CHAPTER 5

THE FORMATIVE YEARS:
THE INDUSTRIAL COLLEGE AND THE COLD WAR, 1947-1962

When Bernard Baruch spoke to the graduates of the first regular post-World War II class of the Industrial College in June 1947, he warned the audience that the United States was now in the midst of a new kind of global conflict. Noting that "although the shooting war is over," he cautioned we were now "in the midst of a cold war" (Baruch, 1947, p.2). While the New York Times and others generally credit Baruch for having coined this term, Baruch's biographer, Jordan Schwarz (1981, p. 508) has observed that various sources ascribe its first use, in that same year, to Herbert Swope, a journalist, publicist, and long-time friend of Baruch's . That controversy notwithstanding, the admonition from Baruch about a new "cold war," one of the College's prominent founders, became a defining hallmark for the nation as well as for the institution in an era which constituted the formative years of the Industrial College of the Armed Forces.

THE COLD WAR ERA

In the 15-year period from 1947 to 1962, profound changes in the post-war world dramatically reshaped the nation and its national security community including the senior military education system. In fact, various developments in the Cold War era appear to have impelled a host of external and internal forces which influenced the maturation of the Industrial College as a unique institution of adult education and learning. Collectively, these forces and events help illuminate the manner in which the guiding charter and mission of the College changed over time, ultimately transforming the fundamental nature and character of the institution in this tumultuous period.

Containment and Crises

The initial peace following World War II soon gave way to an era of global tension fueled by suspicions of Russian ambitions aimed at expansive influence. George Kennan, an American Foreign Service officer, published a now famous anonymous article entitled "The Sources of Soviet Conduct" in the July 1947 issue of Foreign Affairs in which he argued for a U.S. policy of "long-term, patient, but firm and vigilant containment" (cited in Garraty, 1987, p. 833).

That same year, Secretary of State George C. Marshall, former Army Chief of Staff during the war, proposed his plan for European recovery in a commencement

address at Harvard University (Garraty, 1983, p. 833) Together, containment and the Marshall Plan constituted the American response to the power vacuum in Europe in the aftermath of the war, providing a counterbalance to expanding Soviet influence in Eastern Europe.

As if to substantiate Kennan's thesis and Marshall's Plan, a series of crises and conflicts followed. In June 1948, the Soviets closed off all surface access routes into Berlin from the west, and President Truman responded with the Berlin airlift. In 1949, the Soviets detonated their first nuclear weapon, thus ending the American monopoly of this destructive new technology. The following year, on June 25, 1950, North Korean divisions crossed the 38th parallel and moved rapidly into South Korea. The ensuing Korean conflict consumed American forces until a truce was finally negotiated under President Eisenhower in 1953.

In 1954, Eisenhower's Secretary of State, John Foster Dulles, in a January 25 address to the Council on Foreign Relations in New York, articulated the nation's new security strategy of "massive retaliation" through the use of nuclear weapons to deter Communist aggression (Weigley, 1977, pp. 401-403). While there were no direct confrontations between the superpowers in the 1950s, the Soviets did move their armed forces into Hungary, and by 1957, they had won the first round of the space race with the launch of Sputnik on October 4. The United States searched for ways to regain its lost momentum in space technology, and as part of those initiatives, Congress enacted the National Defense Education Act in 1958, placing increased emphasis on science, mathematics, and engineering in the nation's schools and universities (Garraty, 1987, p. 882) -- emphases which would become similarly evident within the Industrial College in this period.

By 1960, amid concerns over an alleged "missile gap" with the Soviets, an American reconnaissance U-2 aircraft was shot down during a spy mission over the Soviet Union. The following year, at the inauguration of John Kennedy, the newly elected President, rose to the challenge of a continuing competition in missile and space technology, by calling upon the nation to put a man on the moon by the end of the decade. At the same time, Kennedy sought more flexible ways to manage potential confrontations with the Soviet Union without resorting to the all or nothing approach suggested by the previous administration's policy of massive retaliation. While crafting a policy of "flexible response," Kennedy nonetheless found himself faced with the most serious confrontation of the entire Cold War. In October 1962, the Soviets installed missiles in Cuba and the two superpowers took themselves to the brink of global nuclear conflagration before the crisis was defused (Garraty, 1987, p. 861; Hofstadter, 1970, p. 612).

National Security Community

In addition to its obvious operational roles in the Korean conflict and Cuban missile crisis, the defense establishment also underwent a number of important changes in the Cold War era. Legislation enacted in the late 1940s -- the National Security Act of 1947 and amendments to the Act in 1949 -- clarified the roles and missions of the land, air, sea, and amphibious arms of the military in patterns which have largely survived to the present day. Under that same legislation, the senior military leadership of the armed forces aligned itself in a Joint Chiefs of Staff organization in the Pentagon. Moreover, the post-war military establishment resurrected its interests in senior military education, opening and re-organizing War Colleges which had been closed for the duration of World War II. All of these events, in ways both direct and indirect, provide the context and influence of changes which shaped the development and evolving mission of the Industrial College in this period.

A DEVELOPING INDUSTRIAL COLLEGE

When the College resumed its regular resident course in 1946, the War Department issued a circular (War Department Circular No. 91, 27 March 1946, cited in Scammell, 1946, p. 71) outlining the mission of the institution in three parts:

> a. Training of officers for duty with those activities of the armed forces concerned with industrial mobilization and procurement planning.
> b. Evaluation of the economic war potential of the United States and foreign nations.
> c. Study and analysis of the current Industrial Mobilization Plan, and such other studies as may be useful to the procurement planning agencies.

This mission statement suggested the College would continue in directions not unlike those seen in the earlier interwar period, with emphasis on training in mobilization and procurement. Over the next two years, however, a series of events would yield significant changes in the nation's military structure which would affect the College and its mission as well.

