

CHAPTER 3

THE INTERWAR PERIOD, 1924 - 1940

The newly created Army Industrial College graduated its first class of nine Army officers in June 1924. In the ensuing years of the interwar period, the College would grow and develop steadily, through enormously difficult economic times and the defining event of this era in the nation's history -- the Great Depression which lasted from 1929 to 1939.

During these years, the country's industrial base (a central focus of study of the Industrial College) atrophied and unemployment reached unprecedented levels. In terms of international involvement, a decidedly isolationist mood enveloped the United States along with a concomitant lack of interest in all things military. Yet throughout this period, the Army Industrial College endured and actually began to come of age in size, scope, stature, and evolving mission as an important and unique educational institution within the armed forces.

Donald Nelson referred to this era, and the Army Industrial College, in his 1946 book, The Arsenal of Democracy. Nelson, an executive Vice President at Sears Roebuck was selected by President Franklin Roosevelt in January 1942 to head the nation's powerful War Production Board (Goodwin, 1994, p. 315; Schwarz, 1981, p. 375). Of the inter-war period, Nelson (1946, p. 32) wrote:

The biggest rifle manufacturing firm in the world...was swept away. Half-finished ships rusted and rotted because shipyards had gone out of business. The world's biggest merchant marine faded to a shadow of its former self. Machine gun plants and the beginnings of a promising military plane industry disappeared. *All that was left of an engine of war production...were plans in the files of the [Army] Industrial College [emphasis added] and in the forgotten cabinets of industry, stored against some bizarre emergency which no one thought could ever come.*

Assessing this period in the College's development depends in part on understanding the political, economic, and military character of the times along with tracing the institution's expanding role and mission throughout the late 1920s and the decade of the 1930s. In fact, developments in public policy ranging from the White House to Congress and the War Department, coupled with changes in the industrial sector and its relations with government, shaped the emergence of the new Army Industrial College both directly and indirectly.

THE POLITICAL, ECONOMIC, AND MILITARY LANDSCAPE

Historically speaking, events of the American interwar period provide a complex portrait of both promise and despair. The nation initially emerged from World War I poised to develop its technological and productive capacities in new areas such as aviation and automotive engineering. In 1927, Charles Lindbergh demonstrated the feasibility of non-stop trans-Atlantic flight with his solo crossing from Roosevelt Field, Long Island, New York to Le Bourget aerodrome outside Paris. That same year, Henry Ford's cumulative sales of the Model T totaled well over 15 million cars, spurring the growth of a vast network of new vendor supply companies and industries (rubber, tires, glass, petroleum products, etc.) along with the start of a burgeoning network of roads and highways. A scant two years later, however, on October 29, 1929, the stock market crashed, starting the nation on a fast downward spiral that would develop into a severe economic depression spanning most of the ensuing decade. Yet even in the depths of depression, the country erected the world's tallest building (the Empire State Building) in 1931 and a perhaps enlightened federal government witnessed the appointment of the first woman to a Cabinet level position in Washington as Frances Perkins became the Secretary of Labor in 1933. (Garraty, 1987; Morison, 1965).

Politics and Isolationism

The interwar era was also marked by significant domestic political change and a decidedly isolationist mood vis-a-vis the country's role in international affairs. With the approach of the Presidential election of 1928, and incumbent Calvin Coolidge's announcement, "I do not choose to run," his Republican Secretary of Commerce, Herbert Hoover, became the party's candidate and ultimately defeated Democratic contender Alfred E. Smith. A millionaire and unabashed friend of industry, Hoover had won the confidence of the business community during his tenure as Secretary of Commerce (Morison, 1965, p. 935).

Following the stock market crash and the ensuing depression, Hoover took some actions, but was not widely perceived as confronting the nation's economic ills boldly or forthrightly. He and other senior officials in government refused to acknowledge the existence of a depression for more than 6 months after the crash. In fact, in November 1929, Hoover told the nation, "Any lack of confidence in...the basic strength of business...is foolish." The following year he optimistically promised the country that "business and industry have turned the corner" (cited in Morison, 1965, p. 945).

A disbelieving voting public was not as sanguine. In 1932, Democratic candidate Franklin D. Roosevelt, then governor of New York, handily defeated Hoover and

assumed the presidency on March 4, 1933. Depression and 12 years of Republican rule likely helped clinch the victory. The country elected Democratic majorities in both houses of Congress, signaling a strong popular mandate for new programs and policies which would take the nation from the depths of economic depression (Morison, 1965, p. 949). At his inauguration on March 4, 1933, Roosevelt told the country, "the only thing we have to fear is fear itself..." (cited in Garraty, 1987, p. 767).

One of the many new programs instituted under FDR's "New Deal" was the Civilian Conservation Corps (CCC) which would eventually find productive work for some 2 1/2 million unemployed young men between the ages of 18 and 25 in useful reforestation, soil erosion, and other outdoor projects (Garraty, 1987, p. 768). Some even saw the CCC as a potential reserve force for future Army needs (an idea which would involve the Army Industrial College), but public sentiments over keeping this agency free of military influence prevented the use of even close-order drill in the Corps (Morison, 1965, p. 955).

By the time of the next presidential election in 1936, conditions had improved somewhat, but overall prospects were still by no means rosy. While some 12.8 million workers had been unemployed in 1933, and while that number had since diminished, roughly 9 million were still idle in 1936. Nonetheless, FDR's enormous popularity swept him to a landslide victory over Democratic challenger, Governor Alfred Landon of Kansas (Morison, 1965, p. 975; Garraty, 1987, p. 778). Eventually, Roosevelt would go on to win unprecedented third and fourth re-election bids to the presidency.

If political change helped define the American interwar period domestically, a pronounced isolationist mood of disengagement characterized the country in international terms. The League of Nations was not well received following World War I, and the United States even refused to accept membership on the World Court. By 1925, President Coolidge announced, "the people have had all the war, all the taxation, and all the military service they want (cited in Garraty, 1987, p. 794).

