



AIR UNIVERSITY **review**

JANUARY-FEBRUARY 1972



a backward glance



AIR UNIVERSITY **review**

THE PROFESSIONAL JOURNAL OF THE UNITED STATES AIR FORCE

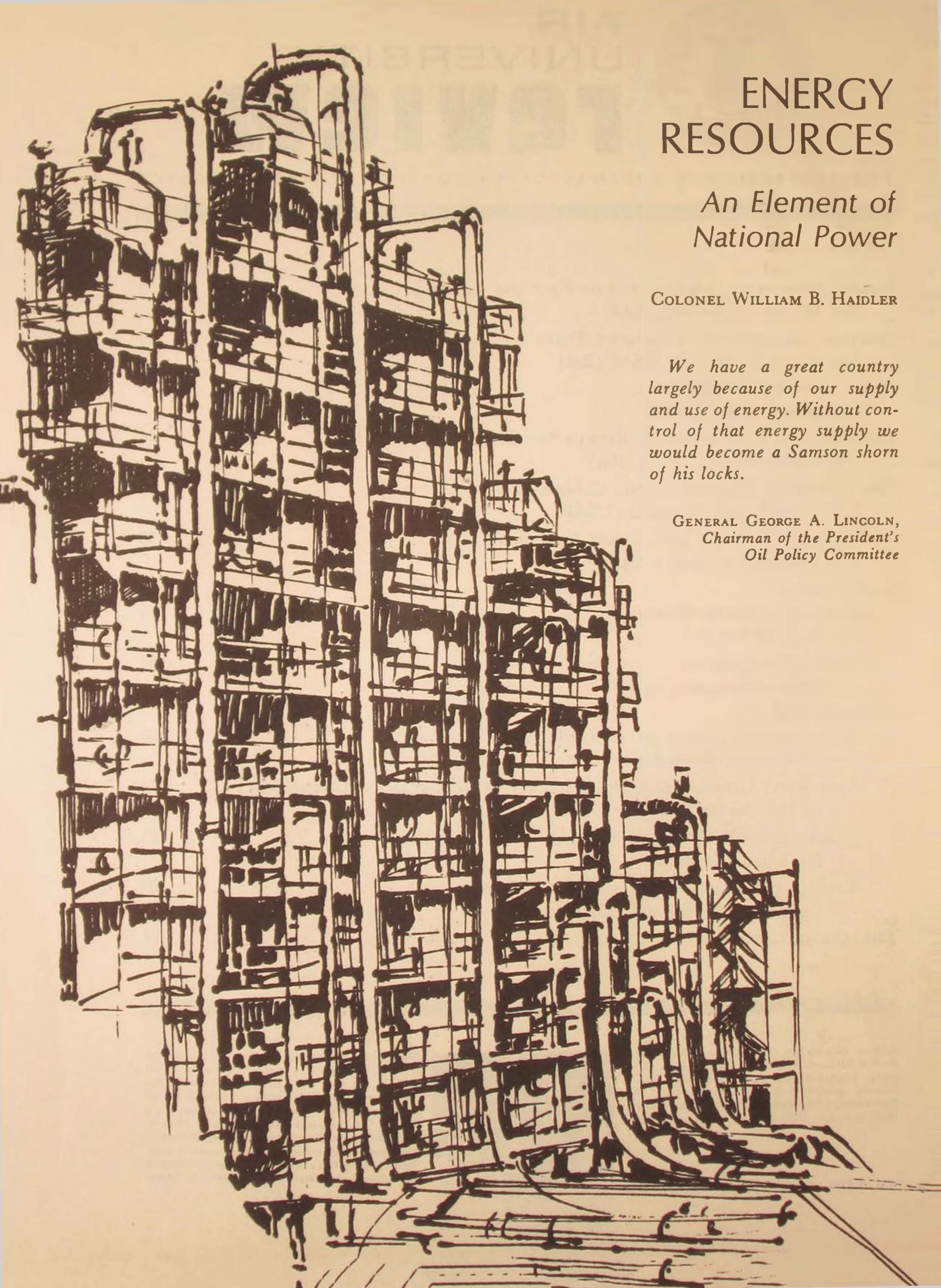
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Address manuscripts to Editor, Air University Review Division, Bldg 1211, Maxwell AFB, AL 36112. Printed by Government Printing Office. Address subscriptions to Superintendent of Documents, GPO, Washington DC 20402; yearly \$4.50 domestic, \$5.75 foreign; single copy 75¢.



the cover

What better way to start the New Year than with a thoughtful backward glance? Not only do we look to the past but also to the back of our book. Our cover shows Lieutenant Colonel Harold E. Hartney, World War I flyer and author of *Up and At 'Em*, reviewed by Dr. James J. Hudson. Also shown are World War II Generals Stilwell and Chennault, prominent in Lieutenant Colonel Gordon K. Pickler's review of Barbara Tuchman's *Stilwell and the American Experience in China*.



ENERGY RESOURCES

*An Element of
National Power*

COLONEL WILLIAM B. HADLER

*We have a great country
largely because of our supply
and use of energy. Without con-
trol of that energy supply we
would become a Samson shorn
of his locks.*

GENERAL GEORGE A. LINCOLN,
*Chairman of the President's
Oil Policy Committee*

GENERAL LINCOLN'S statement vividly indicates the level of concern for energy within the United States today.¹ Our short-term energy problems have become increasingly evident. The electrical power brownouts in the northeast, while primarily a consequence of insufficient generating capacity and not a lack of fuel, have caused citizens to be acutely aware of energy. Late in 1970, public attention quickly focused on the disruption of the Trans-Arabian Pipe Line and the agitation this minor change of 3 percent in the world's oil supply caused in delivery rates and tanker fees.

In January 1971 fifteen international oil companies made an unprecedented offer to the Organization of Petroleum Exporting Countries (OPEC): to stabilize prices and ensure availability. Of even more note was the speedy reaction of the United States in setting up an interagency task force to watch OPEC developments; joining with major West European countries to present a united front to the OPEC; dispatching Under Secretary of State John N. Irwin II to Saudi Arabia, Kuwait, and Iran; and in giving antitrust clearance to the involved American oil companies for their activities in the group negotiations. The Department of the Interior recently recommended the Alyeska crude line across Alaska from the North Slope with the comment: ". . . the need for Eastern Hemisphere oil would be substantially reduced if North Slope oil is developed."²

Secretary of the Interior Rogers C. B. Morton has advocated a national energy policy. A new law requires the Secretary to report annually on the adequacy of fuel supplies and to make recommendations to alleviate shortages. Federal Power Commissioner Albert B. Brooke, Jr., has announced that he would support an industry-government endeavor to determine priorities and pool resources for future energy production and environmental planning. Some senators are skeptical of White House energy studies and plan to spon-

sor their own investigation of our long-term energy requirements. Petroleum industry spokesmen are calling 1971 a historic year for United States energy policy.

The United States could not have developed into a superpower if abundant low-cost energy had not been readily available, and neither can it endure without it. Man consumes daily but a few thousand calories to sustain life; however, the average U.S. citizen daily uses approximately two hundred thousand calories.³ The large difference between calories needed to sustain life and those used is the energy required to move the tractors, condition the environment, extract the ore, process the material, distribute the product, and perform the myriad tasks associated with a highly complex, integrated, industrial society.

Now we hear cries that energy is becoming scarce. Simultaneously, others act as if energy resources were limitless. My purpose is not to argue the ultimate answer to this paradox. Today's ultimate answer, if there is one, would not precisely predict tomorrow's needs, discoveries, technology, or society. In time, any answer would probably be proven false. Rather, my purpose is to present projections of the U.S. energy requirements and resources, foreign and domestic, in conjunction with our announced foreign policy, but always remembering that energy is crucial to our future.

U.S. Energy Resources

Americans like energy. Annually using 60 percent of the world's energy production, we are the world's largest consumer. Worldwide energy consumption is increasing about 3 to 5 percent each year; in the United States the increase is approximately 7 to 10 percent.⁴ We are and will continue to be in competition with all men and nations for energy. Nevertheless, considering our goals and the character of our people, we will probably retain our lead position. This has both advantages and

disadvantages in light of where this energy must come from.

Coal is the only domestic fuel that alone could meet the estimated cumulative energy requirement of the United States between now and A.D. 2000. Approximately 100 billion tons would be required.⁵ Without great cost increases or the requirement for new recovery methods, at least 200 billion tons are estimated to be domestically available. With improved technology, this coal reserve could be greater. However, coal cannot compete economically today with oil, natural gas, and nuclear fuels in all areas and uses. A complete switch to coal would also cause monumental technological and economic shifts as well as changes in our society and habits.

To meet our cumulative demand by oil alone would require approximately 450 billion barrels. The U.S. reserves at the beginning of 1971 were 37 billion barrels.⁶ Obviously there is a wide gap; however, energy reserves are difficult to assess, discoveries come at unexpected times, and estimates rarely agree. Throughout the United States and the world, newly discovered oil reserves have exceeded consumption in recent years. Yet this cannot continue indefinitely. Fossil fuel reserves do have an ultimate limit; our domestic ultimate oil reserve is estimated at several hundred billion barrels, barely enough to cover our cumulative requirements by A.D. 2000 if all could be extracted.

Oil shale presents another domestic energy store. The Green River formation of the Colorado Rockies is estimated to contain over 1000 billion barrels of recoverable oil. The vastness of the supply is not the question; rather, it is the extraction and cost. By the year 2000 this tremendous reserve may begin to supplement our present sources.

Natural gas reserves are even more meager than those of oil. Approximately 2400 trillion cubic feet of natural gas would be required to meet the cumulative U.S. demand over the next thirty years. Today's domestic reserves

are only 265 trillion cubic feet. As with oil, domestic gas reserves fall woefully short. Improved technology, deeper drilling, nuclear stimulation, expanded exploration may all contribute to increased reserves. However, in recent years, new reserves have not kept pace with the spiraling consumption of natural gas. This is the domestic energy source in shortest supply.

Nuclear energy from a fission reaction is well proven and can significantly aid the United States. Growth in this field has been less rapid than original predictions suggested, but it is now speeding up. Nuclear fuel reserves are difficult to evaluate but are sizable, particularly with a breeding cycle. Nuclear and hydro plants will contribute to the generation of electric power but little to transportation, unless that transportation is electric.⁷

Hydro power is often proposed because of its cleanliness, simplicity, and the many streams seen about the countryside. Unfortunately, few sites remain for large hydro installations. Consequently, there is little additional aid available from hydro power—perhaps one or two percent of U.S. needs.

The exploitation of other domestic energy sources does not appear promising at this time. Nuclear energy from controlled fusion reaction offers great potential, but first tremendous scientific and technological advances must be made. The winds, tides, and geothermal heat may provide energy to specific localities. Solar energy may also contribute in some local areas, but because of its dilution this is not a general supply.⁸

In summary, based upon today's reserves and projections, the cumulative energy needs of the United States from now to A.D. 2000 can be met entirely by domestic coal alone. No other single domestic energy resource would meet this cumulative demand; domestic oil and natural gas reserves will be strained to meet current demand trends. Our current use of various energy stores is the result of economic considerations, the energy use pat-

Snaking its way through a forest, a new oil pipeline when completed will extend the more than 200,000-mile network that services the nation, mostly underground so the terrain is unmarred.



tern of our society, and the ready availability of energy from outside the United States.

Foreign Energy Resources

Since shortly before 1950, the United States has been a net importer of energy. We export coal but import oil and gas. Our future energy requirements and the convenience of liquid fuels increase pressure for ever greater importation.

Canada's situation is similar to that of the United States, but scaled down. Her oil and natural gas reserves are approximately one-fourth of ours; hence, Canada's reserves cannot drastically alter our long-term energy supply. Since a considerable portion of Canada's electrical energy is generated from hydro power, whose sites are limited, in time Canada will turn more to thermal generation of electrical power. This will be a further demand on her own fossil fuel reserves. Even now, Canada imports 50 percent of her oil needs. Like the untapped oil shale deposits in our West, Canada has vast reserves in the oil sands of Alberta. These sands are estimated to contain hundreds of billions of barrels. Conservative projections at the 1967 technology level placed recoverable crude oil from these Canadian sands at 40 billion barrels.⁹ This is roughly equal to the domestic crude oil reserves of the United States excluding oil shale. While Canadian reserves cannot offer a long-term solution to U.S. needs, their ready availability should not be overlooked.

Mexico has oil reserves one-tenth those of the United States and even less comparatively in gas reserves. Thus, while again readily available, either quantity is insufficient for the long term. Venezuela's oil reserves of 14 billion barrels are roughly one-third those of the United States. In fact, all the reserves of the western hemisphere outside the United States are but equal to our own domestic reserves. Energy is more abundant outside this hemisphere, and it is to those resources that

we and others have turned with increasing interest.

Our allies of Western Europe are major users of energy, also. Unfortunately, Europe's oil reserves, 3.7 billion barrels, are only one-tenth those of the United States. These are insufficient for European needs alone; Europe currently imports 95 percent of her oil requirements. Half of the European oil reserve is based on preliminary estimates of the recent North Sea discoveries, which are now being developed. European gas reserves are slightly more than one-half ours; these too are under rapid development. Thus, rather than being a potential source of energy to the United States, Europe may require our energy resources in the event her normal imports are disrupted.

The Asia-Pacific area has oil reserves one-third as large as those held in the United States. Ten of the 14 billion barrels of the Asia-Pacific area are in the new Indonesian fields. The gas reserves of the entire area are one-fifth ours. Japan, the rising industrial economy of the East, has negligible fuel reserves. In addition to almost all her oil requirements, Japan imports large amounts of coal. Hence, the reserves of the Asia-Pacific area are less than ours, and when developed they will be close to Japan and her growing needs.

The African continent has twice the oil reserves of the United States and almost two-thirds as much gas. Eighty percent of Africa's reserves of oil are concentrated in the Algerian and Libyan fields, 30 and 29 billion barrels respectively. These nations require little oil for their own use and offer huge quantities for export. In 1970 North Africa supplied slightly more than half of Europe's oil.

The Middle East is the energy giant. This oil-rich area contains oil reserves almost ten times as great as those of the United States. Half of the world's known oil reserves are in the Middle East. Gas reserves are not as great; these are currently estimated as one-

half of ours and one-fifth of the world's. Japan currently receives 95 percent of her oil from the Middle East, and Europe receives almost 50. We also use large amounts of Middle Eastern oil.

A review of the world's oil and gas reserves would not be complete without considering the reserves of the Communist countries. The Soviet Union is the major supplier to this bloc. Her oil and gas reserves are, respectively, twice and one and one-half times those of the United States. Even with these, the U.S.S.R. is an importer of oil to meet domestic and satellite demands. The Soviets too have turned to the Middle East for additional oil.¹⁰

In summary, while we are still fundamentally self-sufficient in all fuels and will remain so in coal, the United States has turned to overseas resources for considerable amounts of oil and gas. The reserves of the rest of the western hemisphere are roughly equal to our own and offer additional resources nearby. These are contained principally within Canada, Mexico, and Venezuela. Our major allies overseas have meager fuel reserves and are dependent principally upon North Africa and the Middle East for their supplies. We have turned to these same areas of the eastern hemisphere for additional energy supplies. The Soviets have too. North Africa and, in particular, the Middle East offer the only presently known liquid fuel reserves that can support the world's long-term energy requirements.