Shift From Civilian to Military Control and a Changing Charter

The first of these events came in the form of a major piece of legislation enacted on July 26, 1947, the National Security Act of 1947. The Act provided for the Departments of the Army, Navy, and Air Force constituting a national military establishment under a Secretary of Defense. Ironically, James Forrestal, the former Secretary of the Navy who had previously opposed strong central control, was named the first Secretary of Defense. (Huston, 1966, 579) Navy misgivings about a dominant Army-Air Force partnership and Congressional concerns of Prussian-like military

centralization, led to a coordinated, though not well unified, National Military Establishment. The three service chiefs and a chairman constituted a Joint Chiefs of Staff organization with a staff which was to consist of not more than 100 officers (Weigley, 374). This Joint Chiefs of Staff organization would soon assume control of the Industrial College, taking it away from the civilian leadership in the War Department.

In spite of the new organization, Forrestal was frustrated by his limited power over the military services. Amendments to the National Security Act two years later would subsequently reduce the military department heads' positions from cabinet status, convert the National Military Establishment into the now familiar Department of Defense, and increase the size of the Joint Staff to 210 officers. Meanwhile, Forrestal met with the service chiefs at a now somewhat famous Key West Conference in March 1948. By most measures the forum largely re-confirmed traditional service roles and missions involving land, sea, and air (Weigley, 375-376, Huston, 1966, p. 579).

The re-assessment of the nation's defense structure that spring, however, proved to be timely. In June 1948, the Soviet's closed off all surface access routes into Berlin, and President Truman initiated the Berlin Airlift, that same month signing a new Selective Service law calling for a peacetime draft (by December, Army strength had reached 600,000 -- the largest peacetime Army in history) (Garraty, 833; Huston, 587-588).

It was in this same period of military reorganization and international crisis, that the Joint Chiefs of Staff were given jurisdiction over the Industrial College. In the years immediately following the war, the College had remained under the purview of the Under Secretary of War -- generally representing the *civilian* leadership of the War Department. In 1948, however, the institution was placed under the control of the newly created Joint Chiefs -- the *military* leadership of the defense establishment.

That year, the Joint Chiefs issued their first formal charter of the Industrial College of the Armed Forces (Joint Chiefs, 1948). Officially published on September 3, 1948, the charter, which had been approved personally by Secretary of Defense Forrestal, officially reconstituted the College "as a joint educational institution operating under the Joint Chiefs of Staff. This institution is recognized as being on the highest level in the educational field within the National Military Establishment" (p.1).

The charter also contained a new mission statement for the College, notable for its distinctly different content from previous statements when the institution operated under the jurisdiction of the Under Secretary of War. Its new mission was...

To prepare selected officers of the Armed Forces for important command, staff,

and planning assignments in the National Military Establishment and to prepare selected civilians for important industrial mobilization planning assignments in any government agency by:

> (1) Conducting a course of study in all phases of our national economy and interrelating the economic factors with political, military, and psychological factors.
> (2) Conducting a course of study in all aspects of joint logistic planning and the interrelation of this planning to joint strategic planning and to the national policy planning.
> (3) Conducting a course of study of peacetime and potential wartime governmental organizations and the most effective wartime controls (Joint Chiefs, 1948, p. 1).

The new mission statement was significant in several respects. For the first time, it provided for the inclusion of civilians from throughout government in the College's main resident 10-month course. It also dropped the heretofore used term "training" in describing an educational program of considerable breadth and scope. It conspicuously omitted any reference to participation in Industrial Mobilization Plans as well. In fact, the charter explicitly noted that the College "is primarily an educational institution. As such, it will not engage in investigations, studies, or activities which would place the College in the status of a staff agency or executive agency" (p.2). This latter provision appears to have been a clear reaction to the College's controversial role in Industrial Mobilization Plans throughout the decade of the 1930s.

The charter also sanctioned a limited external education program, calling for short courses for reserve officers and civilians to be conducted in cities around the country. A subsequent update to the charter, issued on April 19, 1949, further authorized establishing a correspondence course (Joint Chiefs, 1949, p. 3).

Over the course of the ensuing year and a half, one crisis of the cold war was seemingly replaced by another, and their impact was felt at the Industrial College. The Berlin blockade finally ended in May 1949, but by September the Soviets detonated their first nuclear warhead, demonstrating to the world their mastery of this new massively destructive technology. By June 1950, conflict had erupted in Korea and the United States now found itself involved in another shooting war. Perhaps reflecting concerns over needing to place its limited number of senior military leaders in key combat, planning, and support positions, the Joint Chiefs issued a revised charter for the Industrial College (Joint Chiefs, 1950) on August 10, 1950. The new document dropped a previous provision which had called for general or flag rank officers to serve as Deputy Commandants at the College. In spite of the demand for officers to support the Korean conflict, it is interesting to note that the Army War College was re-opened this same year, having been closed since before the American entry in World War II.

During the first few months of the Korean conflict, Congress enacted a far-reaching piece of legislation know as the Defense Production Act. Signed into law by President Truman on September 8, 1950, the statute provided for vast governmental powers in war involving economic priorities and allocations, industrial production, and wage and price controls (Vawter, 1983, p. 16) -- all key areas of study by students at the Industrial College for the past 25 years. The Defense Production Act thus served to reinforce the College's educational focus on these same subjects. Coincidentally, the Act's provision for exerting strong central economic controls in wartime on the national level appears to have mirrored a similar move for increased power over the College on the part of the Joint Chiefs of Staff the following summer. In a change to the institution's charter issued on June 14, 1951 (Joint Chiefs, 1941), the Joint Staff vested itself with control over student enrollment and dropped a previous provision which had authorized the Munitions Board to approve civilian students nominated to attend the College (p. 3).

The Joint Chiefs of Staff would not issue another change to the charter of the College until 1955. By then, the Republicans had taken over the White House with the election of President Eisenhower in 1952, the Korean conflict had ended in 1953, and American national security policy now called for the threat of 'massive retaliation' against any major Soviet aggression in the continuing international tension and nuclear standoff of the cold war.

When the Joint Staff published a new charter for the Industrial College on June 22, 1955, the former mission statement had been amplified. In an apparent move to highlight the expansive role of the defense establishment in the increasingly complex landscape of national and international security, it stipulated that the College's course of study was designed to prepare a select group of military officers and civilians "for important policy making, command, and staff assignments within the national and international security structure" (Joint Chiefs, 1955, p. 1). Moreover, in addition to studying matters related to the Department of Defense, the charter also called for the analysis of issues of interest to the Department of State and other governmental agencies (p. 2).