The nation's receptiveness to immigration likewise diminished significantly. In 1929, the third in a series of immigration laws passed in the decade set an annual quota of only 150,000 with the vast majority of those restricted to white immigrants from northern Europe (Morison, 1965, p. 898).

In the summer of 1933, newly elected President Franklin Roosevelt effectively torpedoed the London Economic Conference, thus preserving American's freedom to manipulate currency and international monetary exchange to its own advantage (Hofstadter, 1970, p. 446).

Beyond the country's own economic interests, however, political disengagement

marked the nation's international agenda. As historian Samuel Morison (1965, p. 967) suggests, "the main trend of the New Deal foreign policy until 1940 was to continue to avoid European commitments."

Public mood mirrored national policy. The peak of isolationism in this era was reflected in a 1937 national poll which showed that 94 percent of the people thought American policy should be directed at keeping the country out of all foreign wars rather than trying to prevent war from breaking out (Garraty, 1987, p. 801).

Economic Depression

In the decade immediately following World War I, the nation enjoyed almost unprecedented economic prosperity. Business boomed. Industrial output nearly doubled in the period 1921 to 1929. At the same time, real wages increased and unemployment declined. (Garraty, 1987, p. 741; Hofstadter, 1970, p. 395). So too did the nation's economic industrial base seem to enter the modern era. By 1929, the value of automotive exports surpassed that of cotton exports, which had held first place since the Civil War (Morison, 1965, p. 889).

The years of prosperity, however, seemed to end as quickly as they arose. By most assessments, the short economic boom of the late 1920s eventually led to excesses in speculation in the nation's financial markets and over extensions of credit buying. The financial structure itself might have been cause for concern in retrospect. One percent of all financial institutions controlled 46 percent of the nation's banking business (Garraty, 1987, p.744). On October 24, 1929, nearly 13 million shares changed hands on the stock exchange in what became known as "Black Thursday." The following Tuesday, October 29, the market crashed. Over 16 million shares were sold as prices plummeted. The event started a downward spiral in prices, production, employment, and foreign trade that reached bottom in mid-1932. As the collapse in commodity prices reduced buying power, production declined dramatically and unemployment skyrocketed both here and in most industrialized nations of the world. At its peak, some 25% of the nation's civilian work force was unemployed (Morison, 1965, pp. 940-941; Garraty, 1987, p. 759).

The severity of economic depression touched virtually everyone -- including those in the defense community. In the summer of 1932, some 20,000 of the nation's military veterans of World War I marched on Washington seeking payment of additional compensation bonuses (each had previously received \$60). Settling in shacks and tents along the Potomac River after Congress rejected their appeal, the nation witnessed the spectacle of troops, tanks, and tear gas routing its own former soldiers (Garraty, 1987; Morison, 1965).

Business and Industry

Herbert Hoover's succession of Calvin Coolidge, brought another Republican leader to the White House who was as much a proponent of business as his two predecessors. Hoover, purportedly convinced that American capitalists had learned to curb their selfish instincts, was satisfied that voluntary trade associations would create codes of business practice and ethics which would eliminate past abuses (Garraty, 1987, p. 747).

Beginning in 1933, Roosevelt's Democratic administration took a different approach toward the business community. The National Industrial Recovery Act (NIRA), one of the many initiatives passed within the first 100 days of the new deal administration in 1933, called for drafting codes of fair business practices for hundreds of industries, prescribing everything from reform and recovery to improvements in labor-management relations.

The NIRA was an outgrowth, in part, of businessmen such as Bernard Baruch (one of the early proponents for establishing the Army Industrial College) seeking to ration and stabilize the nation's business among surviving companies. In fact, the National Recovery Administration, set up to oversee the NIRA, was headed by one of Baruch's proteges, General Hugh Johnson (Hofstadter, 1970, p. 447). Although later declared unconstitutional by the Supreme Court in 1935, by that time, more than 4 million unemployed had been absorbed into industry and roughly 23 million worked under various sets of the new industrial codes (Morison, 1965, p. 957; Garraty, 1987, p. 768).

Government-Industry Relations

Relations between government and industry during the interwar years can probably best be described in terms of two fairly broad but distinct periods. The first, in the years immediately following World War I and extending to the mid 1930s, might well be called the 'merchants of death' era, alluding to widespread public belief at the time that government contracts during the war had created thousands of corporate millionaires who had reaped obscene profits.

The second period, falling generally in the mid to late 1930s, is characteristic of the beginnings of what has come to be known as the 'military-industrial complex,' in which government and business found mutual interests in using military equipment purchases to sustain an otherwise dying industrial base in the midst of severe economic depression. Both eras have direct relevance for understanding the development of the Army Industrial College as a new institution uniquely chartered to train and educate senior officers in understanding this very area -- the interactions of

government and military officials with leaders in industry.

Merchants of Death. From the time of the armistice ending World War I in 1918 to the attack on Pearl Harbor, some 200 bills and resolutions were introduced in Congress aimed at limiting or preventing wartime profits. In 1931 Bernard Baruch published a treatise on "Taking the Profits out of War" in which he proposed policies for industrial mobilization with safeguards to prevent profiteering (Baruch, 1931). That same year General Douglas MacArthur, as Chief of Staff of the Army, assured the nation that any future "profiteering by the unscrupulous contractor" would be controlled by the *knowledge* [emphasis added] obtained in peacetime planning" (cited in Nagle, 1992, pp. 349, 360).

Sustained suspicions of munitions makers as greedy scoundrels virtually devoid of conscience were further fueled by books such as Engelbrecht and Hanighen's Merchants of Death, published in April 1934 (Engelbrecht and Hanighen, 1934). That same month, Congress began an investigation of the munitions industry under a task force which came to be known as the Nye Committee, under its chairman Senator Gerald P. Nye, a Republican from North Dakota. Nye was convinced that greed and excess profiteering had conspired to pull America into World War I. His Committee's report, issued in 1936, condemned bankers and industrialists as "merchants of death" and recommended eliminating the "unhealthy alliance" between arms contractors and government by creating a government monopoly arsenal system for nearly all munitions manufacturing, exempting the aircraft industry as a still developing field (Nagle, 1992, pp. 370-371).

