Capo Press, 1971).
- 7. See for example Thomas C. Cochran, *The Great Depression and World War II, 1929-1945* (Glenview, IL: Scott, Foresman, and Co., 1968), 55-57.
- 8. Robert F. Himmelberg, *The Great Depression and the New Deal* (Westport, CT: Greenwood Press, 2001), 49.
 - 9. FWA 1940, 54.
- 10. Specifically, no family could rent USHA housing if its net income was more than five times the rent plus the cost of utilities. See FWA 1940, 164.
 - 11. Unlike Ridge, Carmody's position was not at the cabinet level.
 - 12. FWA 1940, 13.
 - 13. FWA 1941, 3-4. Needless to say, the caveat offered in note 1 applies.

- 14. WPA Administrator Harrington died in September 1940 and was replaced by Howard O. Hunter who had also long been associated with the agency.
- 15. Spending on all New Deal programs between 1933 and 1939 was \$293 per capita. For a discussion of the political economy of New Deal spending see John J. Wallis, "The Political Economy of New Deal Spending Revisited, Again; With and Without Nevada," Explorations in Economic History 35 (1998): 140-170, and Gavin Wright, "The Political Economy of New Deal Spending," The Review of Economics and Statistics 59 (1974): 30-38. For a discussion of the political economy of World War II spending Paul Rhode, "The Impact of World War Two Spending on the California Economy." in The Way We Really Were: The Golden State in the Second Great War, ed Lochin (Urbana: University of Illinois Press, 2000): 93-119, and Fred Bateman and Jason E. Taylor "The New Deal at War: Alphabet Agencies Expenditure Patters, 1940-1945," Explorations in Economic History 40 (2003): 251-277.
- 16. Brian Waddell, *The War Against the New Deal: World War II and American Democracy* (DeKalb, IL: Northern Illinois University Press, 2001).
 - 17. Waddell 2001, 43.
- 18. Alan Brinkley, *The End of Reform: New Deal Liberalism in Recession and War* (New York: Alfred A. Knopf, 1995), 138-141.
 - 19. Quoted in FWA pamphlet, "Way of Progress," 1940, p. 1.
 - 20. FWA 1940, 131.
 - 21. FWA 1940, 33.
 - 22. FWA 1940, 112.
 - 23. FWA 1940, 115.
 - 24. FWA 1940, 34.
 - 25. FWA 1940, 35.
 - 26. FWA 1940, 103.
 - 27. FWA 1940, 105.
 - 28. FWA 1941, 1.
 - 29. FWA 1941, 15.
 - 30. FWA 1940, 44.
 - 31. FWA 1940, 188.
 - 32. See FWA 1941, 43-53 for a detailed description of FWA housing procedures and costs.
 - 33. Public No. 849, 76th Congress.
 - 34. FWA 1946, 2.
 - 35. FWA 1942, 9.
 - 36. FWA 1946, 20.
 - 37. FWA 1942, 15.
 - 38. FWA 1946, 25.
 - 39. FWA 1946, 29.
- 40. One such PBA pamphlet titled "Air Raid Defense Instructions for Federal Employees" (GPO, 1942) said that when the air raid alarm is given, "that's when we civilians go into action. [The PBA] has worked out a plan providing for all possible air raid protection for Federal workers day or night.... PBA engineers have studied Government buildings to determine the safest place in each in case of air bombing. You will be notified where the Shelter Areas are."
 - 41. FWA 1942, 29-31.
 - 42. FWA 1940, 222-223.
 - 43. FWA 1943, 37.
 - 44. FWA 1940, 215.
 - 45. FWA 1943, 38.
- 46. Most of the projects outlined below are specifically reported in the 1943 FWA Annual Report, pages 35-44.
 - 47. FWA 1941, 2.
 - 48. FWA 1942, 3.
 - 49. FWA 1941, 3.
 - 50. FWA 1941, 27-28.