Another change in the 1955 mission statement called for a course of study in "joint logistics planning and the relation of this planning to joint and combined strategic planning" (p. 1). In the lexicon of the military establishment, the term "combined" denotes international cooperation or the 'combined' endeavor of several allied nations. This change in the mission not only reflected an increased interest in international security affairs, but an emphasis that was recommended in this area by an external review board which had examined the mission of the Industrial College in late 1954 and early 1955 (see the discussion of the Baxter Board which follows below).

While the Joint Chiefs of Staff published a minor administrative update to the College's charter on July 13, 1955 (Joint Chiefs, 1955), there were no other substantive changes to either the charter or mission until the summer of 1960. In that time President Eisenhower had been re-elected in 1956 and the Soviets had won the first round of the space race by launching their Sputnik satellite in 1957. Congress reacted by, among other things, passing the National Defense Education Act of 1958, providing for major initiatives aimed at strengthening American educational programs in mathematics, science, and engineering.

Thus, it is not surprising that a new charter for the Industrial College issued by the Joint Chiefs on July 11, 1960, amended the mission statement of the institution in similar directions, for the first time specifically calling for studies that addressed scientific and technological factors affecting national security. The new mission statement tasked the Industrial College...

> To conduct courses of study in the economic and industrial aspects of national security under all conditions, giving due consideration to the interrelated military, logistical, administrative, scientific, technological, political, and social factors affecting national security, and in the context of both national and world affairs, in order to enhance the preparation of selected military officers and key civilian personnel for important command, staff, and policymaking positions in the national and international security structure. (Joint Chiefs, 1960, p. 1)

Continuing the College's philosophy of treating national defense in its broadest context, the 1960 charter also called for studies in which students assessed "total requirements for national security,...balancing them against total national assets" (p.1). Mirroring concerns over the space race and the potential for nuclear war, the charter also called for studies of "the impact of scientific research and technological development on national security" as well as an examination of the strength of the economy "under all conditions of international conflict and for post-attack rehabilitation" (p. 2).

Interestingly, some of the language for this revised charter and came from the College itself. Then Commandant Lieutenant General Mundy, U.S. Army, referred in his Annual Report to the Joint Chiefs of Staff (Annual, 1960, p. 5) to the new mission "as revised by my staff...emphasizes the study of the economic and related aspects of national security under all conditions, particularly those of peacetime and international conflict." While the precise terminology in the final document varies somewhat, the College's influence in shaping it is nonetheless unmistakable.

The Joint Chiefs issued another amended charter to the Industrial College on June 13, 1961. (Joint Chiefs, 1961). While the specific mission statement of the

institution remained unaltered, the larger charter document outlined two changes. One announced that the Joint Chiefs of Staff would henceforth determine the total number of faculty to be assigned to the College (heretofore a matter of the Commandant's prerogative). The second change specified including "selected foreign nationals of friendly foreign countries" (p.3) in external and correspondence course offerings. This latter provision appears to have reflected a growing national interest in international cooperation in this period. In the months preceding this revision of the charter, John Kennedy had been elected President and had begun talking about broader, more 'flexible response' options beyond the deterrence of the massive retaliation doctrine of the Eisenhower administration. In attempting to forge stronger international ties, Kennedy initiated the Peace Corps and outlined his Alliance for Progress with nations in Central and South America under a program modelled on the Marshall Plan. The charter provision to begin enrolling foreign nationals in extension courses at the Industrial College appears to reflect the spirit of these larger endeavors.

Less than a year later, on February 12, 1962, the Joint Chiefs issued yet another charter to the Industrial College (Joint Chiefs, 1962), containing changes in the mission of the institution which were both substantive and far-reaching. Referring to the College as "the capstone of our military educational system in the management of logistics resources for national security," the document emphasized management as a recurring theme, beginning with a revised mission statement (p.1):

> To conduct courses of study in the economic and industrial aspects of national security and in the *management of resources* [emphasis added] under all conditions, giving due consideration to the interrelated military, political, and social factors affecting national security, and in the context of both national and world affairs, in order to enhance the preparation of selected military officers and key civilian personnel for important command, staff, and policy-making positions in the national and international security structure.

The charter further called for the College's scope of studies to include the "management of manpower, money, materials,... programs and budgets," and the use of "management techniques" in general (p. 2-3). Thus, while the institution's traditional broad concern with resources would continue, these changes essentially directed the College to explicitly refocus its educational programs around a new unifying theme -- management.

The basis for this rather substantial re-direction of the charter and mission of the College becomes clear when examined within the context of developments in the Defense Department at large. By this time, President Kennedy's Secretary of Defense, Robert McNamara, had embarked upon his quest for civilian dominance in the defense establishment, building a culture in which management science, operations research, and analytical techniques aimed at assessing cost effectiveness were becoming

pervasive icons (Hoftstadter, 1970, p. 616). The full implications of this new focus, however, both in the Pentagon and the Industrial College, would not become apparent for several years, eventually becoming a shaping force in the next era of the institution's development.

While many of the charter and mission changes which shaped the development of the College in this period were the product of new directions issued by the Joint Chiefs of Staff, a major external review board, not unlike those convened in the pre-war history of the College, also influenced the formative years of the institution.

Baxter Board

One major review board was convened in 1954, early in the Cold War period, which was tasked to review both the Industrial College and the National War College. The genesis and outcome of this review group provide another instructive installment in the evolving nature of senior military education in general and the mission of the Industrial College in particular.

Co-located at Fort McNair, the National War College and Industrial College had collaborated in a number of endeavors in the early 1950s. Students from both institutions participated in many lectures together, and beginning in 1950, students in both colleges participated in joint committees to assess the logistics and support feasibility of hypothetical war plans. Cycles of cooperation apparently waxed and waned in this period however. By 1953, the strategy-logistics exercise had been discontinued and the number of joint lectures began to decrease somewhat, with Industrial College students attending some 70% of lectures at the War College, but with students from the latter institution attending relatively few at the Industrial College. Old concerns about the relative prestige of the Industrial College were resurrected, and, at the same time, the issue of a possible National Security University resurfaced although the Joint Chiefs of Staff reacted unfavorably to the idea (Masland, 1957, p. 164)

Against the backdrop of these events, the Commandant of the National War College, Lieutenant General Harold Craig, USAF, proposed that the Joint Chiefs establish a board to review senior military education. The Joint Chiefs ultimately adopted the suggestion to form a board, but after protest from the individual military services (presumably to avoid interference with their own War Colleges), narrowed its focus from senior military education at large to a review of only the National War College and the Industrial College.