The Committee's recommendations had little direct impact, particularly as the prospects of war began to loom in Europe and merchants of death sentiments gradually came to be replaced by a view of America as the arsenal of democracy. In fact, in this same period, Mumford, in his work, Technics and Civilization, argued that military purchases in the 19th century were actually the source of industrial innovations in mass production and standardization and would continue to spur technological and manufacturing advances -- one of the notions underwriting a view which would later emerge to foster some measure of military-industrial collaboration (cited in Nagle, 1992, p. 372).

The Military-Industrial Complex. Following the stock market crash of 1929, the young but heretofore rapidly growing aircraft industry began to quickly dwindle. By 1933, with both civil and military demands almost non-existent, scores of companies had left the industry. Then, in 1934, the government convened a committee, the Baker Board, named after its chairman, Newton D. Baker, the former Secretary of War who had presided over the creation of the Army Industrial College in 1924. Notwithstanding the Nye Committee investigations of this same period, the Baker Board found that

commercial demand could not maintain the industry and recommended an ambitious procurement program of aircraft procurement for both the Army Air Corps and the Navy. By 1936, the aircraft industry was being kept alive largely by American military requirements which comprised roughly two-thirds of its entire business base (Nagle, 1992, p. 362).

Koistinen (1980, p. 47) argues that, while most analysts tend to regard the military-industrial complex as a product of World War II and the Cold War, it actually emerged as an outgrowth of "interwar planning by the armed forces and the business community for future emergencies, and of defense spending during the 1920s and 1930s. Almost all practices currently ascribed to the 'complex' arose before 1940." World War I and the interwar period, he contends, "greatly strengthened the cooperative ethic within the business community and between it and the government" (p. 53).

Armed Forces

America's Army, which had 200,000 men under arms prior to World War I, grew to some 4,000,000 during the conflict. Following de-mobilization and into the interwar years, however, troop strength fell well below pre-war levels to roughly 130,000. Officers numbered about 12,000, but by the late 1930s nearly 5000 of them were primarily occupied with managing the Civilian Conservation Corps (Scammell, 1946, pp. 85, 302; Clem, 1983, p. 29). Economic depression and isolationism took their tolls on the country's armed forces just as with virtually every other segment of society throughout this period.

Interestingly, the Industrial College, comparatively small to begin with in its claim on officer billets, actually grew in student enrollment throughout this period. Part of this growth is probably attributable to the continued, though limited, activity in military contracting -- a primary educational province of the College. The War Department continued to place small orders for military vehicles and aircraft through this period. Beginning in 1938, Congress also authorized the expenditure of \$2 million annually over the ensuing 5 year period for the War Department to issue a series of "educational orders" which carried modest funding for industry to conduct studies as a means of preparing for possible future mobilization contingencies (Scammell, 1946, p. 274; Huston, 1966, p. 410).

In a related area, President Roosevelt made some modest beginnings in trying to racially integrate the armed forces, and his New Deal initiatives called for blacks to be represented in defense and other industries. Nonetheless, minority representation in the nation's power structure was virtually non-existent (Morison, 1965, p. 985). Blacks constituted less than one percent of the officers commissioned in World War I,

and no black (or female) representation would be found in the Army Industrial College or other senior war colleges in the interwar period (Review, 1994, p. 14).

THE EXPANDING ROLE OF THE ARMY INDUSTRIAL COLLEGE

From its initial founding in 1924 and throughout the difficult interwar period, the Army Industrial College actually grew in size and widened the scope of its activities. The continued development of the institution in the midst of national economic depression was the product of internal and external forces ranging from the management and faculty of the College, to leaders in the War Department, and to New Deal programs championed by Congress and the White House. Its growth was manifest in such factors as an expanding mission, an increasingly joint service character for the institution, a growing sophistication in academics and studies of the nation's industrial sectors, and an increase in size and prestige.

Mission

The mission of the Army Industrial College was initially specified in General Order No. 7 which on February 25, 1924 officially established the institution...

...for the purpose of training Army officers in the useful knowledge pertaining to the supervision of procurement of all military supplies in time of war and to the assurance of adequate provision for the mobilization of material and industrial organization essential to war-time needs. (War Department, 1924, February 25, p. 1)

While this formal statement of its purpose would not be altered during the interwar period, the College's mission in practice would change dramatically. It would, for instance, evolve from a fairly narrow focus of "training Army officers" to a wider role educating officers from the Navy and Marine Corps, as well as the Army, and would embrace expanded activities to support President Roosevelt's New Deal programs and planning for a future national industrial mobilization.

The calls for an enlarged role for the Industrial College came almost from the start. In the first summer following its creation, Assistant Secretary of War Dwight Davis appointed a board of three general officers to provide advice on the rightful objectives of the College. The board's report, issued on August 13, 1924, spoke of various national "super agencies" which might be created in time of wartime mobilization and the unique role of the College in studying them, noting, "No other educational agency having been established which makes a study of the organization and duties of such super-agencies or how they shall function, the Committee believes that a study of these problems should be made in the Army Industrial College (cited in

Johnson, 1993, p. 11).

Colonel Irving Carr, third Director of the College, spoke of the expansive mission of the relatively young institution in his Annual Report to the Assistant Secretary of War for the academic year 1929-1930 (Annual, 1930, p. 6): "the purpose of the institution is not only the training of officers for procurement planning duty,...but also the study of the broad aspects of *governmental control of national resources* [emphasis added]. Carr also referred to the College as "an institution of research" and declared that "the mission of the College...(includes) investigating the efficacy of present solutions and plans initially formatted by the Planning Branch and by the Supply Branches" (p. 9).