Reserves

Before considering our foreign policy as it relates to the energy needs of the United States, the meaning of reserves should be examined. Reserves are working inventory. They are known deposits on which the world is drawing. They are not the ultimate amounts to be drawn from any area. Undoubtedly the final figure will be higher, but how much higher? New fields will be discovered too, but where and when?

The reserves of the United States are probably better known than those of any other area because of heavier exploration for coal, oil, and gas. Of these three, coal estimates are most accurate. We are also drilling further for oil at a rapid rate—ten times the rate of Africa, twenty times that of the Middle East. The new areas offer better chance for new oil discoveries because they are less completely mapped. This is not to say that new finds, improved technology, and additional recovery from fields now abandoned will not add to our domestic reserves. Nevertheless, the probability of additional large discoveries is greater in the new fields than in the old. Consequently, an even greater preponderance of overseas reserves is probable.

Ultimate reserves have been estimated too. These also change with time. Not only are deposits proven or not found, but what is uneconomical today may become economical tomorrow. A set of ultimate estimates, made in 1962, gave projections for various areas.¹¹ Time has already disproved some of these projections; the 1970 reserves of the Middle East exceeded the 1962 estimates of ultimate recovery from this area and North Africa combined. The trend is clear: the world's significant liquid fuel reserves appear to be in the Middle East and North Africa. The reserves of these areas, if assured to the West, would give the Free World tremendous energy resources; but if lost to the Communist World, they would tip the balance as much to our disadvantage.

Foreign Policy and Energy

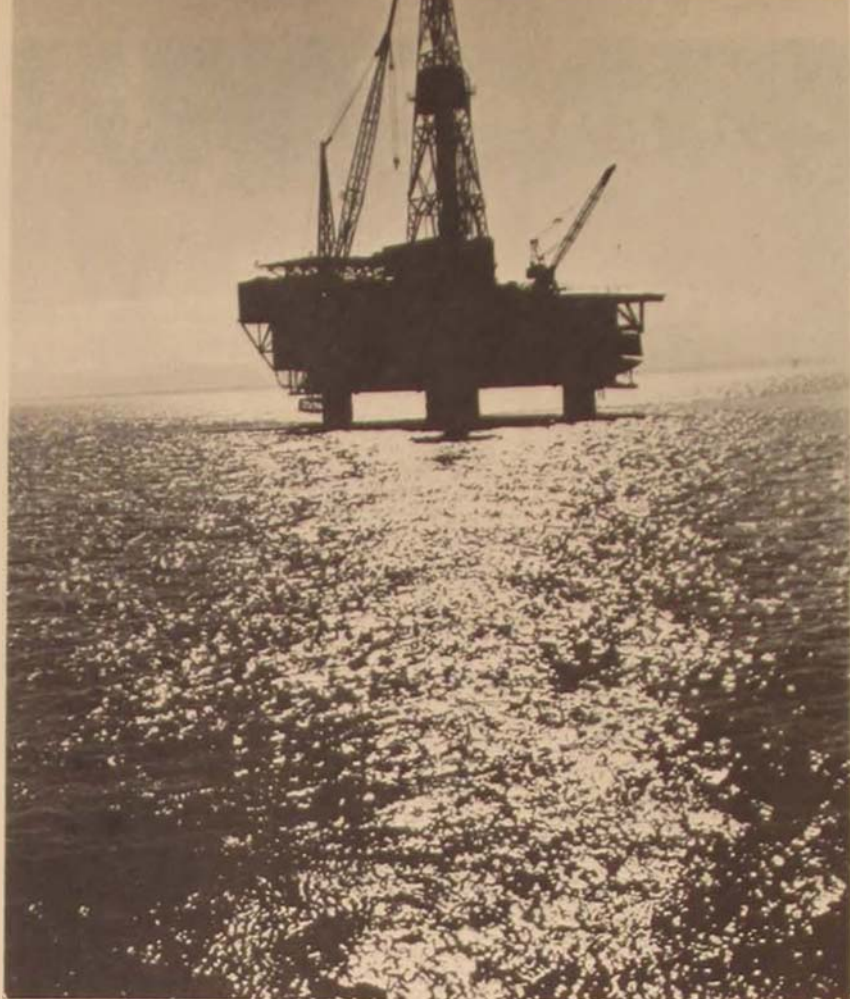
In President Nixon's report to the Congress, *US Foreign Policy for the 1970's*, the subject of energy resources is not discussed as an entity.¹² Over the time span of the President's report, the energy resources available to the United States are adequate, barring catastrophic events. We may expect distribution difficulties and minor supply perturbations,

U.S. Oil Production

An oil-drilling crew prepares to pull some drill stem from its hole, an operation required each time the bit is changed. They can pull up a thousand feet of pipe in minutes.

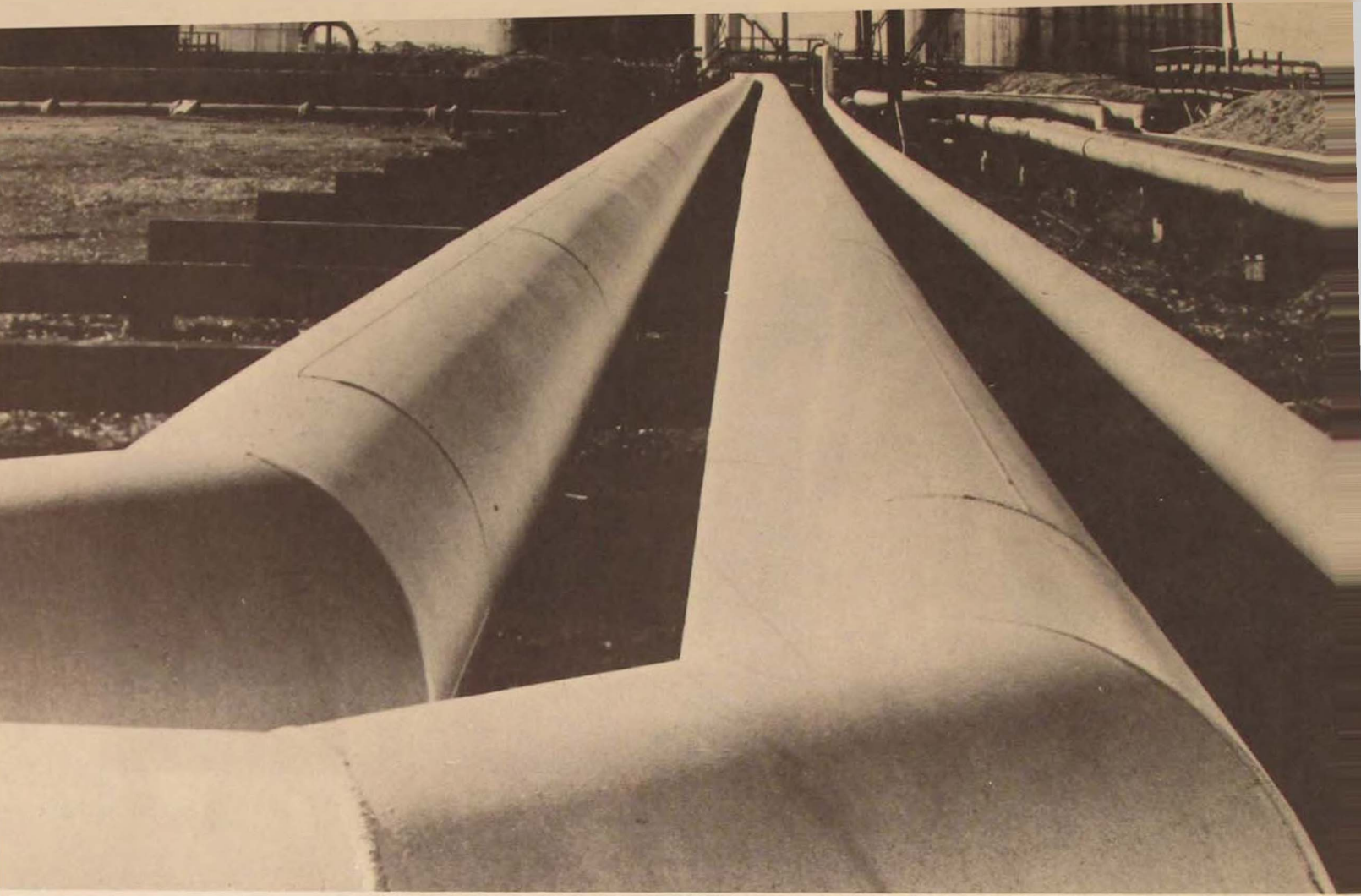


An offshore oil-drilling platform in Alaska's Cook Inlet is typical of rigs costing up to \$15 million that house 50 men and drill exploratory wells in water 1000 feet deep.



Right-of-way having been secured, a ditching machine follows it cross-country, leaving a trench two to six feet deep for carrying the underground oil pipeline.





Pipelines from docks to tank farms are one stage in the flow of petroleum products worldwide.

such as those anticipated for the northeastern United States last winter. This is particularly true of natural gas; midwestern customers are already inconvenienced. For the near term, though, our supplies are adequate. The supply problems that arise will be correctable and, while certainly disturbing, will not impair the nation's overall advance. However, as we reach the end of the century our energy supplies, save for coal, will probably of necessity come from overseas in ever increasing amounts.

We will be in competition with at least Europe, Japan, and the U.S.S.R. for energy resources. The document *US Foreign Policy for the 1970's* will influence our later actions. It will also lay the groundwork for our access to,

or the availability of, future energy supplies. Our foreign policy for the seventies is clear—partnership. How well this partnership provides a basis for the availability of long-term energy resources will be vital to our economy and the entire Free World.

Within the western hemisphere the President has proposed a new partnership that would keep pace with the forces of change. We have formulated programs to share responsibility with other nations of the hemisphere as they formulate their own economic and financial programs along with expanded trade. In the future, by shared development responsibility, hopefully this hemisphere's problems can be met.

Our plans to obtain to the maximum extent

possible our increasing oil imports from Canada, Mexico, and Venezuela are consistent with this concept. Our foreign policy towards the western hemisphere, which is one of mutual support to further economic development within the hemisphere, complements these plans.

In Europe our prime goal is peace. A reconstructed Europe is recognized as a mature partner from which we can learn and receive counsel, a partner whose members, within the framework of the North Atlantic Treaty, pledge the promotion of stability, well-being, and the encouragement of economic collaboration. For the future, we plan to further this mature partnership, continue consultation with the European nations, develop a mutual understanding of our common purposes and respective roles in seeking a peaceful and stable European order, and expand cooperation in meeting the common social and human challenges of modern societies.

Europe geographically provides no energy resources to the United States; rather, our policy places us in a position of possibly insuring energy resources to Europe. In the past, our surplus production capacity was available to support Europe in emergencies. Unfortunately, our surplus domestic capacity no longer covers our own imports; by 1973-74, it is expected to vanish completely. Thus, as advocates of her peace and general well-being, and yet unable to supply Europe ourselves, we may become increasingly sensitive to threats to her North African and Middle Eastern supplies.

In Asia and the Pacific, the President seeks a community of free nations, each maintaining its own traditions and destinies, developing through mutual cooperation, including whatever cooperation we can give, yet based on Asia's own resources. Japan intends to expand her aid programs within the area as her own economy grows. For the future, we foster self-reliance for the Asian-Pacific area. This policy of internal development for the Asians,

with our help when necessary, will fit in well with Indonesian oil field development. The Japanese, with the technology, capital, and need, would find an economical source of energy close to their own industry and thus overcome some of their present dependence on the Middle East. As time progresses, this entire area would benefit. We would profit as well, by gaining another supplemental supply of energy.

For Africa, the United States has two major concerns for the 1970s: a continent free of great-power rivalry or conflict in any form; and an Africa able to realize its potential in the international community. We desire to help the Africans develop the Africa that they believe is best. We plan to devote our aid to the fundamentals of economic growth, as this will best assist Africa to realize fully her vast material resources.

In Africa, as we follow a policy of no great-power intervention and the development of Africa for Africans, our path may not be easy in the matter of energy resources. Europe, heavily dependent now on North African oil, would be the first victim of any capricious shutdown of the North African fields. We, as a European ally and economic partner, would quickly feel the effects. Algeria and Libya have already shown their independence by recent aggressive price demands. Our diplomacy in this area will closely consider the needs of Europe.

In the President's Foreign Policy report, the Middle East is recognized as that area which presents a difficult path to peace because it has real conflict as well as great-power involvement. It has great resources and prospects for economic growth; it is already near to providing its own capital needs. Our desire for peace through partnership and accommodation of interests will be thoroughly tested.

The immediate concern is achievement and maintenance of Middle Eastern peace. This task will require the efforts of the people of the region, the United States, and the other

great powers. For the future we hope to work together with the Middle Eastern nations. We will respect their interests and expect that they will honor ours. Our enunciated policy holds that the large powers cannot and should not determine the course or solve the problems of this area. The resolution of conflict is but one problem. Another is the form of our relationship with the Middle Eastern nations in order to maintain a productive relationship, particularly as they become increasingly self-sufficient. They also have near neighbors to turn to for help.

The Middle East is attractive to the Communist World as well as to the Free World. Here all energy desires meet. The Middle East is vital to Europe and Japan and is a major supplier to the United States. The Free World would be in an extremely difficult position without long-term access to the Middle Eastern energy resources at fair prices. Our policy of mutual respect and integrity and the desire of excluding major powers from the problems of the Middle East may be difficult to achieve in the long term without stability, rationality, and coordination among all the nations of the world, not just those of the Middle East.

The Soviet Union is no stranger to oil diplomacy. She imports oil for her own use while exporting her own to the Eastern European nations, which, by their dependence on Soviet oil, fall further under Soviet control. The U.S.S.R. presently plans to complete a natural-gas line from her fields to West Germany in October 1973. Should inexpensive gas from the U.S.S.R. compete with higher

priced Middle Eastern crude oil, Soviet influence could be enhanced.¹³

The availability of oil is one concern, the price is another. The United States is presently more concerned with availability than price because our domestic oil is still adequate. The price of imported oil to the American consumer is largely governed by the price of domestic oil. This is not true in Europe, with no domestic oil industry to shield. In Europe an increase in import prices is soon felt by the consumer and industry, and thus a large fuel price increase could be a serious blow. In time, the entire world would experience the effects of a change in European prices, and subsequent changing balances of trade could be serious.

On the positive side, the United States and the Western European nations use huge amounts of energy. Together we are the world's largest buyers. The Middle Eastern and North African sellers may try for all the profit they can, short of seriously hurting their best customers. While the Free World needs oil, the oil-producing countries need to sell oil to support their own programs. This situation will change but slowly, since decades are required to build or seriously modify modern industrial economies. The President's *US Foreign Policy for the 1970's*, while not specifically directed toward a consideration of energy from abroad, will, if successfully implemented, provide a base for obtaining this vital resource.

Air War College

Notes

1. George A. Lincoln as quoted in "Lincoln Pleads for US Energy Plan." *Oil and Gas Journal*, Vol. 69, No. 4 (January 25, 1971), p. 90.