The Board was convened on April 7, 1954 under the leadership of Dr. James Phinney Baxter, III, President of Williams College and a former member of the National War College's Board of Consultants. Its other five members included J. Carlton Ward,

Jr., president of the Vitro Corporation and a member of the Industrial College's Board of Advisors, along with four officers of general or flag rank from the Army, Navy, Air Force, and Marine Corps. Commonly known as the Baxter Board, it was chartered to examine the two joint colleges, their respective missions, and their relationship with one another. (Masland, 1957, pp. 164, 490)

The Board submitted its report to the Joint Chiefs of Staff on January 20, 1955 (Baxter, 1955). One of its recommendations dealt with the missions of the two colleges, urging that their mission statements be amended to reflect emphasis on the "combined" (international) as well as joint aspects of strategy along with increased attention to the scientific and psychological aspects of national security. The report also recommended that the two institutions remain as separate entities, but continue efforts to collaborate and participate, if practicable, in some kind of joint student problem. The Board further suggested that Joint Staff assistance and guidance of the colleges could be improved with the creation of a Joint Education Committee comprised of the Commandants of the two colleges and the head of the Armed Forces Staff College (a mid-career institution for officers). In addition, it recommended the creation of an Advisory Board of distinguished civilians to advise the Joint Chiefs on joint education affairs. Finally, the Board made several recommendations specifically related to the Industrial College: an increased proportion of students in line or combat fields should be assigned to each class; the Commandant's rank should be increased to the same level as for that held by the head of the National War College (3-stars); and a new building should be constructed for the college at Fort McNair.

By June, the Joint Chiefs of Staff decided to take somewhat limited action on the Board's recommendations. They rejected the proposed Joint Education Committee and the suggested Advisory Board, arguing the lack of a demonstrable need for such groups. They also declined to intervene in the issue of increased rank for the Commandant of the Industrial College, suggesting this was a matter of jurisdiction by the services which supplied the incumbents for the position. The Board did, however, support the need for a new building for the Industrial College, indicating that the Department of the Army, which was responsible for financial support of the institution on behalf of the Joint Staff, was considering a request for construction funds in its budget submission to Congress (Masland, 1957, pp. 489-494). On the issue of changes in mission to reflect more concern with international cooperation, the Joint Staff, in the June 22, 1955 update of the charter of the Industrial College, inserted words calling for the study of "joint and combined strategic planning" (Joint Chiefs, 1955, p.1).

Interestingly enough, while the Joint Chiefs of Staff initially rejected a number of the Baxter Board's recommendations, many of the initiatives gradually came into practice over the normal course of events in the ensuing years nonetheless. A three-

star position for the Commandant became a reality, as did a Joint Education Committee and an Advisory Board for the College.

Oversight and Advice

In addition to the direct oversight and advice provided to the Industrial College by the Joint Chiefs of Staff, and the recommendations espoused by the Baxter Board, at least two other entities provided counsel and assistance to the institution in this period -- the Joint Military Education Committee and the Board of Advisors.

Joint Military Education Committee. Even though the Joint Chiefs had initially rejected the Baxter Board's recommendation in 1955 to form to joint education committee, such an organization nonetheless came into existence by the end of the decade. The Joint Military Education Committee was comprised of the Commandants of the three joint military colleges -- Industrial College, the National War College, and the Armed Forces Staff College (Bauer, 1983, IV-32). Given the composition of the group, the group's recommendations typically reflected the individual and collective interests of its institutions. Thus, in 1959, for example, it recommended to the Joint Chiefs that the quality of incoming students be a matter of increased emphasis (Bauer, 1983, IV-32). In 1960, the Committee undertook a study of the missions of the three joint colleges at the behest of the Joint Staff. Prompted by the Joint Staff's desire to explore the feasibility of consolidating the three institutions, the study predictably concluded that their "separate status...has been reaffirmed" (Annual, 1960. p.5). Similarly, in 1962, the Committee recommended to the Joint Staff that civilian faculty salaries be increased (Annual, 1962, p. 9).

Board of Advisors. The notion of a Board of Advisors for the Industrial College had its roots in 1944 when then Director of the College, Colonel Miles, U.S. Army, first appointed a Research Council consisting of four officials from industry and one economic consultant. Miles eventually converted the Council to a Board of Advisors which grew in size and stature throughout the 1950s (Bauer, 1983, p.III-17). By 1955, the Board consisted of 21 individuals representing industry, education, law, and public service, to include such prominent figures as the President of the Boeing Airplane Company, the Associate Dean of Harvard's Graduate School of Business Administration (Industrial, 1955, pp. 13-14). The Commandant of the College served as the President of the Board of Advisors, so it is perhaps not surprising that the group often helped reinforce the strategic directions in which the leadership intended to move the institution. Thus, in 1959, the Board of Advisors, for example, recommended greater emphasis on joint and combined military planning, international student field trips, and enhanced quality and remuneration for faculty (Bauer, 1983, IV-32).

On balance, formal changes by the Joint Staff in the mission and charter, along

with the recommendations and advice of various external entities like the Baxter Board, Joint Military Education Committee, and the Board of Advisors, yielded fairly profound, visible alterations in the purpose and major thrusts of the College throughout this period. At the same time these developments also began to indirectly re-shape other critical, underlying aspects of the institution as well, ultimately changing its fundamental character.