It should be noted that the Army Industrial College's original charter as well as this more expansive view of its mission was unprecedented in American military officer education in this era. In characterizing the Army and Navy War Colleges during the interwar period, Masland and Radway (1957, p. 97) observe that while their focus was on command and staff preparations, "these responsibilities were not yet generally perceived to include concern for broader considerations at the national and international levels, particularly of political and economic factors." Thus, the unique mission of the Army Industrial College added an important, new, and somewhat revolutionary dimension to officer education in the 1920s and 1930s. As Colonel William McCain, a member of the first class of the Army Industrial College and subsequently the fourth Director of the institution would later reflect, "there were nine of us in that first class,...we were pioneering in a new field" (cited in Scammell, 1946, p. 72).

Directors such as Colonels Carr and McCain were not the only ones to champion a larger view of the institution's role and purpose. Bauer (1983, p. II-5) notes that the faculty also went on record at this time in insisting that the College should continue to function as a "postgraduate school" and an "institution of research." Interestingly, Colonel Jordan, in his 1934-1935 Annual Report also cited research as an essential function of the institution, but noted that with only four full time instructors, there was "no time available for essential research" (Annual, 1935, p. 6).

One should note too that these broader visions of the purpose of the College were juxtaposed in a time when the nation and its leaders were quite concerned about business and industry, economic failure, and the role of government and its armed forces in affecting these areas. Thus, Colonel Harry Jordan, fifth Director of the College, alluded to the War Department's operational and *educational* interests in the country's persistent economic depression in his 1938 Annual Report to the Assistant Secretary of War: "It is clear as a result of recent national experience in economic adjustments and readjustments that industrial activity must be thoroughly understood to accomplish national aims in peacetime" (Annual, 1938, p. 6).

The evolving mission of the Army Industrial College not only manifested itself in matters concerning its educational role in national economic interests, but in an increasingly joint service character of the institution as well.

Joint Service Character

Originally chartered to train Army officers, the College soon enrolled officers from the Navy and Marine Corps as well as those from other parts of the Army, such as the combat arms, which were not normally associated with procurement and industrial mobilization.

The first class of nine Army officers included one from the Air Service. The following year, with the third class which began in February 1925, two Naval officers assigned to the class became the first to represent the sea services in the College. Beginning in academic year 1928-1929, a few officers from the Army's combat arms were assigned. Colonel Wooten, then Director of the College, in his Annual Report to the Assistant Secretary of War, highlighted the value of these Army line officers along with Navy and Marine Corps officers in helping to achieve "complete consideration of the problems studied" (Annual, 1929, p. 9).

A 1932 report by the Executive Committee of the Army and Navy Munitions Board reinforced the importance of the joint service focus in the curriculum, noting that

The Industrial College has come to be an agency of primary importance in the promotion of joint procurement planning. Joint assignment to problems brings out differences in points of view, in objectives, in organization, and in legal restrictions. The course leads to a greatly improved understanding of joint problems, establishes a background and an interest in joint procurement planning which is manifested by the graduates in their subsequent assignments.(cited in Johnson, 1993, p. 7)

Thus, the joint character of the College grew steadily during the 1930s. The first Naval officer was added to the faculty in 1931, and in 1941 a Marine Corps officer was named as Commandant of the College. Navy and Marine Corps officers comprised over one fourth of the class of 1933. By 1939, at the peak of its prewar development, the institution's 62 students included 12 Naval and Marine Corps officers, 9 from the Army Air Corps, 8 from the Army's combat arms, and 33 from the Army's support branches. As Masland and Radway (1957, p. 91) aptly observed, by the end of the interwar period, the Army Industrial College had become "in large measure a joint military school."

Not all would concur with this assessment. Bauer (1983, p. II-5), for instance,

argues that, despite the inclusion of a number of Navy and Marine Corps officers, the College was still officially an Army institution and by the end of the interwar period was essentially a "one-Service institution with a limited mission."

Still, its official designation notwithstanding, the sizeable inclusion of Navy and Marine Corps officers during the interwar period in virtually every facet of the organization -- students, curriculum, faculty, and management -- made the Army Industrial College, in every practical sense, the first real joint military education institution in American history.

Academics and Industry Studies

Just as the College's role evolved rather quickly from Army unique to joint service, so too did its function move rapidly from training to broader based education. Masland and Radway (1957, p. 95) report that education, as distinguished from training, was emerging as an important part of the military culture of this period. The Army, in particular, regarded its educational system as preparing officers in peacetime for the complex situations they might face in wartime.

Colonel Harley Ferguson, first Director of the College, reported to the Assistant Secretary of War in 1925 (Annual, 1925, p. 2) that he had based the curriculum on what he variously referred to as "the case system" or "case problem" method in which students were assigned specific problems related to industrial mobilization. He noted that a number of prominent guest lecturers also addressed the classes.

Colonel William Wooten, second Director of the College, wrote in his 1928-1929 Annual Report to the Assistant Secretary of War, that the College was using methods such as those employed "in the best post-graduate schools" (Annual, 1929, p. 6).

Colonel Carr, in his Annual Report for 1929-1930, his last report before retiring as third Director, insisted it was essential that the college "continue to be conducted as a post-graduate school," observing that current policy called for selecting two full time instructors from among the graduates of the Harvard University Business School (Annual, 1930, pp. 9-10). Carr pointed out, however, that he believed any adoption of a grading system would be ill-advised in that it would instill undue competition and suppress open debate and discourse among students, pointing out that the Army War College eschewed grading for the same reason.

That same academic year (1929-1930) the faculty too went on record as opposing any move toward detailed training in the curriculum, insisting that the institution was intended as a postgraduate school and research facility (Industrial, 1949, p. 9).

As its very name would suggest, one of the defining academic elements of the Industrial College was to be its program of industry studies. From the first course, students examined problems in the classroom dealing with industrial mobilization, but soon the College began to conduct its industry studies on site at various field locations as well.