2. Interior Department as quoted in "Interior Gives Alyeska Initial Blessing," *Oil and Gas Journal*, Vol. 69, No. 3 (January 18, 1971), p. 25.

3. Ali B. Cambel, "Impact of Energy Demands," *Physics Today*, Vol. 23, No. 12 (December 1970), pp. 38-45.

4. *Ibid.*

5. Hans H. Landsberg and Sam H. Schurr, *Energy in the United States* (New York: Random House, 1968), p. 162. Cumulative de-

mands for 1970-2000 obtained by interpolation.

6. Values for 1970 were obtained by rounding current oil and gas reserves stated in "World Wide Oil at a Glance," *Oil and Gas Journal*, Vol. 68, No. 52 (December 28, 1970), pp. 92-93. The North Slope of Alaska may contain another 10 to 15 billion barrels, according to that journal, Vol. 69, No. 4 (January 25, 1971), p. 123; higher estimates have been reported.

7. The major uses of energy within the U.S. by percentage used in 1960 were: industrial 35, commercial and other 25, transportation 20, residential 20. Landsberg and Schurr, p. 15.

8. For additional reading on the entire subject of energy, Landsberg and Schurr is recommended in its entirety, as is Gerald Manners, *The Geography of Energy* (London: Hutchinson and Company, Limited, 1964). An older publication, one of the first thoroughly documented studies of the maximum plausible world demands for energy over the next century, is Palmer C. Putnam, *Energy in the Future* (Princeton: D. Van Nostrand Company, 1953). Two broader writings on the subject are Charles G. Darwin, *The Next Million Years* (Garden City: Doubleday, 1953) and Sydney F. Markham, *The Climate and Energy of Nations* (London: Oxford University Press, 1944).

9. Landsberg and Schurr, p. 138.

10. Two interesting readings on aspects of the Soviet situation are Robert Hunter, "The Soviet Dilemma in the Middle East, Part I: Problems of Commitment," *Adelphi Papers* No. 59, September 1969;

and "Part II: Oil and the Persian Gulf," *Adelphi Papers* No. 60, October 1969 (London: The Institute for Strategic Studies).

11. M. King Hubert, "Energy Resources," Publication 1000-D, National Academy of Sciences (Washington: National Research Council, 1962).

12. Richard Nixon, *US Foreign Policy for the 1970's*, (Washington: Government Printing Office, 1970).

13. For elaboration see Hunter, *op. cit.*

We are grateful to the American Petroleum Institute for use of the photographs accompanying this article.

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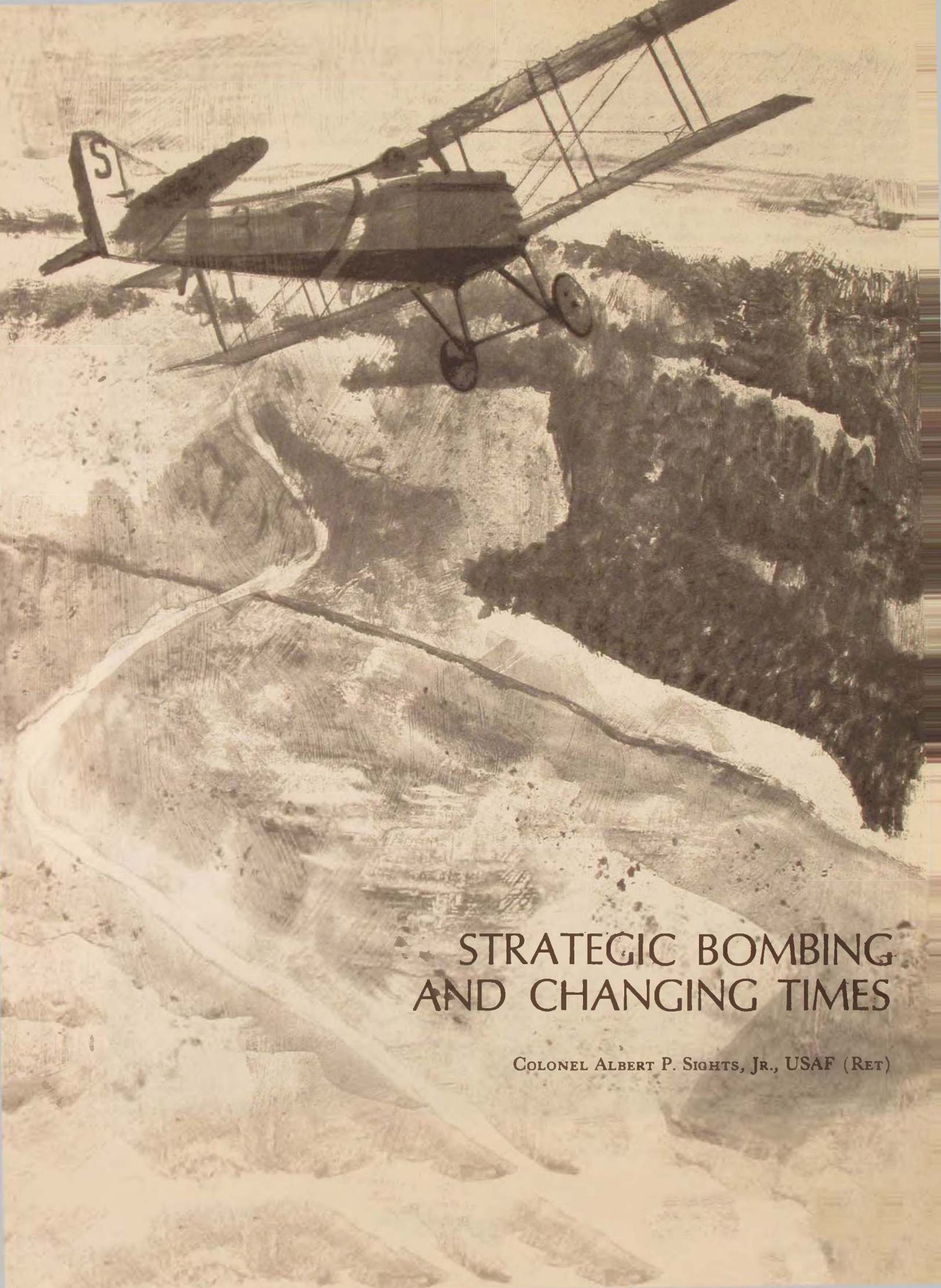
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THE EDITOR



STRATEGIC BOMBING AND CHANGING TIMES

COLONEL ALBERT P. SIGHTS, JR., USAF (RET)

A WORLD WAR I aviator is flying over No Man's Land. From his altitude of 10,000 feet, the great battlefield is reduced to the scale of a sandtable exercise. Just ahead, appearing as a delicate tracery, is the impenetrable maze of enemy trenches and barbed wire that his countrymen have assaulted in vain. It passes smoothly beneath his lower wing and recedes quickly into the distance behind him.

Detached from earth, in company with clouds, he moves freely through the boundless ocean of air. His nimble, responsive machine is as new and marvelous to him as today's spacecraft is to us. He has a feeling of omnipotence.

Spread before him like a giant relief map is the enemy nation itself. Somewhere out there lies Berlin, the symbol and focus of national power, along with the dozens of other cities and towns that sustain the opposing military machine. Without their industries that machine would falter and fail, the road to victory would be opened, and thousands, possibly millions, of lives would be saved. Given suitable airplanes, could not he and his fellow airmen destroy arsenals, oil refineries, marshaling yards—anything vital to the enemy war effort—even in the farthest corner of this vast unfriendly land? His reverie is broken by the sight of hostile planes rising to attack, a grim reminder that nothing comes easily in war, since every new weapon quickly spawns its own counter-weapon.

Aviators were not the first ones to entertain such thoughts. In 1842, the poet Tennyson foresaw the falling of "a ghastly dew" from the clash of "airy navies."¹ In 1908, H. G. Wells envisioned war involving great fleets of airships: "Upon anything below," he wrote, "they could rain explosives in the most deadly fashion, forts and ships and cities lay at their mercy. . . ."² In 1914, F. W. Lanchester, builder of Britain's first gasoline motor car, analyzed the tactical problem of bombing a large city: "The critical point to be aimed at

is that at which the fire-extinguishing appliances of the community are beaten or overcome. Up to this point the damage may be taken as roughly proportional to the means and cost of its accomplishment; beyond that point the damage is disproportionately great: the city may be destroyed *in toto*."³

Indeed it was mainly writers and politicians who first professed to see important strategic implications in aerial bombardment. Professional military men, aside from the few young aviators among them, rarely engaged in such flights of fancy. The object of war was to defeat the opposing army. Generals found greater relevance in what they might see from horseback on a hill overlooking the battlefield than from the breezy open cockpit of an airplane cruising far behind enemy lines. The hardships and hazards of flying were such that it was left almost entirely to the more durable and expendable junior officers, who had little voice or influence in the higher councils of war.

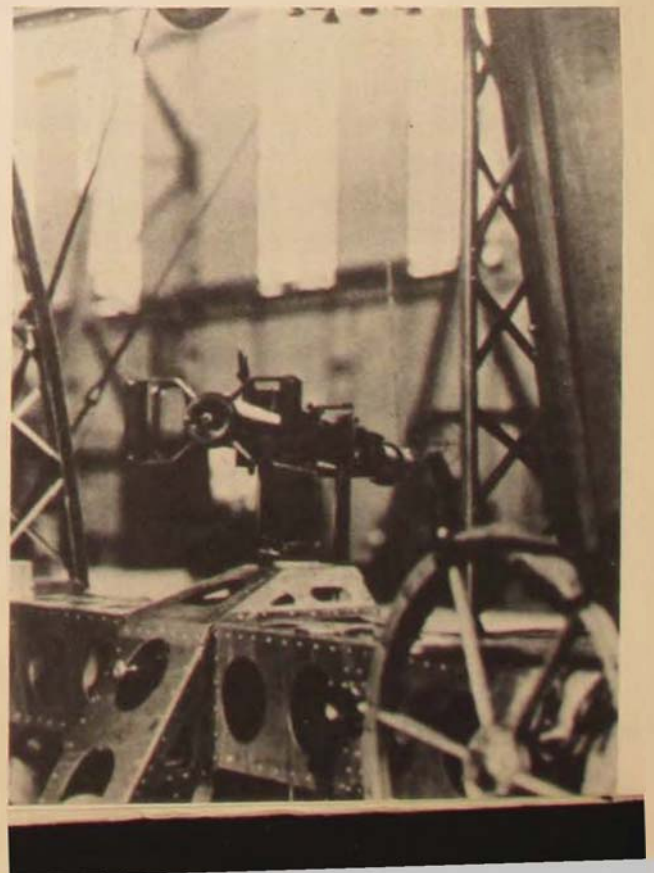
Still the idea took hold that far beyond the front lines there were legitimate and profitable targets for attack. The growing capability of the airplane to make such attacks possible introduced a wholly new and different factor in warfare. Historically, wars had started on frontiers or at sea or on foreign soil. Ordinary citizens were usually secure in the interior of their country. They lived in a sanctuary, sometimes precarious and temporary but nonetheless an initial place of refuge. Now the airplane promised to eliminate that sanctuary. The entire homeland of a nation would be exposed to direct observation and attack. All citizens—men, women, and children—would find themselves, in a sense, at the front. Though most would be in quiet sectors, none could ever feel entirely safe.

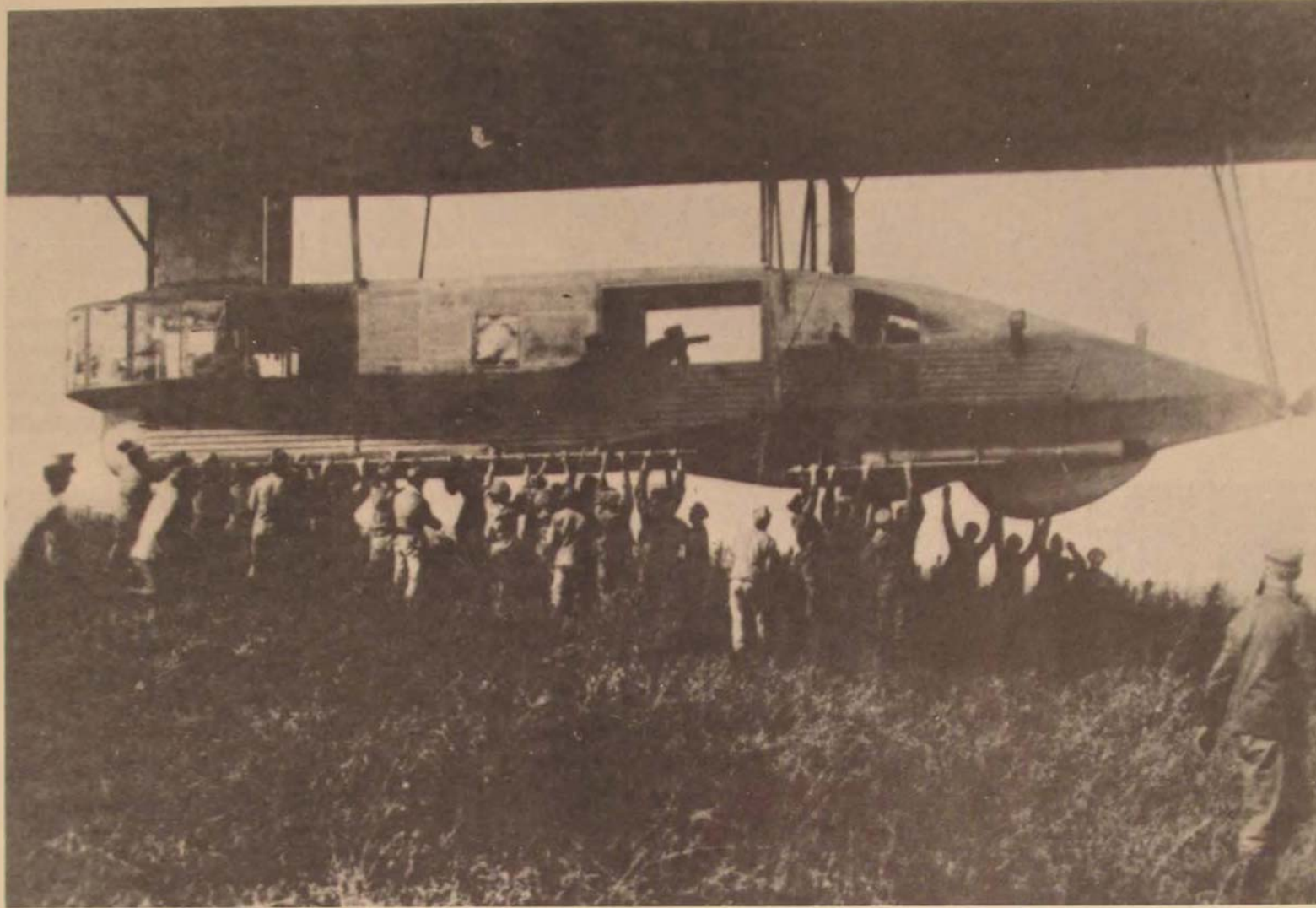
It was inevitable that nations deadlocked in trench warfare should experiment with this new method of attack. The Germans were the first to try it. From late 1914 until the summer of 1918 they conducted a small-scale but



World War I: Zeppelins

Prewar German Zeppelins, such as the 1912 model above, were considered awesome weapons. A British cartoon of the period pictured them unloading red-hot coals over London. Later models were forced to carry defensive armament, such as the 2-cm cannon (right), or machine guns, usually mounted in the command gondola (far right). The huge airships proved so vulnerable that they were forced to fly at night or above an overcast, when they were directed by a small gondola lowered by cable below the clouds. By mid-1917 the Zeppelins were withdrawn from service in favor of Gothas and giant Staakens.