THE CHANGING CHARACTER OF THE INSTITUTION

In his 1956 report to the Joint Chiefs of Staff, Major General Robert Hollis, U.S. Army, then Commandant of the Industrial College, observed that the basic nature of the institution had changed dramatically since the end of World War II. (Annual, 1956, p. 2). This transformation, he suggested, was attributable to three major developments: the reorganization of the defense establishment and the broadened concept of national security; Korea and the Cold War; and nuclear weapons. Having examined the effect these developments had on changes in the institution's formal charter and mission, it is also noteworthy to assess concomitant changes in the fabric and character of the College manifested in such areas as the curriculum, student body, faculty, and a number of other defining elements of the institution

Curriculum

In his 1957 Annual Report to the Joint Chiefs of Staff (Annual, 1957), then Commandant Major General Hollis, U.S. Army, observed that changing world conditions and quantum strides in technology were prompting commensurate alterations in the College's curriculum. Hollis' sentiments were echoed by a later Commandant, Lieutenant General Mundy, U.S. Army, who, in 1961, reflected upon "the broad lines along which the curriculum had developed over the past several years" in order to keep abreast of changes in complexity in the world and in the possible nature of future warfare (Annual, 1961, p. 1).

In fact, the curriculum did evolve in several new directions throughout this period. While maintaining some of its traditional interest in economics, resources, and procurement, changes put in place from 1959 to 1961 added new units of study devoted to resources management, contemporary international politics in the world economy, and economic capability for international conflict (Bauer, 1983, p. IV-17).

Lectures at the College similarly reflect the changing, expansive nature of the curriculum in this period. An illustrative sampling shows presentations conducted by a number of prominent officials: George Kennan - International relations; Dr. Oppenheimer - The Atomic Age; Lt. Gen. Leslie Groves - Atomic Bomb Development;

Admiral Chester Nimitz - United Nations and the Korean Crisis; Vice President Richard Nixon - National Security and Foreign Policy; John Foster Dulles - The International Scene (Annual, 1951, 1954, 1955, 1956).

Secretary of Defense McNamara's interests in defense management techniques were also reflected in the curriculum. By 1962, the College reported to the Joint Chiefs that it was developing a special textbook, "Management Concepts and Practice," for use in both the resident and correspondence courses (Annual, 1962, p. 3).

Interestingly, examinations. which were a staple of the correspondence course, were *not* administered in the regular resident program throughout this same period in the College's history. Bauer (1983, p. IV-19) notes that an experimental test was given to resident students in June 1951 and the generally poor reaction among students and faculty was such that "no attempt was ever made to repeat such an experiment" (through the time in which Bauer completed his historical account of the College in 1983).

Field Studies

Since its early days as the Army Industrial College, the institution had long conducted student field studies of industrial facilities in and around the greater Washington, D.C. area, to include longer trips to Maryland and Pennsylvania. These trips continued and were expanded in the post-World War II years and throughout the Cold War era. Student groups in the Class of 1951, for example, visited Birmingham, Buffalo, Chicago, Cleveland, Detroit, Dallas, Philadelphia, Pittsburgh, Hartford, and St. Louis (Annual, 1959, p. 93-94). By 1955, students were venturing to the West Coast, visiting factories in Los Angeles and San Francisco (Annual, 1955, p. 62). Not all visits were purely industrial in nature, however. One group in the class of 1956, for instance, visited the United Nations headquarters in New York City (Annual, 1956, p. 12). All field studies up to this point, however, were limited to the United States.

By 1958, the College began to explore the possibility of expanding its field studies program internationally. That summer, then Commandant Lieutenant George Mundy, U.S. Army, reported to the Joint Chiefs that in light of the recent "greater emphasis upon combined [international]" military affairs, "I have investigated the feasibility of an annual visit to Europe and find it entirely practicable" (Annual, 1958, p. 2). By the spring of 1960, international field studies had become a reality. Mundy told the Joint Chiefs that he had inaugurated the program "with visits by students and faculty to some of the major economic centers of Western Europe and Latin America" (p. 5). He noted that plans were underway to visit Africa, Asia, and the Middle East in the following year. By 1962, then Commandant, Vice Admiral Rose, USN, noted in his Annual Report that the Joint Chiefs of Staff had authorized scheduling International

Field Studies as "a regular feature of the resident course" (Annual, 1962, p. 10).

Students

Class Size. The post-World War II interim course which ran from January through June 1946 consisted of 81 officers. The first regular 10-month resident course of the new Industrial College began in the summer of 1946 and graduated 98 officers in 1947. Thereafter, classes in this era of the College's development would consistently exceed 100. The Class of 1950 which began in August 1949, for instance, numbered 121. Annual enrollment grew steadily over the course of the ensuing decade. With the Class of 1962, enrollment in the resident course reached its highest level to that point at 159 students. Anticipating further increases in class size, then Commandant Vice Admiral Rufus Rose, U.S. Navy, reported to the Joint Chiefs that year that, despite the new expanded facility which the College had inhabited in 1960, "I have recommended that 180 students be recognized as the maximum number that can be adequately housed and, more important, educated, in the manner we should expect" (Annual, 1962, p. 5).

Civilians. Although large numbers of civilian students attended the wartime short courses in contract termination and surplus property disposal, none had ever attended the regular resident course of the Army Industrial College or the reconstituted Industrial College of the Armed Forces. In 1948, the first charter issued by the Joint Chiefs of Staff authorized the College to enroll civilian students from defense and other government agencies in the regular resident course (Joint Chiefs, 1948, p. 3), but it was not until the following year that civilians actually began to attend classes (31st, p. 13). Enrolled in August 1949, six civilians graduated as members of the Class of 1950. Civilian student enrollment then grew commensurately with overall increases in class size throughout the decade. The Class of 1951 included eight civilians from the Departments of Commerce, Defense, Interior, Labor, State, and Treasury. By the time of graduation of the Class of 1962, the 27 civilian students in the resident course comprised some 17% of the entire class. As the Commandant, Vice Admiral Rose, reported to the Joint Chiefs that year, the civilian presence in the class helped accommodate the increasing demand for enrollment from other government agencies and created a "healthy mix of diverse outlooks and points of view" in the educational experience (Annual, 1962, p. 5).

Quality. Throughout this period in the College's history, several Commandants expressed concern about the quality of students coming to the College. As Bauer (1983, p. IV-10) observed, the College was interested in officers with superior records and promising potential for senior leadership. In 1955, the Commandant, Rear Admiral Hague, U.S. Navy, told the Joint Chiefs of Staff that only officers with reasonable promotion potential to general or flag officer rank should attend the resident course

(Annual, 1955). In 1957, then Commandant Major General Hollis, U.S. Army, told the Joint Staff that a more uniform level of quality and experience was needed among incoming students, arguing that some proportion should even be graduates of their respective service war colleges *before* entering the Industrial College. Hollis further noted it was "a source of disappointment to me that so few of our graduates have attained the rank of flag or general officer" (Annual, 1957, p. 10).