A few faculty members made the first visits to industry in late autumn of 1925, and students in the fifth class (February to June 1926) proposed making such visits a regular educational activity of the College (Scammell, 1946, p. 275). The idea was adopted. Colonel Ferguson, in his Annual Report for academic year 1926-1927, observed that the first class to have participated in the new 10-month academic year program had also benefited enormously from the first student on-site visits of coal, steel, and electric power facilities in the Pittsburgh and Washington areas during the week of May 16-21 (Annual, 1927, p. 7).

By the spring of 1936, in addition to what had become its traditional visits around Washington and to Pittsburgh, the College travelled to the Baltimore area as well, and expanded the scope and nature of industries targeted for field studies to include the Chevrolet Motor Co. (automobiles) and the Glenn L. Martin Co.(aircraft) (Annual, 1936, p. 7).

Throughout the interwar period, the College developed its assessment of various industrial sectors into a regular field of study. In these early years, students and faculty conducted rather extensive studies of the steel, copper, textile, chemical, communications, machine tools, automotive, aeronautical, and construction industries. Scammell (1946, pp. 85-86) suggests, however, the analytical treatment of specific industries in any systematic pattern was largely haphazard through most of this period. Nonetheless, these industry studies -- which continue some seven decades later -- became an important, defining dimension of the College in this period, contributing to its unique role as a military educational institution concerned with the health and responsiveness of American industry for national security needs.

Size

Economic depression forced deep cuts in the nation's military forces -- including its educational institutions -- throughout the interwar years. The Army Industrial College, however, actually increased its student enrollment through most of this period, while the Army War College and the Command and General Staff School saw their student quotas decline slightly in the mid-1930s (Scammell, 1946, p. 137).

Appendix A provides a complete summary of the 24 classes which graduated

from the Army Industrial College during interwar period. From the first group of nine student officers in 1924, class size grew to the upper thirties by the end of the decade. In 1932, in the depths of the country's Great Depression, class enrollment reached its highest point to that date with 60 students.

The College's growth in this period was reflected by pressures to increase the length of the course. An Advisory Board consisting of prominent business figures like Bernard Baruch, Robert Brookings, and others was established during the first year of the College's existence to help guide the development of the institution (Scammell, 1946, p. 270; Koistinen, 1980, p. 53). The Advisory Board, in its first report of August 13, 1924, recommended that the course be lengthened to a full 10-month academic year beginning in September 1926 (Scammell, 1946, p. 72).

Thus, with the beginning of the fourth class, convened in September 1926, the course was expanded to 10-month full academic year (Annual, 1927) and would remain so until the prospects of American involvement in another world war forced shortening the educational program in 1940.

The expansion in class size and duration throughout this period produced some crowding in the Munitions Building in which the Army Industrial College had first been given limited space to establish its operations in 1924.

Colonel McCain, in his Annual Report for 1930-1931, reminded the Assistant Secretary of War that the College was still located in the midst of War Department offices on Constitution Avenue and noted that "the Munitions Building is not a suitable place for a General Service School" (Annual, 1931, p. 8). The following year, he complained about inadequate space and noise from the Post Office on the ground floor immediately under the school's small auditorium (Annual, 1932, p. 6).

By 1935, Colonel Jordan, pointed out to the Assistant Secretary that the College now occupied "most of the fifth wing on the second floor of the building" and repeated his previous pleas that provision for a new facility for the Industrial College be included in plans for a new War Department building (Annual, 1935, p. 6). These pleas would go unheeded through nearly the entire interwar period.

Prestige

It will be recalled that questions about less-than-equal stature with the Army War College surrounded the creation of the Army Industrial College, but these concerns began to abate during the interwar period -- another sign of the evolving growth and development of the College.

One month following the stock market crash of October 1929, the Army Industrial College became a separate division within the Office of the Assistant Secretary of War (Johnson, 1993, p. 6). The move might possibly have been a reflection of general concerns with business and industry, but it certainly reflected the Assistant Secretary's personal interest in the College and its important role in the War Department.

Colonel Carr's Annual Report of 1929-1930, for instance, recalled a memorandum which the Assistant Secretary of War had sent to the heads of the Army's Supply Branches on February 21, 1930 stating that graduates of the Army Industrial College would be given the same preference for important assignments as students of the Army War College. The directive, said Carr,

...has produced immediate results in obtaining officers of the highest type for next year's class and has added materially to the prestige of the Industrial College. In the past there has been some evidence of a feeling among officers of the Supply Branches that the road to preferment in the service lay through the...War College rather than through the Army Industrial College, and as a result, details to the latter were not sought. The policies now established should do much to remove this feeling and increase the influence and effectiveness of this institution. (Annual, 1930, p. 8-9)

Similarly, Koistinen (1980, p. 52) observes that while the General Staff's (sponsor for the Army War College) resentment of the power conferred upon the Office of the Assistant Secretary of War in 1920 persisted in festering a rivalry between the two organizations for a time during the interwar period, the ill will gradually waned in the 1930s. One major turning point likely occurred in 1935-1936 with the collaboration between General Malin Craig, Army Chief of Staff, and Secretary of War Harry Woodring in supporting a new Protective Industrial Mobilization Plan (drafted and revised between 1936 and 1939) as the first war plan based upon the nation's industrial potential. The emphasis on industrial resources reflected a significant change in Army command philosophy that was now closely aligned with the thinking which undergirded the rationale for the Army Industrial College.

Thus, early resistance to attending the Army Industrial College on the part of some military officers slowly but steadily abated throughout the interwar period. The Army's comprehensive historical study of American military mobilization planning observed that by the "middle of the 1930s, the Industrial College's prestige had increased to a degree that officers sought admission there as well as at the Army War College realizing that the two schools were mutually beneficial" to their careers (Kreidberg, 1955, p. 498).