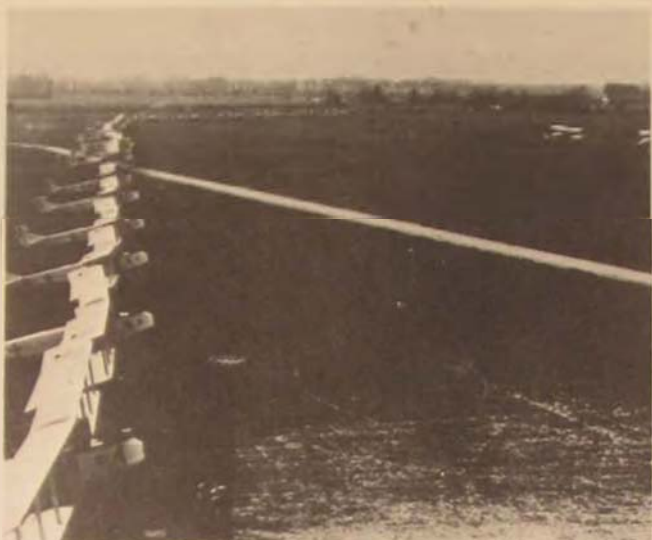


sustained strategic air offensive against England. For bombers they used Zeppelins initially and later large, multiengine Gotha and Giant airplanes. Altogether about 250 tons of bombs were dropped, of which more than half fell on the city of London. The bombing produced 4830 casualties, destroyed or damaged much property, and forced Britain into a sizable diversion of war resources to strengthen her homeland air defenses.⁴ Considering the primitive state of military aviation, these results were impressive. However, they had no

measurable effect on the course or outcome of the war, and Germany evidently concluded afterward that they had not been worth the effort.

Britain, on the receiving end of the bombing, took quite a different view. Her preoccupation with homeland air defense and growing desire to strike back at German cities, neither of which had much to do with land or naval operations, led her in the closing months of the war to establish the Royal Air Force as a separate and coequal military serv-

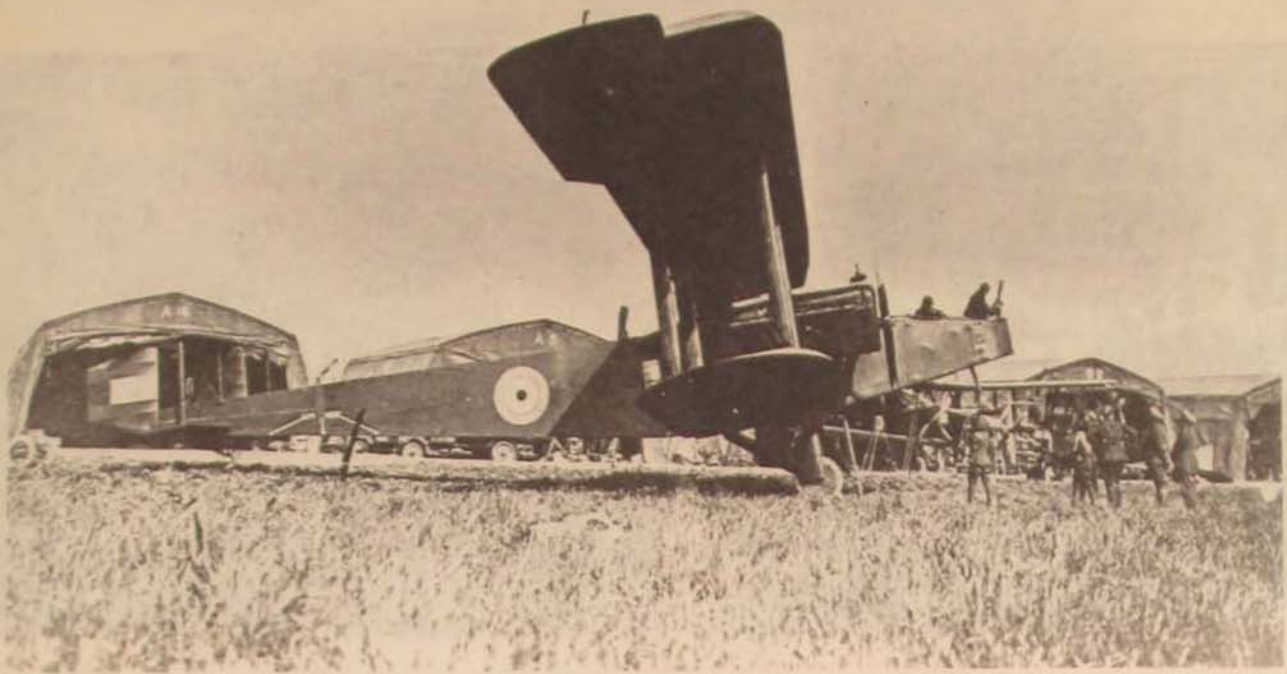
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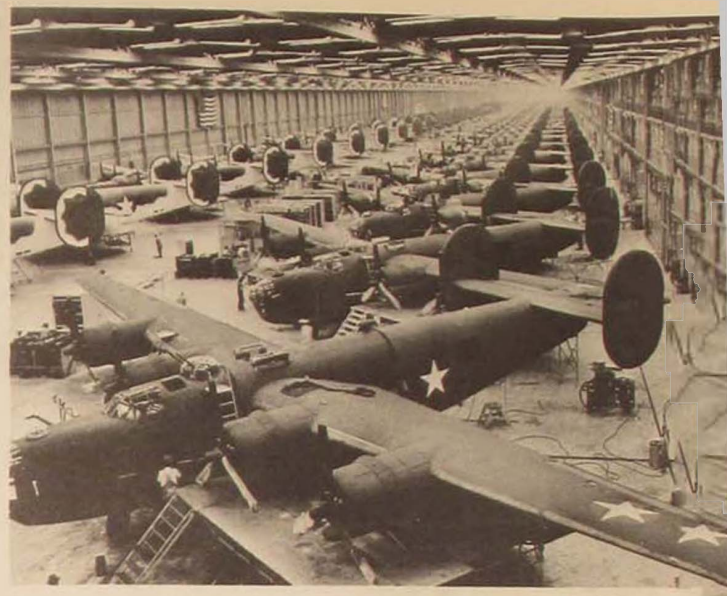
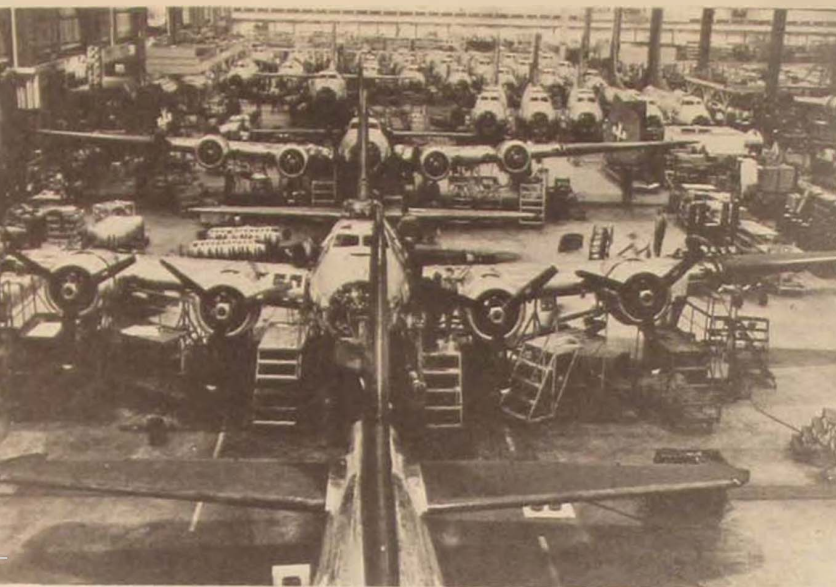


World War I: Bomb Warfare

Germany's "England Squadron" of Gotha bombers (left and below) was based at Ghent, Belgium. These aircraft, the first German bomber to go into line production, were used to bomb London, some 180 miles away. The British counterpart was the Handley Page. The model shown (right), the O/400, was Britain's first "heavy" bomber. It carried an 1800-pound bomb load internally and had an endurance of eight hours. When the war ended, three special four-engine Handley Pages, designated the O/1500, had been prepared to use their 1300-mile range and 7500-pound bomb load to bomb Berlin.







World War II: U.S. Heavy Bombers

Boeing B-17s and Consolidated B-24s, which formed the backbone of the U.S. strategic air offensive over Germany, were produced by the thousands. In accordance with U.S. air doctrine, they operated at high altitude (for safety), during daylight (for precision), and often deep behind the German frontier. The B-17s (above right) hit the German transportation network. Those at lower right struck Stuttgart, a German industrial city, in September 1943.

ice and to build a strategic bomber force of her own. Beginning operations in June 1918, this force dropped on Germany in a five-month period more than twice the weight of bombs that fell on England during the entire war. On 11 November, the day of the Armistice, three four-engine Handley Page bombers were fueled and armed for the first air raid on Berlin—an event deferred for another quarter century.⁵

In the postwar period, air power theorists, of whom Douhet was the best known and probably the most influential, argued that strong air forces could quickly undermine the enemy's will and capacity to fight by striking directly at his "vital centers." Granted, armies and navies were still necessary. However, the air power theorists downgraded their importance by suggesting that they should remain on the defensive while air forces, operating independently, shuttled back and forth over their heads delivering the decisive thrust.

Senior army and navy officers found such a theory of war most uncongenial and resisted it strongly. They outranked and outnumbered the airmen and presumably were more influential in the councils of government. How did it happen, then, that the United States and Great Britain undertook such massive bombing campaigns in World War II? Or, to turn the question around, if the American and British airmen had such a good case, why did no other countries—Japan, Russia, France, Germany, nor even Douhet's own Italy—try to capitalize on strategic bombing? The fact is that not one country, the United States and Britain included, was willing to gamble on this controversial, untested theory.

Nations on the European continent gave first importance to matching or surpassing the hostile armies arrayed against them just across their borders. Although Japan had no vulnerable land frontiers, she maintained a large army and navy to defend her far-flung





During Operation Ivy, Eniwetok 1952, the first "fusion" type nuclear device was detonated.

oceanic empire. This absorbed most of her resources. In any case, she had little incentive to build strategic bombers, since her principal enemy, the United States, was too large and too far away to be attacked decisively by air.

Britain, whose enemy was closer at hand, did build a large fleet of bombers. Although the effort was costly, it involved little risk and offered the possibility, at least, of a handsome payoff. Her homeland was protected by the Channel, and her sea lines of communication were guarded by a strong navy. She wanted, above all, to avoid a repetition of the disastrous land campaigns of the First World War. There was always the chance that her bombers might fatally weaken the enemy. Failing that, they would at least keep pressure on him while she sought other ways to bring about his defeat.

The United States entered the war with no army or air force of any consequence and a navy badly crippled by the Pearl Harbor attack. However, her enemies were far away, and her sea lines of communication were fairly secure. Whether to emphasize land, sea, or air forces required no agonizing choice. She could, and did, emphasize all three, putting enormous resources into each. If airmen thought they could win the war with a strategic air offensive, by all means let them try. President Roosevelt, who in 1939 had urged Hitler to avoid bombing cities, now called on American factories to turn out 100,000 warplanes a year and soon gave his approval to a bombing campaign aimed at "the progressive destruction and dislocation of the German military, industrial, and economic system. . . ."⁶

Although strategic bombing was ultimately used with devastating effect, it became apparent early in the war that the theorists had made some major miscalculations. They had overestimated the destructive effect of aerial bombs and underestimated the technical difficulties of delivering them accurately on target. Also they had underestimated the ability of

the civilian population to withstand aerial bombardment. The theorists erred, one supposes, because of the meager and misleading data available from the previous war, in which fewer than a thousand tons of bombs had been dropped by both sides.

IF THE DATA from the First World War were skimpy, those from the Second were exhaustive. The Anglo-American air forces dropped 2.7 million tons in Europe alone. Another 700,000 tons fell on Japan. Moreover, the effects produced by all these bombs were examined by the U.S. Strategic Bombing Survey, whose teams of experts made on-the-spot surveys soon after hostilities ended. Their reports and supporting data, amounting to hundreds of volumes, have been valuable to civilian historians; also to military public information officers, who still cull them for quotes in the continuing dispute over which service really won the war. Apparently, however, this vast store of material has never been seriously studied by the war colleges or military planning staffs. The atomic bomb seemed to make it all irrelevant. As a result, the 1945 generation of air warfare theorists found themselves with even less usable data than their 1918 counterparts—not that they were the least bit dismayed. With a royal flush to lay down on every call, who cared whether two pair beat three of a kind?

It was soon a familiar cliché that a few planes armed with atomic weapons could deliver, in a single sortie, more explosive power than had been dropped by all the thousands of bombers in World War II. As Europe faced the threat of renewed war, atomic air power became the first line of defense of the Western Allies. "For good or ill, air mastery," said former First Sea Lord Winston Churchill in 1949, "is today the supreme expression of military power, and fleets and armies, however necessary and important, must accept subordinate rank."⁷

Not all Americans agreed with this judgment. It was the year of the so-called "Admirals' revolt," in which U.S. naval officers argued, rightly in some ways though often for the wrong reasons, that atomic air power had been overrated. Commander Eugene Tatom, an ordnance expert who should have known better, weakened the Navy's case by belittling the bomb itself. "You could stand in the open," he told members of a congressional committee, "at one end of [a 7000-foot airport runway] and have an atom bomb explode at the other end of the runway without serious injury to you."⁸ Luckily no one put this claim to a test, and three years later at Eniwetok any lingering doubts about the power of the atom were swept away by the first monstrous explosion of a thermonuclear device.

Meanwhile Air Force officials pondered the implications of nuclear weapons, which were still, in the early 1950s, almost exclusively in the hands of the United States. Amid the frustrations of the Korean conflict, some airmen dreamed of using them to enforce a kind of *Pax Americana* in a world still afflicted with recurrent wars. Such was the idea, and the ideal, behind Air University's Project Control. In this elaborate study effort a task force of military officers, assisted by prominent civilians mainly from the academic community, sought to delineate how a world of law and order could be achieved by inducing any would-be violators to abide by established rules under pain of forcible control by air forces and other means invested with proper authority. Project Control took as a point of departure an earlier British experience.

During the 1920s and 1930s the Royal Air Force had successfully used aerial bombardment, or the threat of it, to prevent tribal conflicts in underdeveloped areas of the Middle East. "We imposed a sort of inverted blockade," said Air Marshal Sir John Slessor in describing the air control system, "making it impossible for the offending tribe to live in its villages, tend its crops, use the normal graz-

ing areas or water points for its cattle or camels—and so on."⁹ Tribes were warned well in advance of the specific village or other clearly defined area within which activity of any kind would be liable to attack. Usually the warning alone was enough to bring the tribesmen to terms. If it did not, the RAF fliers would begin to apply pressure by bombing.