Gender and Race. Given the temper of the times, it is perhaps not surprising that one aspect of student quality was *not* discussed in this period -- gender and racial diversity. President Truman signed Executive Order 9981 on July 26, 1948, calling for "equality of treatment and opportunity for all persons in the armed forces without regard to race, color, religion, or national origin" (cited in MacGregor, 1981, p. 312). Truman specified that the policy "be put into effect as rapidly as possible...(allowing for time required to make changes)...without impairing efficiency or morale." By 1962, however, black officers accounted for just over 3% of the Army's commissioned ranks, 1% of those in the Air Force, and less than 1% of the officers in the Navy and Marine Corps (Young, 1982, p. 227). Similarly, Holm's study of women in the military (1992, p. 272) indicates that women officers did not begin to attend senior military colleges until around 1970. While historical records associated with the Industrial College do not specifically mention this area, a review of archival materials and photographs in student biography books for this period indicate that no women or black officers had attended the resident course by the end of this era in the College's history in 1962.

Faculty

Just as the student body changed in this period, so too did the faculty evolve in new directions. The number of faculty assigned to the College did not keep pace with increased student enrollment, however. As the Commandant, Vice Admiral Rose, U.S. Navy, complained to the Joint Staff in 1962, while the institution consisted of 112 students and 42 faculty in academic year 1948 - 1949, class size was projected to grow to 180 in 1962 - 1963 at the same that faculty strength would diminish to only 38 (Annual, 1962, p.4). Rose highlighted his concerns by observing that one of the basic precepts of professional senior military education was founded on the philosophy of "an intimate and informal faculty-student relationship, small group discussion and instruction, an academic atmosphere in which the individual is never submerged in the crowd" (p. 4).

While the number of faculty assigned to the College remained relatively constant in this period, the institution was successful in beginning to attract civilian academicians to its ranks and moved to make pay scales competitively attractive for hiring and retaining top quality professors. As then Commandant Lieutenant General Mundy, U.S. Army, noted in 1961, one of his highest priorities was to upgrade civilian

faculty positions to the "highest level permitted in the present regular Civil Service scale for educators" (Annual, 1961, p. 7).

The faculty also began to serve in new capacities in this era. While continuing their traditional roles as educators and facilitators in student seminar classes, beginning in academic year 1950 - 1951, each member of the faculty was also appointed as an academic advisor to several students, providing consultation and advice throughout each year (Gest, 1990. p. 95). Formally designated as Primary Faculty Advisors (PFAs), the program continues to the present day.

Prestige

Nagging doubts about a perceived lack of prestige at the Industrial College had plagued the institution as early as the 1920s, and these concerns continued throughout much of the Cold War era. Bauer (1983, p. IV-1), notes that as a relatively new and non-traditional institution in the military educational system, many officers feared attending the Industrial College would adversely affect the advancement of their careers. With the creation of the National War College in 1946, concerns about prestige were exacerbated. As Masland and Radway (1957, p. 141) point out, while the Industrial College and other services' War Colleges were later officially recognized as having equal status, original plans for the National War College fueled enduring impressions that it stood "at the top of professional military education, capping the educational experience of a relatively few carefully selected officers."

To help alleviate these concerns, the Joint Staff, in its first charter issued for the Industrial College in 1948 (Joint Chiefs, 1948, p. 1), noted that "this institution is recognized as being on the highest level in the educational field within the National Military Establishment."

Relations between the National War College and the Industrial College were actually strengthened through most of this period. Students from the Industrial College attended upwards of 75% of the guest lectures at the National War College in the 1950s and by 1957, then Commandant Major General Hollis, U. S. Army, reported to the Joint Chiefs (Annual, 1957, p. 1) that "relations with the National War College were excellent and there was a marked increase in the cooperative activities of the two Colleges." What would become a long standing softball rivalry between the two institutions was also begun in this period. Begun in academic year 1947 - 1948, the so-called 'Little World Series" was re-confirmed by a formal agreement on February 2, 1960, and continues to the present day (Bauer, 1983, p. IV-34).

By 1960, there were slight signs that the two College's might be moving somewhat apart or at least that some in the Industrial College perceived the institution

to be on a firmer, more independent footing. That year, the Commandant, Lieutenant General Mundy, U.S. Army, noted that the Industrial College's own curriculum and guest speaker program had evolved to the point that it was being conducted "without depending, as in the past, upon National War College lectures which were out of phase with our own course" (Annual, 1960, p. 5).

Nonetheless, concerns over prestige appear to have been somewhat common in this period of the College's development. Major General Hollis, Commandant in the mid-1950s, spoke of "a misconception prevalent in some quarters of the services, and frequently in the minds of the students as they enter the College...that the Industrial College is essentially an advanced logistics school" (cited in Bauer, 1983, p. IV-11). Hollis' successor, Lieutenant General Mundy, addressed a similar aspect of the issue, and its relationship to the evolving mission of the College in his final Annual Report to the Joint Chiefs in 1961 (Annual, 1961, p. 2), writing that

> ...the Industrial College has long had to combat the adverse effects resulting from misleading impressions conveyed by its name. The term 'Industrial College' inherited from an earlier era and *an educational mission long ago superseded*, [emphasis added] suggests a course content and a type of instruction which bear little resemblance to the broad graduate-level curriculum now offered by the College. It has helped to create a widespread impression among the armed services that our curriculum is concerned with the 'nuts and bolts' of logistics and military procurement, with adverse consequences for student motivation and the prestige of the institution.

Mundy's concerns about prestige were heightened further by a short-lived decision by the Joint Staff to reduce the Commandant's billet from the three-star level to two stars. He told the Joint Chiefs that of all the issues confronting the institution, "the major problem now facing the Industrial College concerns its prestige and standing in the joint education system" (Annual, 1961, p. 2). The three-star billet was restored the following year (Annual, 1962, p. 8), with general and flag officers of that rank presiding over the College until 1975 (the billet was subsequently reduced to two stars in conjunction with the creation of the National Defense University).