By 1937, the College had finally acquired the external trappings of legitimacy in

the form of an official seal. Upon the background of a shield, it portrayed an open book with a key and palm crossed above a field of flames (the fires of industry). The seal carried the official motto of the college as well, "Industria at Defensio Inseparables," -- a Latin phrase crafted at the time reortedly with the assistance of a priest from Georgetown University (Scammell, 1946, p. 323).

At the graduation ceremonies for the Industrial College class of 1940, the Honorable Louis Johnson, Assistant Secretary of War, told the students, "in my humble opinion, of all the colleges conducted by the Army, the most important is the Army Industrial College" (cited in Scammell, 1946, p. 230). With the course now soon to be shortened and accelerated to accommodate a surge in demand for graduates in the face of looming war, prestige no longer seemed to be a major issue for the Industrial College.

New Deal Programs

The Industrial College also played a role in some of the programs which grew out of the Roosevelt New Deal. Howard Coffin of the Council Of National Defense, for instance, asked the College shortly after Roosevelt's first inauguration on April 14, 1933 to send him materials which could be used to set up a national economic planning agency (Scammell, 1946, p. 264)

During academic year 1934-1935, the College undertook an analysis of the Civilian Conservation Corps as a first-hand opportunity to examine a case study of a large scale mobilization and procurement effort (Industrial, 1949, p. 12). In fact, Scammell (1946, p. 266) observed that projects like the CCC were "a good guinea pig for testing procurement plans, " and he records that the College regularly worked with New Deal agencies occasionally even lending them a small "initial nucleus (of people) for administration."

In April 1940, the College also set up an Economic Warfare Information Section, in cooperation with the administration's Office of Government Reports to collect and evaluate information related to economic activities among potential belligerent and allied nations. Later that summer, President Roosevelt appointed General Russell Maxwell (a graduate of the third class of the Army Industrial College) as Administrator of a new Export Control Agency, and by that fall Maxwell had transferred the Army Industrial College's entire Economic Warfare Information Section to his Agency. Thereafter, the College continued to support the Export Control Agency with reports and staff studies (Scammell, 1946, pp. 266-268).

One other major area would involve the Army Industrial College in the Roosevelt Administration -- Industrial Mobilization Planning. It would be an involvement spanning

much of the decade preceding American entry in World War II.

A DECADE OF INDUSTRIAL MOBILIZATION PLANNING, 1930 - 1940

The National Defense Act of 1920, it will be recalled, had charged the Assistant Secretary of War with overall responsibility for both economic mobilization planning and procurement. Under that charter, the Assistant Secretary set up a Planning Branch (which would later act as the initial oversight body for the Army Industrial College) and, in 1922, created the Army and Navy Munitions Board, with the Board becoming the official sponsor of what came to be known as the nation's Industrial Mobilization Plan (Huston, 1965, p. 406). Eventually, a series of Industrial Mobilization Plans were written and published in 1930, 1933, 1936, and 1939 (Vawter, 1983, p. 6; Huston, 1965, p. 406).

A certain amount of controversy exists relative to the extent of the Army Industrial College's involvement in preparing these Plans. The issue is of interest in this period of the College's history, partly because President Roosevelt ultimately rejected the final version of the Plan, and some have viewed the College's involvement as a source of professional embarrassment for the institution. As the Echols Board (convened in 1943 to assess past and future directions for the College), would later judge: "...twenty years of planning went largely for naught" -- a fairly clear indication of dissatisfaction in an area the Board seemed to regard as a key part of the implied mission of the College (War Department, 1943, December 3, p. 3).

The Industrial Mobilization Plan was intended to provide an administrative blueprint for controlling and directing (ultimately under civilian auspices) the nation's resources in time of war. The core organization it proposed was a "superagency" called the War Resources Administration, loosely modeled upon the War Industries Board of World War I. Its powers would be centralized in an Administrator who reported directly to the President (Clem, 1983, pp. 30-31).

While some government and military officials were initially hesitant to engage in economic mobilization planning that might encroach on traditionally civilian responsibilities, industrialists like Bernard Baruch, part of the founding influence of the Army Industrial College, helped persuade the War Department that this was indeed a legitimate area of interest and involvement (Koistinen, 1980, p. 51). Thus, under its charter for economic mobilization planning from the National Defense Act of 1920, the Assistant Secretary's office assumed responsibility for industrial mobilization planning through its Army and Navy Munitions Board. Beyond its two senior members (the Assistant Secretaries of War and of the Navy), however, officers were not assigned to full time duty on the Board until the 1930s (Huston, 1965, p. 406). The Board therefore

drew upon assistance from others in preparing the plans. Since the Army Industrial College was part of the same larger organization as the Board (both reporting directly to the Assistant Secretary of War), questions about the degree of the institution's involvement have since surrounded this part of the institution's history.

Some accounts have suggested the College indeed played a major role in preparing the Industrial Mobilization Plan. Masland and Radway (1957, p. 91), for example, indicate that "students and faculty commented on or actually helped prepare mobilization plans." Huston's historical study of Army logistics notes that "faculty members and students [of the Army Industrial College] participated in consultations contributing to the preparation of the Industrial Mobilization Plan" (Huston, 1965, p. 406). Similarly, a short history of the College, prepared in conjunction with its 25th anniversary in 1949, says that the institution began actually participating in mobilization planning in academic year 1929-1930 (Industrial, 1949, p. 10).

Earlier historical documents, however, suggest that the College's role in these plans was more modest, primarily taking the form of student reviews as part of the educational program. Major Dwight Eisenhower (a member of the faculty of the Industrial College and later a graduate of the Class of 1933) referred to the Industrial Mobilization Plan of 1930 as a broad "narrative..(with) educational value" (Eisenhower, 1931, p. 13). Colonel Harry Jordon, then Director of the Army Industrial College, observed in his 1937-1938 Annual Report that student body had conducted hypothetical tests of the Mobilization Plan of 1933, although he went on to speculate that, in his opinion, those student reviews had "been the cause of the revision of that plan" by the Planning Branch of the Assistant Secretary of War (Annual, 1938, p. 7).