Could not atomic air power be used in some such manner to prevent or stop conflicts among modern industrial nations? Today the idea seems naïve, but circumstances and attitudes have changed a great deal in the last 15 years. In the context of its times, Project Control won a respectful hearing and may well have influenced national policy. The "New Look" of the incoming Eisenhower administration did indeed emphasize strategic nuclear air forces. Secretary of State John Foster Dulles announced that the United States would thereafter put primary reliance on its massive retaliatory power. And in the early days of the administration there was even guarded talk of shifting from passive "containment" of Communism to active "roll-back."

For air control to work, the threat to use nuclear weapons had to appear credible, and Air Force officials strove to make it so. Bombers were designed primarily for nuclear weapon delivery, and their pilots were given little or no training in the use of conventional bombs. Donald A. Quarles, Secretary of the Air Force from 1955 to 1957, argued in public speeches that nuclear weapons should be regarded simply as "modern weapons" replacing the outmoded conventional ones in the nation's arsenal. In 1956 a faculty member from a USAF senior school went so far as to suggest that the United States demonstrate its willingness to use nuclear weapons by actually dropping one on some small, lightly populated place that threatened to disrupt the peace.

Militarily, these efforts of the mid-fifties to conventionalize nuclear weapons had a certain logic. But politically, they were *passé*. Air

control might have belonged to the old era ending, but not to the new era beginning. Its underlying assumptions were rooted in the past—in America's disappearing atomic monopoly, in Major General Orvil Anderson's rationale for preventive war, even in Admiral Mahan's turn-of-the-century call for imperialistic expansion. When the United States made no move to free Hungary from Communist domination during the 1956 uprising, the notion of air control was clearly defunct.

If air power could not control the policies of hostile nations, it could—and did throughout the 1950s—provide a reassuring bulwark against major aggression. Few people doubted that under extreme provocation, such as a Soviet invasion of Western Europe, the 1500-odd bombers of the Strategic Air Command could and would carry out the classic mission of strategic bombing—"to destroy the war-making potential of the enemy nation."

The decade of the 1960s ushered in a new weapon—the intercontinental ballistic missile—and a new military situation. As increasing numbers of these missiles were deployed on both sides, the era of U.S. nuclear superiority, which had lasted since World War II, came to an end. It was not that the U.S.S.R. had necessarily "caught up" either in number or quality of weapons. Rather, the peculiarities of missile forces were such that nuclear superiority lost much of its former utility.

As long as a strategic nuclear war was to be fought with airplanes alone, a nation might assume that, with superior air forces, most of its own bombers would get through whereas most of the enemy's would not. In other words, a quick victory was conceivable at a bearable cost. The greater the superiority, the quicker the victory and the lower the cost.

On the other hand, the chances of stopping a missile attack were far more problematic. Once both sides acquired these weapons, people began to doubt that any margin of superiority, however great, would give reasonable protection against a disastrous attack. Thus

nuclear forces lost political leverage because of increasing doubts that they would actually be used. What the nuclear-tipped missile did, oddly enough, was to restore—to a degree—the sanctuary status of the homeland that the airplane had stripped away half a century earlier. This is reflected in changing public attitudes.

In the early 1960s, when the Soviet threat was comparatively small, the American people were obviously worried over the possibility of a nuclear attack. Few scoffed at President Kennedy when he said at a 1961 news conference that "we happen to live in the most dangerous time in the history of the human race."¹⁰ Many responded to his appeal for citizens to construct and equip fallout shelters in their own homes. Today, attitudes are altogether different. The average man in the street knows there are many more missiles pointed in his direction. Immeasurable catastrophe could descend on him at any hour of the day or night with little or no notice. Yet he is relatively unconcerned. The fortunes of a small and distant guerrilla war occupy him much more than the possibility of Armageddon at home.

Mr. Average Man may be right in assuming our cities will not be obliterated. Missiles have made nuclear wars unprofitable for the strong nations as well as the weaker ones. But in making such wars less likely, have they made others more so? It could be argued that those who feared a nuclear retaliation were less inclined toward military adventures than those—today's leaders in Hanoi perhaps—who are persuaded that nuclear weapons will never be used against them.

IF ANOTHER great war does come, what will it be like? On the basis of what has happened in Korea and Vietnam and elsewhere in the first quarter-century of the nuclear age, one would have to conclude that it will be fought with conventional weapons. If so, paradoxically,

those much-maligned generals who spend their time studying the weapons and tactics of the last war will be the winners of the next one. And the airmen most in demand will be those schooled in the uses of outmoded iron bombs. This possibility brings us full circle.

Without the euphoric assumption that nu-

clear weapons will be used "if required," we are confronted by an old, tough question: What can strategic bombing destroy that is worth the possible loss of the bombers and their crews? It is time to start looking for some new answers.

Arlington, Virginia

Notes

1. In his poem "Locksley Hall," Tennyson anticipated a world still some three quarters of a century away:

For I dipt into the future, far as human eye could see,
Saw the Vision of the world, and all the wonder that would be;
Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales;
Heard the heavens fill with shouting, and there rain'd a ghastly dew
From the nations' airy navies grappling in the central blue.

Lines 119-24

2. H. G. Wells, *War in the Air* (New York: Macmillan, 1908), p. 158.

3. F. W. Lanchester, *Aircraft in Warfare* (London: Constable and Co., 1916), p. 191.

4. Raymond H. Fredette, *The Sky on Fire* (New York: Holt,

Rinehart & Winston, 1966), p. 231.

5. *Ibid.*, p. 226.

6. Combined Chiefs of Staff directive of 14 May 1943 for Operation Pointblank, reprinted in Sir Charles Webster and Noble Frankland, *The Strategic Air Offensive against Germany* (London: H. M. Stationery Office, 1961), IV, 273.

7. Winston S. Churchill in an address, "The Advent of Air Power," delivered at Massachusetts Institute of Technology, March 31, 1949, as quoted by Eugene M. Emme, ed., *The Impact of Air Power* (Princeton, New Jersey: D. Van Nostrand Company, Inc., 1959), p. 87.

8. *New York Times*, October 11, 1949, p. 28.

9. Marshal of the Royal Air Force Sir John Slessor, *The Great Deterrent* (New York: Praeger, 1957), p. 58.

10. *New York Times*, October 12, 1961.

DOWN THE ORGANIZATION

*How to Stop Overstaffing from Stifling People and Strangling Performance**

COLONEL BRUCE F. KING

THE proven adage that too many cooks spoil the broth seems to be forgotten in many headquarters. The higher the organization is in the hierarchy, the less frequently that simple truth is recalled and the worse the problem of overstaffing becomes.

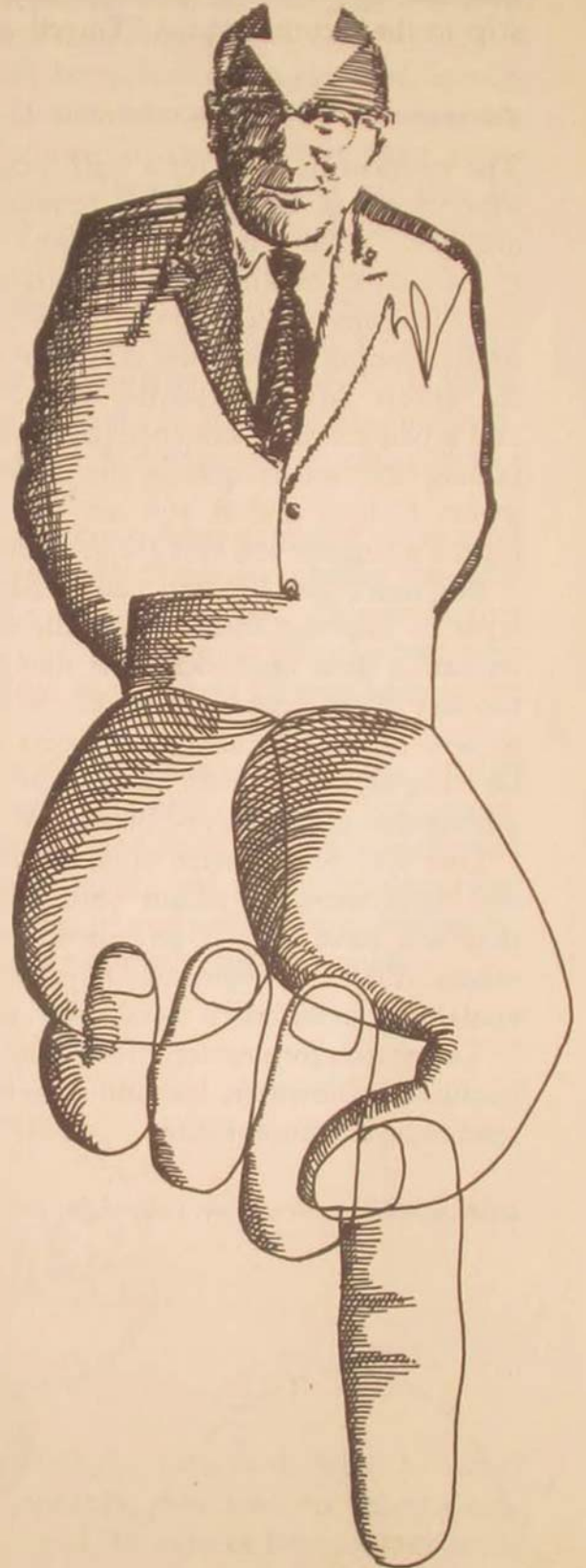
Perhaps the Peter Principle, which holds that “in a hierarchy, every employee tends to rise to his level of incompetence—the cream rises until it sours,” is symptomatic of a higher rule in operation: *In a hierarchy, the staff tends to expand until the organization becomes incompetent (the best flowers can choke themselves out)*. There are two corollaries to this higher rule:

- An oversized staff smothers creativity and nurtures mediocrity. In the words of Horace: “Mountains will be in labour, and the birth will be an absurd little mouse.”
- In time, every function tends to be diffused until its original purpose is obscured.

The obstacles to keeping a staff from becoming a monster are severe. Slaying the monster is even more difficult, particularly if you reside, Jonah-like, within it. This article is written for those who would like to do something to make their part of the organization more effective and a better place in which to work. If you are the chief of a staff unit, you can make some progress. If the entire staff works for you, so much the better. The keys to success are to be honest with yourself and to keep in mind that staff members are human.

What follows is a collection of thoughts—some original, some not—on how to improve staff

*With apologies to Robert Townsend, author of *Up the Organization: How to Stop the Corporation from Stifling People and Strangling Profits* (New York: Alfred A. Knopf, Inc., 1970).



effectiveness and thus make personnel reductions possible. The alphabetical arrangement is for my convenience—and yours if you become interested enough to refer to them later. If you are searching for a way to make dramatic reductions or wholesale eliminations, you can skip to the section headed “Forced attrition.”

Ask yourself what you can contribute

The moment of truth for a staff member or a supervisor can be his frank response to the question, What can I contribute? An adequate answer requires thorough knowledge of the functions the group performs and clear understanding of the roles played by others in the group. Merely knowing what has been and is being done is not enough—unless maintaining the status quo is the name of the game. If it is and if you are an ambitious type, I’d suggest you look for greener pastures.

But don’t give up too easily. Most bosses want to improve their organization and will tolerate a little boat-rocking if they don’t get too wet in the process. Most of the resistance to new ideas will come from peers who may be hanging on for dear life. A few casualties among that group may be beneficial.

One way to minimize opposition is first to seek improvements within your own sphere that will have little if any direct impact on others. Your achievements may not start an epidemic, but success is usually contagious.

The search for greater effectiveness must be continuous, however, because one-shot efforts tend to be self-immunizing.

Ball, keeping your eye on your own

Some staff units get fat accumulating the work of others. There should have been a Chinese proverb that he who plays in two courts is playing with someone else’s balls. If keeping your eye on your own ball bores you because the job is too small, you ought to recommend realignment of duties.

If the job is big enough but you are still bored, you ought to request a transfer. If that is impossible, as it often is in military organizations, try sitting down with your boss and defining explicitly what is to be done and what constitutes acceptable performance (see “Job descriptions” and “Performance standards”).

Conferences, an approach to

Conferences can be useful, of course, but they can also be one of the least productive consumers of large numbers of man-hours in any headquarters. If you feel you must have a conference:

- Limit the participants to those who can be expected to contribute to the meeting.
- Make certain the participants have had adequate information and time to prepare for the session.
- Be ready to present your proposal in writing as a starting point.
- If you get agreement quickly, you probably didn’t need a conference in the first place. If you don’t, break it up after the dissenting views are presented and give the participants (including yourself) time to assimilate them.
- Don’t be afraid to modify your original proposal or to reject it entirely, but avoid compromise for the sole purpose of getting unanimity. You will waste valuable time and, like the committee that set out to design a horse and ended up with a camel, you may get strange results. Compromise may be the art of politics, but you are supposed to be conducting a staff conference, not a political caucus!



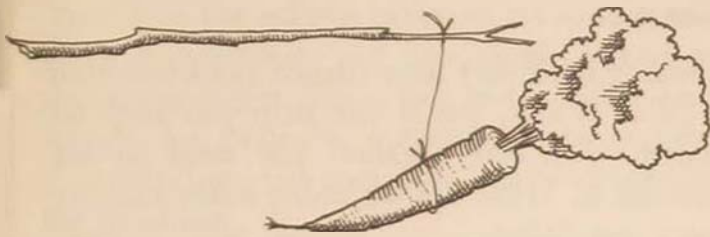
Decisions

If you want to slow the organization down, be sure that all decisions are referred to you, and treat every decision as though it were a matter of life or death.

Everyone talks about pushing decisions down the organization, and some even try to do it. You should too! But don't expect a subordinate to make a critical decision that will bring the roof down if it turns out to be wrong. That is your job.

Conversely, if you give a man his head, don't expect him to look over his shoulder all the time; he would get a stiff neck, and you would get poor decisions.

Expectations



"I am giddy, expectation whirls me round. The imaginary relish is so sweet that it enchants my sense." So said Shakespeare. Whether you use imaginary relish or a carrot on a stick, your subordinates will not be long enchanted by unfilled promises of better things to come.

Motivation thrives on expectation. Because the good things in life—and in work—are limited, overstaffing will inevitably lead to individual frustration and loss of motivation.

Possible solution? Cut your staff until all who scramble can nibble on the carrots. Incidentally, since some people hate carrots, you might have to switch to relish.

Forced attrition

The vaguest rumor of forced attrition can send organizations into frenzied activity to

justify their manning. Everyone, it seems, is indispensable, and vacant positions are described as millstones that force the struggling group to superhuman efforts to complete its mission. Unfortunately, the myths thus created are repeated until they become truths in the minds of their creators.

It would be naïve to assume that human nature will ever change to the point where empire building is less attractive than economy of force. Therefore, forced attrition by determined leaders is probably the only realistic way to deflate oversized organizations. Admiral Rickover's tongue-in-cheek suggestion to reduce the Pentagon population by stopping every fourth man from entering the building in the morning may be too arbitrary, however. After all, you could wipe out an entire service staff that way!