General Mundy's concern notwithstanding, it should be recalled that the Joint Staff consistently opened the charter of the College (and its revisions) with explicit statements about the Industrial College's standing at the highest level in the military education system. Moreover, it seems noteworthy that a standing President of the United States (albeit one with a longstanding connection to the institution), Dwight Eisenhower, would personally serve as guest of honor when the College's new building was dedicated in 1960. Nonetheless, it is clear, that insecurities about prestige persisted among the minds of many affiliated with the Industrial College throughout this era.

A New Facility

Concern about prestige also manifested itself in the sub-standard facility that became the home of the Industrial College following World War II. In August 1946, shortly after it was re-constituted as the Industrial College of the Armed Forces, the institution had moved from the Pentagon into building T-5 on the War College grounds (renamed Fort McNair in January 1948) in Washington. Erected in 1942 as one of the city's many temporary wartime buildings, its five year lifetime expectancy was reflected in its light construction and overall inauspicious appearance, particularly in light of its close physical proximity with the magnificent permanent structure that had been the home of the Army War College and which now housed the new National War College. (Fort, 1954, p. 13; Bauer, 1983, p. IV-23).

Championing the need for a new building for the Industrial College became an important cause among Commandants of the institution for much of the ensuing decade. Rear Admiral Wesley Hague, U.S. Navy, Commandant from 1952 to 1955 was particularly vocal. He complained to the Joint Chiefs of Staff in each of his Annual Reports about the need for a new building and a series of unsuccessful attempts to include construction funding in the Department of Defense's budget. Hague also highlighted the unfavorable comparison with the National War College occupying "a large permanent structure...an outstanding example of the architectural design of the period," while the adjacent Industrial College was housed in "an obviously dilapidated building." Tying the issue of a new facility to the very mission of the institution, Hague charged that Industrial College students were being given the false but unavoidable impression that their school was on a subordinate, inferior level from the National War College. "This erroneous impression has far-reaching and detrimental results to the mission of the Industrial College," he concluded (Annual, 1955, p. 7).

In apparent desperation, Hague eventually took his plea directly to President Eisenhower, former student and faculty member of the old Army Industrial College. Eisenhower told Hague he agreed that a new building was indeed necessary (cited in Bauer, 1983, p. IV-24). Nonetheless, competing demands for dollars kept construction funding out of the defense budget until August 28, 1958 when Congress finally approved $4.1 million for a new structure. A groundbreaking ceremony was conducted on December 12, 1958, with the building contract awarded to the G. A. Hyman Construction Company (Annual, 1960, p. 2; McClellan, 1993, p. 168). By the following summer, the Commandant, Lieutenant General George Mundy, U.S. Army, reported that construction was proceeding well (Annual, 1959, p. 2).

The new building was completed by mid-summer of 1960, although the formal dedication ceremony was not held until the fall. At least part of the facility was suitable

for use by June 14, however, because General Mundy reported to the Joint Chiefs that the new auditorium was used that day for the graduation ceremony of the Class of 1960. Mundy noted that he expected to move the entire College into the building later that summer (Annual, 1960, p. 2).

The move did indeed take place that summer, and the timing was fortuitous. The College's old home, temporary building T-5, was scheduled to be torn down at the end of the summer to make way for the construction of a parking lot. On August 30, however, T-5 caught fire and burned. The fire was later linked to a workman's blowtorch (McClellan, 1993, p. 168).

The formal dedication ceremony of the new building -- Eisenhower Hall -- was held on September 6, 1960. President Eisenhower was the principal speaker at the event along with the new Chairman-designate of the Joint Chiefs of Staff, General Lyman Lemnitzer, and a number of other government officials and industry leaders. Eisenhower reminisced about his affiliation with the College in the 1930s, and he credited the subsequent development and growth of the institution to visionaries such as Bernard Baruch (the auditorium of the new building was named in honor of Baruch). The President concluded by praising the Industrial College as "a guidepost pointing to the greatly increased quality of our defense capacity," noting that it must continue on the path of "ever ascending progress for the years ahead" (cited in Bauer, 1983, p. IV-25).

Apart from the President's personal attendance at the dedication of the new ICAF building, it is also noteworthy that the character of the College in this period was also changing in directions not solely limited to the home campus nor to the institution's primary 10-month resident program.

External Education Programs

Efforts from within the College as well as changes sanctioned in iterations of its charter by the Joint Staff provided the impetus for the institution to create a series of external educational offerings in this period. The Industrial College embarked on three major external programs in the post-World War II and Cold War years: a series of conference courses in various cities around the United States; a correspondence course; and an affiliate master's degree program.

Civilian and Reservist Conferences. The first charter issued by the Joint Chiefs of Staff in September 1948 (Joint Chiefs, 1948) directed that the Industrial College, in addition to its traditional 10-month resident course, was to conduct an abbreviated external educational program as well. Taking the form of on-site short courses, these

were intended for officers of the National Guard and Reserves of the various services along with "selected executives of industry, educators, and prominent citizens" (p.3). Envisioned as a "condensed version of the regular course," these offerings were to be conducted either at the College or in cities throughout the country.

Actually, the College had already begun such an external program, initiating in January 1948 a series of National Resources Conferences, with the first held in New Orleans. That year, conferences were conducted in six states, typically sponsored by a local organization such as the Chamber of Commerce in collaboration with a nearby military installation or unit (Bauer, 1983, p. IV-26). The program expanded fairly rapidly. During academic year 1950 - 1951, the College held conferences in Alabama, Delaware, Kansas, Missouri, Rhode Island, and Virginia (Annual, 1951).

The conferences attracted widespread public interest. Enrollment grew and within a year or two, they were being conducted as two week seminars in 14 to 16 cities annually (Bauer, 1983, p. IV-26). By June 1957, then Commandant, Major General Hollis, U.S. Army, reported to the Joint Chiefs of Staff that 38,222 students (24,579 military; 13,643 civilians) had completed the conference program, with some 5331 participating in that academic year alone (Annual, 1957). By 1960, over 50,000 officers and civilians were graduates of these conferences (Annual, 1960).