Colonel Miles, a later Commandant of the College, noted in his 1938-1939 Annual Report that, in addition to their regular studies, "student officers were requested...to submit individual reports on the essential features of the Industrial Mobilization Plan, Revised, 1936" (Annual, 1939, p. 4).

This subject is also mentioned in an Army historical study of industrial mobilization in this period (Kreidberg, 1955), noting the contribution of student work on the detailed *annexes* (information related to specific industrial sectors), as opposed to the main body of the Plan itself. The study observes that students in the Army Industrial College class of 1938 - 1939 "provided valuable assistance on the revision of the annexes to the 1939 Industrial Mobilization Plan" (p. 498).

Apart from student revisions to the Plans' annexes, it is clear that Army Industrial College *graduates* likely played a role in preparing the Industrial Mobilization Plans themselves. In fact, former students and faculty were assigned to a number of positions on the staff of the Assistant Secretary of War. By 1939, of the 27 individuals

assigned to the Planning Branch, 23 were graduates of the Army Industrial College. Colonel Harry Rutherford, an early member of the College's faculty, later served as Director of the Planning Branch. Rutherford, along with four Industrial College graduates made up five of the six membership positions on the Executive Committee of the Army and Navy Munitions Board (Johnson, 1993, p. 27).

Ultimately, however, President Roosevelt never formally accepted the Industrial Mobilization Plan (IMP), and some have cited the role of the Army Industrial College in his refusal to do so. Historian Albert Blum (Blum, 1963, p. 93) argues that White House staff members urged Roosevelt not to invoke the IMP:

They told the President that the IMP was based on 1914-1918 experience and did not pay enough attention to the changed nature of war... They also told the president that the needs of the Army were arrived at under the IMP by the 'most elementary rule of thumb' methods by Army officers 'after a half-a-day lecture on statistics.' In fact, the White House advisers stated that many of the war plans are 'nothing more profound than student exercises, worked up in a few hours or days as a problem in a brief Army Industrial College course.'

Other assessments have been less harsh. The IMPs won generally favorable reviews by potentially critical members of President Hoover's War Policies Commission as well as members of the Nye Committee in Congress. As historian Russell Weigley (1973, p. 209) has observed, however, "while the plans were technically sound, they developed a political and social insensitivity to the subsequent events of the 1930s." He suggests that President Roosevelt could accept neither the plans' vision of an extensive role for the armed forces in governing the national wartime economy nor the concentration of power in the hands of business.

Ironically, in practice, the President eventually implemented many of the ideas of the Industrial Mobilization Plan without formally invoking it as a basis for his actions. In August 1939, for instance, Roosevelt appointed a War Resources Board under the chairmanship of Edward Stettinius. As Huston (1965, p. 408) notes, the move "clearly was intended (by Assistant Secretary Johnson if not by the President) to become the War Resources Administration of the Industrial Mobilization Plan if the plan were put into effect." Roosevelt appointed Colonel Harry Rutherford, former member of the Army Industrial College faculty, as Secretary to the War Resources Board, and the College was later asked to conduct a confidential study of the Board's initial Plan (Johnson, 1993, pp. 28, 31).

Over the ensuing year, however, tenuous public opinion over American involvement in events in Europe and controversy over the Board's composition prompted the White House to seek modifications to its Plan from Bernard Baruch and

John Hancock, the former Secretary of the Navy. Their recommendations were forwarded in the form of a report of the War Resources Board. While the new modified Plan moved somewhat away from the concerns over a superagency, Roosevelt still feared the plan would remove industrial mobilization too far from his control. Moreover, the Secretary of War, Harry Woodring, was only lukewarm toward the Plan and openly critical of Assistant Secretary Louis Johnson's efforts aimed at US rearmament. Ultimately, the White House declared the Plan secret and never implemented it, though, once again, a number of its provisions were actually used in mobilizing for World War II (Huston, 1965, pp. 409-10).

In retrospect, it would seem that the events surrounding the Industrial Mobilization Plan, the White House, and the Army Industrial College, actually were of some usefulness. As Weigley (1983) and others (Thatcher, 1943; Vawter, 1983) suggest, the planning process itself succeeded in educating a new generation of military officers with the economic dimensions of war. Moreover, the process clearly stimulated productive thought and planning that very likely enhanced actual mobilization efforts after the war began. In fact, many of the organizations and economic controls which eventually evolved paralleled those envisioned in the Industrial Mobilization Plan. As Koistinen (1980, p. 12) concludes, "principally because of the interwar planning, few problems in industrial military planning were encountered during World war II compared with World War I."

ASSESSING THE COLLEGE'S INTERWAR DEVELOPMENT

Between its founding in 1924 and the completion of the last of its regular pre-war courses in 1940, the Army Industrial College educated 804 military officers, to include prominent leaders such as Dwight D. Eisenhower and Henry (Hap) Arnold, in the hitherto unexplored dimensions of the relationships between military strategy and the national economy. During these years, the institution evolved and expanded in form, substance, and purpose.

Mission

While the original mission of the College was codified in its 1924 charter in General Order No. 7, the institution's mission *in practice* was soon re-shaped, guided less by formal statement than by events and people and a host of internal and external political, military, and economic forces.

Originally conceived to conduct training of military officers in two fairly specific areas -- procurement and industrial mobilization -- the College quickly took on

expansive roles in conducting post-graduate education, research, and actual industrial mobilization planning. By the end of the interwar period, the institution had established itself as a unique and legitimate element in the military system of senior officer education. It had graduated an initial cadre of senior military leaders with expertise in economic and industrial mobilization which would later prove enormously useful in World War II. In a larger sense, it had also developed the beginnings of a unique institutional expertise in employing systematic methods for analyzing various industrial sectors in the national economy.