One anonymous wag proposed a massive game of musical chairs by closing the fifth floor of the Pentagon. Then, without further crowding of the remaining offices, those who had no place to sit would be sent back to the field.

The fiscal pressures created by smaller budgets and increased personnel and equipment costs demand relief, part of which must come from smaller, and fewer, headquarters. The only way to make significant, lasting reductions is to get tough and stay tough.

Helping the boss



Staffs exist to help the boss do what *he* wants done. Regrettably, they tend to become *self-serving*. One of the evils of bureaucracy is the

staff unit that defies termination. If you have people working on unauthorized projects, *stop the work* and tell the Manpower folks that you have found a few precious spaces for re-allocation. Before you do that, however, make certain you have not been neglecting something the boss really wanted done. This may not make you a hero to the boss, since you can't admit to him that your savings resulted from ending defiance of his orders, but you will make a few points with Manpower and with groups that are undermanned.

Job descriptions

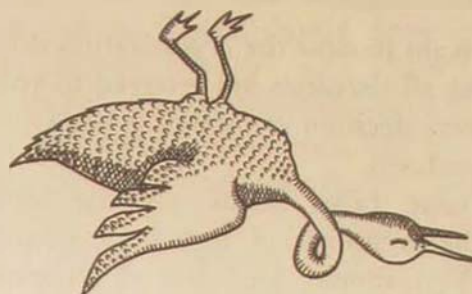
A mutual understanding of what your staff unit is doing and of the part each man plays in it is so obviously necessary that it is often taken for granted. Most military and civil service job descriptions, however, do not describe what any individual is actually doing. They are usually larded with high-sounding duties intended to impress someone—perhaps the man from Manpower. You might have to keep, and maybe even display, those phony job descriptions, but don't be lulled into believing them.

A good way to start getting a handle on what is really going on in your unit is to have each man write his own job description, telling it like it is. At the same time you should write a functional description of the unit, again telling it like it is. You may find that your people are doing things that are not properly a part of your unit's responsibilities. You may also find some essential task that no one believes is his responsibility. Corrective action should be obvious.

Putting your work and your people into focus is the first step toward establishing performance standards.

Killing the goose

Occasionally a staff function is created in a time of need which, like Aesop's goose, suc-



ceeds in laying golden eggs. But years later, even if the organization has long since gone off the gold standard, the same old gang may be found doing business in the same old way. Attempts to do away with a once-successful group will bring forth anguished cries, but killing an old goose may revitalize your flock.

Look back

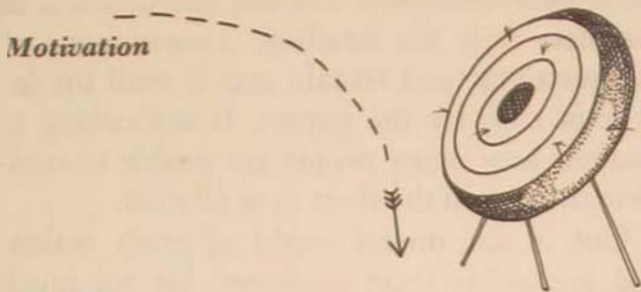
Looking back may have turned Lot's wife into a pillar of salt, but it can help you keep on course. The first question you need to ask yourself is, What are we doing today that we were not doing a year or two ago? If your memory is poor or you are new on the job, you can put the unit's semiannual histories to good use. Don't overlook the reports you prepare and, particularly, those you require from others.

After you identify the things that were added to your work, the second and more difficult question is, Are these tasks still contributing to the organization's mission? At this point, don't equivocate. Abandon those tasks that fail to muster strong justification. Mistakes you might make by eliminating questionable activities are not likely to be crucial and can be rectified easily.

Now you are ready for the third question: Are these essential tasks really my responsibility? If you have invaded someone's territory, get out, even if it means giving up some people along with the work.

Experienced staff officers know that once you accept an action all similar actions tend

to be yours. That is true even if the original assignment was made under duress or if you were just being a good guy by picking up the work to help a temporarily overworked unit. But two wrongs don't make a right. If you continue to accept misplaced work, you undermine the functional integrity of the organization.



Everyone talks about improving motivation. Too often the actions taken to do so miss the mark because they are unwittingly aimed at the wrong target. Better pay and working conditions, for example, are essential to prevent dissatisfaction, but they don't motivate people for very long.

Many good staff officers are frustrated by limited opportunity for personal growth. If a competent man can't progress steadily from the simple to the difficult tasks during his tour of duty, you probably have too many people cluttering the scene. Personal growth in the form of expanding horizons is necessary for sustained motivation. Some authorities call it job enrichment. Call it what you will, but don't make the mistake of thinking that *more* work equates to greater challenge. People need fresh perspectives.

The late Robert Benchley's rhetorical question about life in a dogsled team is worth recalling: "Did you ever stop to think that the lead dog is the only one that ever gets a change of scenery?"

Overstaffing with education

The compulsive drive toward higher degrees has created a new form of organizational

obesity—overstaffing with education! If you can really employ a Doctor of Whatever, well and good; but there are few military staff jobs that require the degree of specialization indicated by the esoteric titles of doctoral dissertations.

While master's degrees in business administration, management, political science, and similar fields are *desirable* for upper-echelon staff officers, it is difficult to make a convincing case that they be *required*. Obviously, there are some military specialties directly related to academic disciplines that demand graduate education; but, fortunately, most students have learned to think by the time they finish undergraduate work. If they have also learned to listen, read, write, and speak, they have exceptional credentials. Fortified by professional military education and seasoned by experience, they can expect successful military careers.

Performance standards

The trouble with performance standards is that too many people want them, or want to avoid them, for the wrong reasons. One common misconception is that their real purpose is to measure people against people, particularly in that great middle group of average workers who stand cloaked in anonymity between the highly visible fast burners and the equally visible incompetents. But even the best standards are poor measures of relative effectiveness because they simply identify what constitutes *acceptable* performance.

Good standards are impossible to establish unilaterally and difficult, at best, to develop even after extensive dialogue between supervisors and workers. But don't despair! Probably ninety percent of their value is derived through trying to create mutual understanding about the nature of the job and the expectations of management.

If you are successful in establishing standards, don't be afraid to raise them on an indi-

vidual basis as competence increases, but don't fail to reward the better achievers!

Trivia, protecting people from



The best managers shield their people from distracting, routine tasks. They consider an action officer's time more important than their own. A staff unit chief worth his salt can personally handle most of the requirements for status reports, items of interest, and the like over his morning coffee.

If the trivia load is so great you cannot cope with it in an hour or so each day, you might be tempted to create a new position sometimes mistakenly called a deputy. Don't do it! And don't be a coward and dump the load back on the action officers! Trivia-fighting is an honorable and rewarding profession. Your goal should be to get the important jobs done well with the minimum number of people.

Today's protocol and command relations may not permit the frontal assault on trivia made by the Duke of Wellington in 1810 when he told the Secretary of State for War: "If I attempt to answer the mass of futile correspondence that surrounds me I shall be barred from all serious business of campaigning." You might arrange, however, for a copy of Wellington's letter (or this article) to find its way to your antagonist's desk.

Understanding instructions

Following the wise admonition never to omit the obvious, we come now to the often im-

plied, sometimes stated, but less frequently applied advice to understand instructions before starting a task.

One gimmick sometimes used to drive home the need to understand instructions is a multiple-choice test containing lengthy written instructions on how to fill in the heading (name, serial number, etc.) and how to mark the answers correctly. The last instruction is to complete only the heading, answer *none* of the questions, and remain seated until the instructor calls for the papers. It is shocking to find out how many people are unable to complete the task in the short time allotted.

Out in the unreal world of crash actions and impossibly short suspenses, far too much staff work misses the mark because someone failed to determine exactly what The Man wanted. Some staff supervisors seem reluctant to ask for additional guidance for fear they will appear stupid. Instead, they risk confirming their stupidity by generating unnecessarily complex responses to simple questions or, worse, by answering the wrong questions.

The problem, of course, is that a seemingly simple question often requires a complex answer *unless you know the intent of the questioner*. If The Man asks what the storage capacity is at some particular ammo dump, you could provide an infinite set of answers. Does he mean inside or outside storage—or both? Does he want to store rifle ammunition, iron bombs, or nuclear weapons? Even if you know he means nuclear weapons, the answers are still nearly infinite unless you know what types of weapons he is considering.

It may sound impertinent to probe The Man's mind, but probe it you must unless you are willing to spend absurd amounts of time compiling encyclopedic responses to every question and unless he is willing to spend equally absurd amounts of time sifting through your chaff to find the grain of knowledge he needs. The implications of shotgun responses are obvious: extra people to cope with the unnecessary workload, frustrated

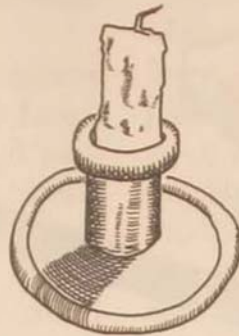
people whose efforts are largely wasted, missed suspenses (or ridiculous working hours to meet them), and annoyed bosses.

Valedictory

If the foregoing thoughts prove useful to you,

if they stimulate you to improve the effectiveness of your staff work, then these words will have lit a candle of understanding. The heat of that candle may yet thaw the frozen notions of bureaucracy.

Air War College





INTUITION:

*An Instantaneous
Backup System?*

COLONEL JAMES E. MRAZEK, USA (Ret)

ONLY within the past few years have the military services tried to grasp the essence of creativity and its meaning to military affairs. On the whole, their efforts have been rather uncoordinated, and the results of research on the subject have not led to lasting or practical benefit, especially in making the combat forces more effective.

Yet, evidence is there. Intuition, the essence of creativity, has won battles and wars. Leaders with creative ideas have vanquished supposedly insuperable enemy forces. The legend of the Trojan horse comes immediately to mind.

Before the turn of the last century Admiral Alfred Thayer Mahan, this nation's foremost naval historian and a serious military philosopher, came to the conclusion that there was something more to winning a naval victory than sheer superiority in gun calibers, in battleship sizes, in learned admirals and trained sailors. What resulted was an intellectual breakthrough of major proportions to our comprehension of how battles and wars are won. He said that the "conduct of war is an art, having its spring in the human mind of man, dealing with various circumstances, admitting certain principles; but beyond that, manifold in its manifestation, according to the genius of the artist and the temper of the materials in which he is dealing." It is, in other words, not battleships that win a naval battle, Mahan told the world, it is not men that tip the balance, it is the mind of man that wins a battle, most frequently the lone leader. And it is the novel tactic which the individual's mind produces that brings victory.

Naval leaders long ago labeled this indefinable leadership talent "the Nelson touch" in recognition of the unique quality Admiral Horatio Nelson demonstrated when he defeated the French fleet at Alexandria, and

again at Trafalgar, to doom forever Napoleon's dreams of an overseas empire. It is an incandescent quality the navies of many nations hoped to find in their admirals.

It remained for T. E. Lawrence, "of Arabia" fame, that baffling, thoroughly un-military military genius, to demonstrate what Mahan had theorized. Bedridden, wracked by fever, in despair over an unsuccessful campaign, Lawrence pondered the direction the Arab revolt should take to break the Turkish shackles. Lacking the professional armies and modern weapons of his opponents, his task looked insurmountable. To a lesser man, it would have been.

Weighing the teachings of Clausewitz, de Saxe, Jomini, Foch, and others to find an answer to his dilemma, Lawrence finally rejected them all. He came to his own conclusions about how to fight his particular war. They are buried in only a few pages of Chapter 33 in his *Seven Pillars of Wisdom*. There he set down his philosophy of warfare, especially from the metaphysical side.

Suppose, he said, "we [Arabians] were . . . an influence, an idea, a thing intangible, invulnerable, without front or back, drifting about like a gas? Armies were like plants, immobile, firm-rooted, nourished through long stems to the head. We might be a vapour, blowing where we listed. *Our kingdoms lay in each man's mind* [My emphasis—J.E.M.]; and as we wanted nothing material to live on, so we might offer nothing material to the killing. It seemed a regular soldier might be helpless without a target, owning only what he sat on, and subjugating only what, by order, he could poke his rifle at."

Shortly thereafter Lawrence sallied forth to test his philosophy on the conventional Turkish garrisons. He blew up their railroad tracks, raided outposts, and in cleverly deceptive tac-

tics hammered the Turks' main forces. Unable to cope with such unprecedented warfare, the Turks capitulated.

Differentiating the individual soldier from the mass to function as a free agent (apart from the structure of formations, "intangible," a force free to maneuver where it chose, the intellect free and supreme), Lawrence transferred to guerrilla warfare some of the fundamental conditions and rationale for creativity as we understand it now. In doing so, he turned intellect to the task of making up with ideas what he lacked in soldiers and guns.

Lawrence's ideas, as carried out by Mao Tse-tung and Ho Chi Minh, have proved the undoing of more traditional strategies. Only a few in the Western world—Winston Churchill; General Orde Wingate, who was Lawrence's contemporary and student; and George Bernard Shaw, who was his confidant—understood what Lawrence had discovered and was telling the world.

The Army has never quite caught up with our Navy in acknowledging or even realizing the existence of this special quality of the mind. This is so despite the fact that the Army produced Patton, MacArthur, and others of comparable intellectual caliber in the course of its history. The military establishment has been more bewildered by such men than understanding of them and their idiosyncrasies, but more often than not our politicians and public have been thankful that, to the ultimate good fortune of this nation, the military establishment managed to make such men generals. Here, by and large, the matter has rested, with no serious attempt to determine what made these men operate so successfully. Investigations, if any, have been quite superficial.

The Air Force has been generously endowed with creatively gifted Billy Mitchells. Such officers have been far ahead of their time, with ideas and deeds solidly demonstrating they could produce high-quality creative thought. They grew up in the Air Force when it was

struggling for recognition as a separate service, when it had no well-developed traditions and only a small body of doctrine and regulations. The Air Force is still a youthful service, less hampered by deeply rooted traditions and voluminous regulations than the other services.

forms of creativity vary

The creativity which Billy Mitchell, Patton, and the others demonstrated was not the colorless, lethargic, deductive sort but rather the intuitive and intellectually nimble kind. It is the kind of thinking that has produced winning battle combinations and surprises as well as man's greatest achievements in science, art, and business.

There are actually only two well-defined kinds of creative thinking. One is the analytical or deductive. The other is the intuitive, flash-of-insight kind. Analytical, logical thinking moves laboriously, a step at a time, sorting, relating, finally concluding.

In contrast, intuitive ideation arrives at answers to a problem by mental shortcut. Frequently the person encountering a good idea all of a sudden is surprised by it. He may call it a hunch. "It feels good!" is a remark often heard from those who have had the experience. There is no logical explanation for it. He is totally unaware of the mental processes used to arrive at it.

I do not mean to imply that analytical thinking cannot be creative. It can, but man has rarely made great strides via this route. Intuitive thinking has been the kind that has made significant breakthroughs, such as Galileo's concept of the universe.