Originally envisioned as a workshop on economic and industrial mobilization, these conferences gradually expanded in scope to mirror the expansive curriculum of the resident course. The name of the program changed several times, from the original National Resources Conferences in 1948, to National Defense Resources Conferences in 1958, to National Security Seminars in 1960 (Bauer, 1983, IV-27; Annual, 1960). In each case, however, it seems apparent that those affiliated with the College recognized the broader utility of this interaction with communities around the country. Partly reflecting that realization and the Cold War sentiment of the times, then Commandant, Lieutenant General George Mundy, U.S. Army, suggested to the Joint Chiefs of Staff in 1960, that these seminars constituted "the most effective means available to the Department of Defense for informing and awakening American public opinion at the grass roots level" (Annual, 1960, p, 2). In fact, at one point in 1958, the seminars formed the basis of a television series of 15 thirty-minute programs produced under a grant by the Ford Foundation and broadcast over 30 stations of the Educational Television Network that autumn (Bauer, 1983, p. IV-27).

The external conferences and seminars represent one of the hallmarks of the Industrial College's formative years. By the end of this era, in 1962, nearly 63,000 military and civilians had attended these offerings in some 126 cities, with over 9000 students participating that year alone. Many viewed this undertaking as much a contribution of public service as it was to national security. In fact, it was in recognition

of this service that then Commandant Vice Admiral Rufus Rose, U.S. Navy, accepted, on behalf of the College, the George Washington Honor Medal from the Freedoms Foundation of Valley Forge at a ceremony held in the U.S. Capitol on May 28, 1962 (Annual, 1962, pp. 5-6).

Correspondence Course. In 1949, the Joint Chiefs of Staff issued a revised charter for the Industrial College (Joint Chiefs, 1949, p. 3) calling for the institution to offer a correspondence course aimed at military officers and civilians unable to attend either the resident course or the seminar programs offered in cities around the country. A correspondence program was begun in 1950 and grew rapidly in popularity. In 1957, then Commandant, Major General Robert Hollis, U.S. Army, reported to the Joint Chiefs that faculty members in the College had written 22 short text books (commonly referred to as "blue books" for the color of their covers) for the course which included "intentionally difficult examinations" (Annual, 1957, p. 7). The text books covered such subjects as economic mobilization, manpower, materials, energy resources, technology, requirements, procurement, economic intelligence and warfare, and foreign aid. A typical student took about 18 months to complete the course (Industrial, 1955, pp. 27-28).

By 1959, 3,472 students were enrolled in the correspondence program. Student composition that year was roughly 45% reservists, 36% civilians, 18% active duty military officers, and 1% foreign nationals. From its inception in 1950 to the end of this era in the College's history in 1962, a total of 34,370 had been enrolled in the correspondence course. Of that number, however, only 12,441 had successfully completed the program -- a problem often characteristic of correspondence courses. Nonetheless, the Industrial College's correspondence course became widely recognized, its "blue books" were in demand from other federal and defense agencies, and it generally enhanced the institution's reputation throughout the national security community (Bauer, 1983, IV-28 - IV-30). As a short publication prepared in 1955 in conjunction with the 31st anniversary of the College reflected, the correspondence course had become "an integral part of the mission...to educate key personnel on both sides of the all important civilian-military team" (Industrial, 1955, p. 27).

George Washington University. In late summer, 1960, the Industrial College established a cooperative education program with George Washington University (GWU). Under the agreement, participating students received some credit for course work at the Industrial College, then completed additional courses at GWU during evenings and a summer semester following graduation from the Industrial College (Bauer, 1983, p. V-16). In his June 1961 Annual Report to the Joint Chiefs of Staff (Annual, 1961, p. 6), then Commandant Lieutenant General George Mundy, U.S. Army, remarked that seven students of the Industrial College were also receiving Master's of Business Administration degrees from the cooperative program inaugurated with GWU

in the 1960-1961 academic year. The following year, the new Commandant, Vice Admiral Rufus Rose, U.S. Navy, reported to the Joint Staff that the "successful" new cooperative program had grown in only one year to the point that 52 ICAF students from the class of 1962 would receive Master's degrees (Annual, 1962). While this program would subsequently continue for over 30 years, it would be the subject of periodic cycles of both praise and concern -- reflecting a controversy centered on whether or not the Master's program might dilute student effort in the Industrial College curriculum of study.

CONCLUSIONS

The tumultuous Cold War era provided a dynamic and influential backdrop for the formative years of the Industrial College. A modest institution resurrected from the pre-war period to train a relatively small number of military officers in procurement and industrial mobilization, it evolved into a considerably larger center of excellence for educating senior civilian officials and military leaders in the complex global nuclear age.

Brought under the jurisdiction of the Joint Chiefs of Staff, the College's formal charter and mission --defining its fundamental purpose and objectives -- changed at least eight times between 1947 and 1962. These new directions were prompted by a variety of individuals and events. At various times, Commandants, the Joint Chiefs of Staff, advisory boards, the Baxter Board, the Congress, and even the President of the United States played critical roles in reshaping the institution. So too did developments like the reorganization of the Defense Department, the Korean conflict, the nuclear arms race, and the space race influence the changing character of the College.

Clearly, changes in this period derived from forces both external and internal to the College. At times, the institution was moved in new directions by the Joint Chiefs of Staff, and others. Frequently, however, it was itself the source of change, at times carefully placing its own key figures and institutional friends among the membership of external advisory panels and review boards.

In the final analysis, these formative years in the College's history witnessed its move away from any direct role in wartime planning, as it had involved itself in the interwar period, and its expansion, both qualitatively and qualitatively, into its primary role of senior professional military education, to include an ambitious external program with a correspondence course and seminars conducted in major cities around the country.

By the close of this period in its development, the College's influence as an

educational institution was becoming more pronounced and widespread than ever before. Its correspondence and seminar courses extended ICAF's reach well beyond the home campus. Nearly 400 of the roughly 3000 graduates of its resident course had become general officers, and the student body had begun to include senior civilians in gradually significant numbers. Moreover, as the complexities of industrial and resource support of national security increased throughout the Cold war era, so too did the College's role become more firmly a part of educating future leaders prepared to cope with those challenges.

By the 1960s, that legacy would propel the College into a distinctly different Vietnam era in which the institution and senior military education in general would evolve in yet further, dramatically new directions.