The *process* by which this evolution occurred is also instructive in understanding the development of the College, both in this and subsequent periods in its history. A variety of individuals internal and external to the institution were clearly influential. Early Directors of the College, along with faculty support, seemingly expanded the mission from training to post-graduate education and research almost by unilateral decree. Faculty and students appear to have been the impetus behind establishing on-site visits to support the industry studies which have since become a hallmark of the College. Advisory Boards prompted the extension of the course to a full ten-month academic year and urged the applied study of wartime super agencies and other facets of actual mobilization planning.

Equally important to understanding the process by which these changes occurred, however, are the insights to be gained from understanding the conditions which enabled them to take place.

Enabling Conditions

Why was the Army Industrial College able to endure and actually develop and grow in an era of national austerity? Masland and Radway (1957, p. 98) point out that the senior war colleges, including the Industrial College, were somewhat sheltered from external difficulties and the otherwise prevailing isolationist sentiments of the times. This is particularly noteworthy in face of trends tending to diminish the importance of other military education in this austere period. As Lawrence Cremin (1988, p. 507) observes, education, though it had been the subject of intense interest immediately following World War I, was soon "de-emphasized" and the more "traditional aspects of garrison life came to the fore."

Factors uniquely related to the Industrial College were also at work. Van Creveld (1990, p. 64), for example, notes that, particularly toward the end of this era, business was regarded as a fairly prestigious area and one both new and appealing to most military officers. In fact, contacts generated between those associated with the Industrial College and others in business as well as other government agencies would later prove useful during World War II.

Circumstances also seem to have been conducive in permitting cooperation between the military services. The Industrial College's concerns with a broad subject area like industrial mobilization appears to have allowed the Army and Navy to collaborate without threatening one another's traditional service-unique, parochial interests.

Finally, while motivations for maintaining a strong government interest in industry changed dramatically during the interwar years, the actual interest itself continued virtually unabated through economic boom and bust and through Republican and Democratic administrations. In the years following World War I, whether for reasons of becoming an educated, vigilant watchdog over greedy industrial profiteers or functioning as an effective pro-business collaborator, the net result was an abiding interest in government interaction with industry. Later, during the New Deal era, while motivations shifted toward seeking to help restore the robustness of an economically anemic industrial base, a strong government interest in the business community persisted. Furthermore, by the end of the decade of the 1930s, the College found itself favorably positioned in the midst of a rapidly growing federal government. The federal civilian workforce alone rose from 600,000 in 1932 to over one million by 1940 (Hofstadter, 1970, p. 471).

While conditions such as these were undeniably conducive to the development of the College throughout this period, it is also apparent that the institution filled an important void in the senior military education system.

Institutional Void

Johnson (1982, p. 43) argues that the Industrial College emerged from this era as "a pioneer institution" -- the only College in the military education system chartered to study procurement and industrial mobilization planning as interactive elements of the country's economic strength and as components of national security. Similarly, Masland and Radway (1957, p. 97) contend that the Industrial College added "an important new dimension to officer education."

The College was indeed a pioneer institution, even by international standards. Comparing the robust German system for educating senior officers in this era, Van Creveld (1990, p. 101) concludes that its single greatest shortcoming was in offering "insufficient instruction in the nonmilitary aspects of war, including politics, economics, technology, and business administration" -- all provinces of the relatively new Army Industrial College. He argues that the same void was apparent in the English system of senior military education in this period, noting that "Britain had nothing like the U.S. Army's Industrial College and no systematic attempt was made to equip officers with an

understanding of the non-military aspects of war" (p. 51).

In addition to filling a void in the military educational system, however, the College helped promote a new and expansive view of the larger dimensions of war and national security in general.

Expansive Concept of National Security

The successful development and growth of the Industrial College in the interwar period opened what would become a serious, persistent debate about the military-industrial complex, of which the Army Industrial College was surely an integral part. It reflected the recognition on the one hand that industry and military planning and cooperation would help assure a more effective team in any future contingency, while expressing, on the other hand, the concern of the Nye Committee and others about the potential excesses of this "unhealthy alliance" (cited in Koistinen, 1980, p. 57).

Questions arising from this debate, however, also focused some serious thinking about the interrelationships among military effectiveness, industrial robustness, and economic strength, ultimately fostering a new and enlightened perspective on the very nature of national security. As Dwight Eisenhower, who served with the Army's Planning Branch and studied and taught at the Army Industrial College, would later observe, "no matter how much we spend for arms, there is no safety in arms alone. Our security is the total product of our economic, intellectual, moral, and military strengths" (cited in Koistinen, 1980, p. 13).

CONCLUSIONS

Eisenhower's farsighted words notwithstanding, it must also be recalled that, in the final analysis, the interwar period was a difficult time for the nation as well its defense establishment and the Industrial College. As Fortune magazine would record of this era in its October 1940 issue:

...we were left with no munitions industry at all. Thus the people and their statesmen washed their hands of war. Only the professionals -- the army, the navy -- continued to practice an art that the people were confident would never again be employed in their time. In the dreary cubicles of the Army Industrial College, a handful of officers wrote dull but solid papers on how plants making adding machines, automatic lead pencils, cash registers, boats, pipe organs and lawn mowers could be turned to revolvers, ammunition components, bomb fuses, pontoon bridges, saddle frames, and shrapnel. Doggedly, the War Department allocated M-Day assignments which some vice-president, busy with other duties,

filed away and forgot. (U.S. Defense, 1940, p. 52)

In many ways, the Industrial College was one of the few institutions anywhere in government which retained any interest in these matters throughout most of the interwar period. Even though the nation endured a severe economic depression, the College's unique mission, coupled with an enduring government interest in understanding the capacities of the country's industrial base and an expansive notion of the economic elements of national security, all combined to reinforce the institution's role in filling a void over which all too few paid much serious attention. Soon, however, the country and the Army Industrial College as well, would find themselves faced with an international crisis of unprecedented proportions which put this unique institutional expertise in high demand -- a response to the bizarre emergency which no one thought would ever come.