Intuitive thinking is "hunch" thinking, to use the vernacular. It has produced many innovations in aerospace equipment design. The "coke bottle" fuselage idea used in supersonic planes came to Dr. Richard Whitcomb like a "bulb lighting up." Dr. John Houbolt, a NASA scientist and engineer, scribbled some calculations on the back of an envelope after a sudden

new thought, and the product was a device that helped get man to the moon. Spontaneously, it became clear that a lunar excursion module (LEM) was a scientific and engineering possibility. Like many innovative ideas, however, it was for a long time an idea no one wanted.

The Doolittle raid on Tokyo, a feat that reinvigorated the sagging morale of this nation after the debacle at Pearl Harbor, called for the takeoff of heavily laden bombers from the deck of an aircraft carrier. The idea was conceived suddenly by Admiral Francis S. Low while flying to Washington. MacArthur conceived the brilliant strategic scheme for the Inchon landing in Korea while on a flight over that country.

Napoleon intimated that the outcome of a battle could hang on a thread and would most likely be decided as the result of a sudden thought: "One approaches the enemy according to a prearranged plan, one comes to blows, one fights for awhile, the critical moment draws near, a *spark of inspiration flames up* [My emphasis—J.E.M.], and a small reserve division does the rest!"

Hitler's intuition, according to General Kurt Student, a retired German Air Force officer, produced one of the greatest surprises in military annals, the German glider attack on Fort Eben Emael. Ten gliders discharged 78 German infantrymen onto the roof of the mammoth "unconquerable" Belgian fort and within 20 minutes had subdued the 780 defenders. The loss of the fort proved of such catastrophic dimensions to the Belgian cause that within days the Belgians sued for peace. The double tragedies of Dunkerque and the fall of France were the unavoidable results.

The unusual ideas of many military innovators prove hard for their superiors to accept. Frequently this is so because such ideas would upset the hierarchical status quo, change current doctrine, and disturb the complacency of establishment-conditioned mentalities ensconced in cocoons of their own weaving.

Ideas unpalatable to the Army and his staunch support of them got Billy Mitchell into much trouble. Congress later cleared him after the validity of his ideas had been established. The Italians jailed General Giulio Douhet, apostle of air power. They finally recanted and released him when they caught up with his unorthodox thinking. General Claire Chennault was another who had a mind of his own, reportedly a quick and decisive one and certainly one that has contributed to the development of aggressive fighter doctrine.

psychologists' viewpoints

Behavioral psychologists have pretty well identified the creative personality. Intuitive thinkers differ in personality traits and general outlook from average persons. The creative person is alert, confident, foresighted, informal, spontaneous, and independent. He is deeply involved in what he is doing. He is not afraid of his experiences, himself, or his world. Moreover, he accepts challenge readily. He is unconventional, yet comfortable in this role. He can live with doubt and uncertainty. He is willing and able to create and is not afraid of exposing himself to criticism.

Intuitive thinking sometimes brings the wrong answer, since all human activities are subject to error. But logical thinking also errs. Intuitive faculties cannot be turned off or on at will. Sometimes they refuse to operate. An intuitive person can sense when this faculty is operating. When one has "that feeling," one rarely makes a mistake. When "that feeling" is not there, his judgments reflect only the laws of chance. The feeling of being on the beam, so to speak, comes and goes.

Psychologists hold that it is difficult to combine logical and intuitional thinking. The former interferes with intuition and distorts its message. One authority has even indicated that the "logical mentality is afraid to think." What the author of this statement meant is that the individual who must sit down and fig-

ure out his problem step by step is afraid to trust the intuitive voice of his mind.

Henri Bergson, the French philosopher, explained intuition this way: "It can never be as precise as intellect [analytical thinking], nor a substitute. But what it lacks in precision, it makes up in immediacy. It comes into play whenever our vital interest is at stake. It pierces the darkness of night in which our intellect leaves us."

Several stimuli help to increase creative thinking. Among them are:

- A knotty problem to solve.
- A free mental environment that allows the individual full use of his available mental and physical resources. For the painter, these resources are paints, canvas, and the images in his subconscious. For the military man, they are guns, planes, tactics, and the contents of the mind.
- A free physical environment.
- Tenacity.
- Ability to work alone.
- A basically creative personality—a desirable asset, but the degree may vary from individual to individual. With other stimuli present, virtually any person will demonstrate increased creative vitality under stress.

Most individuals can be creative to a certain degree in the social environment in which they are immersed. Nevertheless, it is much better if an individual is in as free an environment as can be made available. The free environment increases creative ideation.

The captain of a warship is freer of constraints than the commander of an infantry regiment in that there are rarely any political boundaries to hem him in, or roads he must travel on, or barriers he cannot cross. The skipper of a submarine has yet another dimension than either of his surface colleagues. Once he departs from national shorelines, he is virtually alone in a boundless and boundaryless sea that imposes no restrictions on the move-

ments of his sub as his mind wills it to move.

The physical range and maneuvering potential of the aircraft pilot exceed that of the submarine skipper. The aerospace atmosphere is among nature's most violent yet intangible elements, and the pilot is in constant contest with it. Like the submarine skipper, the pilot wields intellectual resources in three dimensions but at rocket speeds.

tension enhances creativity

It has been determined that tension, pressure of mission, and even danger enhance the quantity and quality of creativity. There is strong evidence that heroes, in reality, are not so much rash, brave beings as highly creative men who perceive more than their comrades. An unusual case to support the contention that danger can heighten creative output was reported of one of the world's most famous mathematicians, the Frenchman Évariste Galois (1811–1832). He had allowed himself to be goaded into a duel. Throughout the night before the duel, in those last desperate hours before dawn, he sketched out intricate mathematical formulas. On the dueling ground the next morning, Galois, only 22, took a mortal wound, but generations of mathematicians have been kept busy by his final creative spurt.

Pilots under combat stress perform breathtaking, innovative feats—tactics and maneuvers so new and different they are as creative as inventions or works of art. They are apparently the result of intuitive, flash-of-insight intellections just as notable inventions and artistic masterpieces are.

All pilots encounter unanticipated problems calling for innovative approaches when in flight. Many instances abound, but one described in the Winter 1970 *Aerospace Historian* is worth recounting as illustrative of one pilot's inventiveness under stress. Colonel John D. Mainwaring, in "Born for Combat," tells of an attack against a Japanese formation of 36 bombers which the then Lieutenant Donald

C. McGee, in a flight of P-39s, encountered near Port Moresby, New Guinea:

As three of us finished our initial firing run and dove away to start our climb for the second attack, Mac, who was flying last, performed a prohibited maneuver. Dissatisfied with his firing pass, he, alone, turned back to hit the Japanese from the rear, where he would soon receive full cannon fire from the entire formation of bombers as well as cannon fire from the rearmost flight of escorting Zeroes. . . . Closing to 100 feet, he pumped the rudder pedals back and forth as he fired, to yaw his plane's nose 15 degrees. In a split second he had knocked out all three bombers' tail guns and gunners. Then he pulled into the center of this three-ship V-formation of bombers which were now totally defenseless.

The entire bomber formation went after Mac, dropping down or popping up so their rear gunners could get a shot at him. They soon discovered that they could not strike Mac without hitting their bomber mates. During this time Mac flew a cozy, tight formation with the three enemy bombers as he manually disarmed all his guns but one 50 caliber. . . . His plan was to employ one gun at a time to conserve ammunition. . . .

Then, with the calm of a pro golfer putting, he began firing short bursts from his one-armed 50 caliber at the port engine of the bomber element leader just in front of him. The crews of the Jap bombers flying on his wings just viewed the proceeding helplessly. His plan was to skip from bomber element to element, duplicating this same procedure until he'd downed all 36 bombers! . . .

When asked about the incident and how he had decided to use such tactics, Colonel McGee could not recall. He did mention that while attacking he always had the "feeling it was right, and that if one did not do right, one knew that one would 'buy the farm.' "

contradiction exists

Interviews with other fighter pilots have shown general agreement that the training a pilot un-

dergoes is what prepares him to do the correct thing in combat. Like McGee, some observed that the decision to make the maneuver that paid off "hit just right" or that "there was no logical explanation, I just did it."

Although these experiences tend to resemble the character of the mental or emotional experiences of artists and scientists and leaders of the other military services when intuitions occurred, all pilots interviewed have been hesitant to use the term "intuition" to describe the source of their decision.

One reason may be that intuition is not understood. Also it is too unusual a suggestion for combat-experienced officers to absorb and accept easily. But once having grasped the meaning of intuition, many admitted having experienced it. I have spoken to many soldiers returned from combat, and, surprisingly, they were more apt than the officers to acknowledge that they fought by hunch dictates.

Those in command positions, who must plan strategy and tactics, are often more willing to accept the role of intuition, however. General Elwood Quesada, USAF (Retired), when asked if he felt intuition played a role in combat operations, replied, "Absolutely! It is an integral part of air combat as well as ground operations." Asked if he had experienced it with any degree of frequency personally, he said:

It occurred over and over again. There is a lot of confusion in war. Intuition isn't perfect, but it's often the best thing there is! I can cite an example.

By the winter of 1944-45 ours was a close-in fighter force. Our bases were right up to the front. One day it intuitively hit me that the Germans were about to launch attacks against our airfields. I don't know why the idea occurred at the particular time. However, I took the cue and acted on it right away. I ordered a fighter pilot into each anti-aircraft defensive position at each of my airfields. They were to be in the emplacements one half hour before dawn to one half hour after, and the same at dusk. I did this because I knew

the ground crews were not well enough trained to recognize quickly German fighters sweeping in to strafe or bomb the fields, but my pilots with their combat against the German fighters could recognize them with little trouble.

Just as I thought, it was only a few days before German fighters descended on us, but we were ready for them. We got some, but they quickly learned they would pay heavily if they continued attacks on the 12 fields of my 9th Tactical Air Command. There were other fighter commands that had not anticipated such attacks, and they caught hell from the German fighters.

Psychology has conclusively established that there is intuitive-caliber creativity in operation in men in the arts and sciences and in war fought on the earth's surface. Backing up the Air Force's air arm is a creative effort of substantial dimensions in aircraft development, in planning, and in the creation of "Billy Mitchell"-quality doctrinal concepts for the use of air power. Evidence is lacking as yet to document man's intuitive creativity in the space environment.

Theoretically, however, man should have an extraordinary ability to turn out more and better creative ideas while in space. The farther man escapes from man and from the confinement of his laws and customs on earth, the better and more exhilarating the intellectual performances of man in space should be. Explorers have sailed into vast unknowns to make fantastic discoveries and accomplish exceptional feats. Escaping the constraints of civilization seems to have helped them do this. But astronauts on space missions hundreds of thousands of miles out have had such close communication with earth that their isolation does not seem as complete as that of the explorers of earth's farthest regions. Space explorers may have yet to experience a *need* for intuitive invention in that environment.

This brings us to another point. Separation from home base does not change the way man's intellect operates. To those who would

question the whole concept of creative thinking, or in a more narrow sense the fact that it goes on at all in flying, some of NASA's conclusions about the psychological reactions of the astronauts to the stresses of deep-space flight are worth noting. These are digested from a paper presented to a conference on medical education for national defense by NASA psychologist Dr. E. J. McLaughlin. Essentially, space flight creates no psychological changes, Dr. McLaughlin declares. No astronaut experienced disorientation. Generally, weightlessness produced a pleasant state wherein crewmen found movement easy and pleasant.

Since intuition seems to increase in speed and quality in a man under stress or in danger, the question then arises, Can a pilot or astronaut produce a sudden, brilliant insight in flight just as the foot soldier does when he solves a dangerous situation confronting him in the jungle with an almost instinctively quick idea? If man does not change psychologically in space, then he must be able to achieve the same creative impulses in space as on land.

When these ideas were presented to Dr. Charles L. Jennings, Chief of the Clinical Psychology Function, School of Aerospace Medicine, Brooks Air Force Base, Texas, he spoke of the need for pilots to learn to "transcend the obvious." As he explained, pilots are taught appropriate responses to problems that can be reasonably forecast. Even these responses can become fixations. Pilots need to learn to develop untested theories quickly, to enable them to "rise above the obvious" (as he refers to the procedure), since many times they will encounter entirely unexpected challenges in flight to which there are no obvious solutions.

No amount of training, no amount of experience, will be entirely adequate to handle the all-too-frequent, totally new emergency. The instantaneous reaction to a tire blowout on landing in an emergency is a result, perhaps, of training having properly prepared the pilot for its occurrence.

The correction of a fault that jams a bomb bay will require something extra from the mind. Involved are not just the problems with one piece of equipment but with a whole array of equipment, modules, electronics, switches, or the human error of the bombardier. The mind is pressed to transcend the obvious, to do something truly innovative, to reach for genius in such situations; and countless reports provide convincing evidence that minds have produced handsomely under stress.

When pilot consensus about training being the main reason for getting out of tight pinches was cited, along with the contradiction that was created concerning intuition as the prime mover, Dr. Jennings was reassuring. In his opinion intuition is at work in space; it does not cease when man leaves the earth. He would be inclined to feel that though pilots were reluctant to admit to intuitive thought taking place when in stress, evidence strongly suggests that these messages, transformed to successful actions for which they cannot account, are indeed, on the whole, intuitive ones.

It is worth noting that there is an almost purposeful intent to avoid mention of creativity with respect to aerospace flight. Works about the psychology of flight are notably silent on the subject. Flight examinations stress eye testing, acceleration tests, and a host of psychological tests, but they disregard the mind. The examiners seem little concerned as to whether the mind exists.

But those who have experienced flight in space indicate otherwise. Astronaut John Glenn has stated:

You go into an unknown every time you fly in combat, and you often face stress situations that are far more exacting than the physical strain of pulling G's. Through such experiences, and by constant training, combat pilots build up the experience required for quick reaction which they can rely on, *almost without thinking* [My emphasis—J.E.M.] whenever they get into trouble. . . .

Only man himself, however, has the imagination, curiosity, and flexibility to notice the smaller facts and take advantage of the unexpected things that crop up.

I feel that the mind puts forth an extra something in the aerospace environment, making possible phenomenal accomplishments in air combat and tremendous achievements in aerospace explorations in a relatively few years of effort. The extrasensory perception (ESP) experiments conducted during the Apollo 15 mission by Captain Edgar Mitchell bear watching. Their results so far appear strikingly significant.

THERE will always be challenging new situations ahead. Every cloud is different, every cloud bank an enigma, every enemy pilot a question mark to which no amount of training and experience will provide an exact answer, and perhaps they will provide no answer at all. It is in these situations, as in other fields of man's endeavors, that it is well for a pilot to lean on his intuitive faculties, should they be making themselves heard from within the inner recesses of the mind.

Perhaps it is time for a more thorough investigation of this aspect of man's thinking, to learn how intuition can be used in conjunction with techniques of training to produce even more effective fighting men and better tactics and strategy.

What has been said here is so aptly expressed by Commander Howard Bucknell in the June 1964 *United States Naval Institute Proceedings*:

Play your hunches, Captain. No one else in the ship can develop such a composite "feel" for the ship as her captain. . . . Many commanding officers have had cause to regret that they did not heed that small inner voice that their unique experience, non-watchkeeping responsibility, and continuing information give them.

Silver Spring, Maryland



THE COPYRIGHT DILEMMA IN THE CLASSROOM

But Can It Be Done?

LIEUTENANT COLONEL WILLIAM H. CARNAHAN

THE United States Copyright Act grants authors "certain exclusive rights" to exploit their works in order to encourage authorship that inures to the benefit of all mankind.¹ Its power consists only in preventing others from reproducing copyrighted work.

The act has significant bearing on the use,

recording, and reuse of materials for education purposes. Because of the vital role of education in American society, educators desire maximum availability of all kinds of teaching materials and resources. On the other hand, without financial and other incentives, authors might not prepare the very materials educators need. Both the Constitution and currently

proposed revisions of the Copyright Act recognize that there must be a proper balance between free use of creative works and incentives necessary to encourage authorship of those works.²

Educators continue to press for statutory recognition of limited copying for instructional purposes.³ They argue that the teacher has no time to obtain the requisite permission to copy and distribute an excerpt from a book, and, if he must obtain permission, he will not use the particular work. Consequently, the students suffer. Because modern copying machines are very efficient and easy to handle, and since they have become relatively inexpensive and even commonplace, it is feared that statutory recognition of limited reproduction will lead to widespread copying, amounting to confiscation of an author's product. The opponents of a copying privilege for educational use point out that copying machines are currently used by schools to copy articles from encyclopedias, works of history, source books, dictionaries, atlases, and many other scholarly works that are not read in their entirety but used a few pages at a time. They also argue that a school need have only one copy of such books, where formerly it had many. This curtailment of the publisher's market reduces the very incentive which copyright legislation is designed to promote.⁴

One who is both an educator and an author enjoys the advantage of being clearly on one side of the fence or the other at any one time. As the petitioner for permission to copy materials belonging to someone else, he seeks the greatest possible latitude in their use. Once his own book has been published, however, he becomes part of the defending establishment and expects—quite rightly—that his work will be carefully protected against infringement. This is precisely the dilemma in which faculty members at the Air Force Academy, Air University, and other educational institutions find themselves. The major reasons an educator copies a work without

obtaining prior permission are the need for immediate use and the bother involved in seeking such permission. The delay in obtaining permission seriously handicaps the efforts of the classroom instructor.

During the past four years I have received numerous requests for guidance from academic departments and military training officers involved in classroom instruction. Like all educators, they desire almost unlimited accessibility of teaching materials and other resources. In addition to books and like materials, classrooms at the Academy and elsewhere are typically equipped with audiovisual devices such as closed-circuit radio and television, projectors, and other recording instruments. The present copyright law places severe limitations on the use of these materials even for educational purposes.

As in any situation throughout military and civilian academe, the classroom instructor here at the Academy is faced with the daily challenge of presenting his students the most interesting and informative lessons possible. This entails considerable preparation of lesson plans. Faculty members are continually engaged in "disciplinary research" of source material to aid in the preparation of their lesson plans, as well as for use as handouts, visual aids, and other teaching devices. These materials are in addition to the required textbooks, notebooks, and supplemental readings. To complicate matters further, many of the academic departments write their own texts.

Because much of the source material unearthed by the researcher is copyrighted, both the classroom instructor who desires to use it in his lesson plans or as handouts or slides and the academic department that desires to include copyrighted material in textbooks are clearly at an impasse with the provisions of the copyright law which prohibit copying.

Although the copyright statute speaks of the "exclusive rights" of a copyright holder, some copying of copyrighted works is permitted.

For example, book reviewers may quote brief passages from copyrighted works in their criticisms, and newspapers often contain brief synopses of operas and plays. Although such uses would appear to infringe on the "exclusive rights" of a copyright holder, the courts have found no infringement because the uses have been "fair." Thus, the rights of a copyright owner are not quite "exclusive." Under the judicial doctrine of "fair use," some copying of a copyrighted work is permissible provided the copying is reasonable and the rights of the owner are not materially impaired.

There are two bases for the doctrine of fair use: the public good in the dissemination of knowledge and the negligibility of the use. Theoretically, at least, the primary purpose for providing copyright protection is the "public good" (i.e., to encourage authorship by offering the incentive of protection). And it is also for the public good that reasonable copying of copyrighted works be allowed.

Another basis for fair use is the doctrine of *deminimis non curat lex* ("the law will not concern itself with trifles"). To sustain an action for infringement of copyright, a substantial portion of the whole or a material part must be reproduced. To determine what is a substantial copy or a material reproduction, the courts look to such factors as the part of the author's work taken, the part the user contributed to his own work, the value of the author's work taken, the labor saved by using the author's work, the amount of original work added to the author's work, whether the user's work could serve as a substitute for the author's work, and interrelated factors of competition, commercial gain, loss to the copyright holder, and the number and quality of copies.

One of the leading cases that placed an upper limit on the scope of fair use in the area of educational endeavor is *McMillan v. King*. The defendant, an economics teacher, expected his students to possess a copy of plaintiff's text. However, he prepared and distrib-

uted to his students, in advance of class, brief outlines of the material to be dealt with in class. All outlines were subsequently returned to the defendant and destroyed. Each outline contained frequent quotation of words and occasional quotation of sentences directly from the plaintiff's book. The court found that the defendant had attempted to reproduce an abridged and paraphrased form of the author's treatment of the topic and that the students might believe they could meet the course requirements by reading the outlines rather than using the plaintiff's book. Because this went beyond fair use, the plaintiff was granted an injunction.⁵ Some writers believe this 1914 case would not be controlling today.

In a 1962 case, *Withol v. Crow*, the plaintiffs owned the copyright of a musical composition. Crow, the defendant, was head of the music department of a junior college. Without permission of plaintiffs, Crow copied a song, incorporating it in a new arrangement made by him, and reproduced forty-eight copies on the school's duplicating machine. The District Court was of the opinion that defendant's innocent intent had a bearing on the question of fair use and ruled that Crow did nothing more than make a fair, noninfringing use of the copyrighted song. The Court of Appeals reversed the decision, noting that "it is not conceivable . . . that the copying of . . . substantially all, of a copyrighted song can be held to be 'fair use,' merely because the infringer had no intent to infringe."⁶

The Doctrine of Fair Use

From the discussions in *Withol* and in *McMillan*, it would appear that copying even for educational purposes (a public good) is an infringement of the author's copyright, unless it can be justified under the doctrine of fair use.

The present Copyright Act does not impose an insurmountable barrier to educators intending to use copyrighted materials for

teaching purposes. However, because the act is over fifty years old, it does not specifically address itself to many of the problems raised by modern educational techniques. In 1955 Congress authorized the Copyright Office to undertake a program of studies leading to a general revision of the act. House Resolution HR 4347, introduced in 1965, is a culmination of these studies as well as of a series of long debates and rejections of several proposals for revision. HR 4347, among other things, attempted to clarify the rights of educators as users of copyrighted materials. Basically, it would have first granted to the author a somewhat broader copyright protection and then would have provided a number of specific exemptions for educational uses in addition to expressly preserving the doctrine of fair use. However, from 1955 until the 1967 proposed revision, this suggested course of action was successfully opposed. The implications of the opposing positions of authors and publishers on the one hand and of educators on the other extend far beyond the specific arguments enumerated. They involve fundamental questions of social policy. But bearing in mind that the basic constitutional purpose of granting copyright protection is the public good to be derived from the advancement of learning, the House committee in its 1967 report on HR 2512 recognized that the potential destruction of incentives to authorship presented a serious problem. At the same time the committee, recognizing a need for greater certainty in protection of educators, made a careful study of the judicial doctrine of fair use to determine whether it should be given express statutory recognition.⁷ The committee's evaluation found that it would be necessary and proper to insulate a teacher, who honestly and reasonably believed what he was doing constituted fair use, from excessive liability and subject him only to a minimum statutory liability.⁸

The committee also proposed that Section 107 of the act be amended to characterize fair

use as generally being "for purposes such as criticism, comment, news reporting, *teaching*, scholarship or research."⁹ (Emphasis added.)

Section 107, as revised by the committee, is intended to restate the present judicial doctrine of fair use, not to change, narrow, or enlarge it in any way. Beyond a very broad statutory explanation of what fair use is and some of the criteria applicable to it, the committee believed that the courts must be free to adapt the doctrine in particular situations on a case-by-case basis.

The expanded statement of the Fair Use Doctrine and amended Section 107 offer some guidance to users in determining when the principles of the doctrine apply. However, the endless variety of situations and combinations of circumstances that can arise in particular cases precludes a formulation of exact rules in the statute. Since this section, if enacted, would represent the first statutory recognition of the doctrine in our copyright law, some explanation of the considerations behind the language used is necessary. This is particularly true as to copying by teachers, because in this area there are few if any current judicial guidelines. The doctrine of fair use, when properly applied, is broad enough to permit reasonable educational use, and education has something to gain in the enactment of a bill that clarifies what may now be a problematical situation.

The criteria contained in the statute must necessarily be broad and illustrative rather than detailed and conclusive, but it may provide educators with a basis for establishing workable practices and policies. The new language of Section 107 makes it clear that, assuming the applicable criteria are met, fair use can extend to the reproduction of copyrighted material for purposes of classroom teaching.

purpose and character of the use

The fair use doctrine in the case of classroom

copying would apply to the situation of a teacher who, acting individually and at his own volition, makes one or more copies for temporary use by himself or his students in the classroom. A different result is indicated where the copying is done by the educational institution, school system, or larger unit or where copying was required or suggested by the school administration.

Depending upon the nature of the work and other criteria, the fair use doctrine should differentiate between the amount of a work that can be reproduced by an instructor for his own classroom use (for example, for reading or projecting a copy or playing a tape recording) and the amount that can be reproduced for distribution to a large number of students. In the case of multiple copies, other factors would be whether the number reproduced was limited to the size of the class, whether circulation beyond the classroom was permitted, and whether the copies were recalled or destroyed after temporary use. For example, the complete reproduction of a fairly long poem in examination questions distributed to all members of a class might be fair use, while the distribution of separate copies of the poem without restrictions might not be.

Spontaneous copying of an isolated extract by an instructor, which may be a fair use under appropriate circumstances, could turn into an infringement if the copies were accumulated over a period of time with other parts of the same works (*McMillan, supra*) or were collected with other material from various works so as to constitute an anthology. There are certain classroom uses which, because of their special nature, would not be considered an infringement in the ordinary case. For example, copying of extracts by students as exercises in a shorthand or typing class or foreign language study or recording of performances by music students for purposes of analysis and criticism would normally be regarded as a fair use unless the copies or phonorecords were retained or duplicated.

nature of the work

The character and purpose of the work will have a lot to do with whether its reproduction for classroom purposes is fair use or infringement. For example, in determining whether an instructor could make one or more copies without permission, a news article or photograph from a daily newspaper would be judged differently from a full musical score or a musical composition (*Withol, supra*). With respect to material in newspapers and periodicals, the doctrine of fair use should be liberally applied to allow copying of items of current interest to supplement and update the students' texts, but this would not extend to copying from periodicals published primarily for student use.

A key factor is whether or not the work is available commercially to the user. If the work is out of print and cannot be purchased through normal channels, the user may have more justification for reproducing it than in the ordinary case; however, the existence of firms licensed to provide photocopies of out-of-print works at reasonable cost is another factor to be considered. The applicability of the fair use doctrine to unpublished (and hence uncopyrighted) works is narrowly limited, since, although the work is unavailable, this is a result of a deliberate choice on the part of the owner. Under ordinary circumstances, the owner's "right of first publication" would outweigh any needs of reproduction for classroom purposes—unless, of course, the owner grants permission for limited instructional use.

amount and substantiality of material

Educators have sought a limited right for an instructor to make a single copy of an "entire work" for classroom purposes. This is not generally intended to extend beyond a "separately cognizable" or "self-contained" portion (for example, a single poem, story, or article) in a collective work, and no privilege has been

sought to reproduce an entire collective work (for example, an entire periodical issue) or a sizable integrated work published as an entity (a novel, treatise, etc.). Subject to this limitation and to the other relevant criteria previously mentioned, the reproduction by educators of a single copy would appear to be within the scope of fair use. They have also sought statutory authority for the privilege of making a "reasonable number of copies or phonorecords for excerpts or quotations . . . provided such excerpts or quotations are not substantial in length in proportion to their source." It would also appear that the copying for classroom purposes of extracts or portions that are not self-contained and are relatively "not substantial in length" when compared to the larger, self-contained work from which they are taken should be considered fair use. Dependent on the circumstances, the same may also be true of very short, self-contained works such as a four-line poem or a map in a newspaper.

effect of use on the potential market

The effect of use on a potential market for the work is one of the most important of the criteria of fair use. However, this criterion should always be judged in conjunction with the other three criteria. With certain special exceptions (use in parodies or as evidence in court proceedings), a use that supplants any part of the normal market for a copyrighted work would ordinarily be considered an infringement. As in any other case, whether displacement would result from reproduction by a teacher for classroom purposes requires an evaluation of the nature and purpose of the use, type of work involved, and the size and relative importance of the portion taken. Where the unauthorized copying displaces what realistically might have been a sale, no matter how minor the amount of money involved, the interests of the copyright owner need protection. Isolated instances of minor

infringements, when multiplied many times, become in the aggregate a major inroad on copyright that must be prevented.

But Can It Be Done?

Even in anticipation of statutory approval of the fair use doctrine, I believe the proper approach to the use of a protected work is, first, to ask permission of the author, publisher, or assignee of the copyright holder, and then to make payment, if requested, for the privilege of using the work. The public interest will not be served by statutory resolution of the conflict between educators and copyright owners without a supplemental arrangement for paying for uses that would not otherwise be freely allowed.

At the same time, I recognize the dilemma in which the classroom instructor finds himself when, for example, two days before class he discovers an article in a current periodical that he wants to use as a handout or in a lesson plan. The expanded statement of the fair use doctrine and amended Section 107 already discussed will provide relief under these circumstances.

As I have indicated, fair use involves, among other things, considerations of quantity, quality, and purpose. It is on this basis that the publisher assesses petitions to copy, making careful distinction between requests for release of materials for anthology use and brief quotations to be used for purposes of citation or illustration. In general, all reputable publishers—commercial as well as scholarly—are, or try to be, liberal about granting permission without a fee for purposes of citation. When they reply to such requests as "to quote five lines" from a scholarly work, often they not only grant permission but explain why the inquiry need not have been made.

When advising faculty members in their efforts to clear permission for extracts within works to be published or printed at the Academy, I have pointed out that the act of re-

DEPARTMENT OF THE AIR FORCE
(MISSION ELEMENT)
USAF ACADEMY, COLORADO 80840

SAMPLE--Modify as Needed

REPLY TO
ATTN OF:

SUBJECT: Copyright Release (literary work/film)

TO:

1. This (department/agency) is currently engaged in preparing course materials to be used in teaching courses to cadets of the United States Air Force Academy. These materials will be printed by the United States Air Force Academy for instructional use only at the United States Air Force Academy for the _____ academic year. (This material will be exhibited by the United States Air Force Academy (in the form of slides/still prints/transparencies), for instructional purposes only for the exclusive use of the United States Air Force Academy for the _____ academic year.) They will not be distributed, sold or released for use at any other institution, civilian or military.

2. Permission is requested to include in the above identified work the following material which has been published by you:

3. It will be appreciated if you will indicate on the space provided on the attached copyright owner's permission, whether the copyright material identified herein, with an appropriate credit line, may be used for the purpose mentioned above. A self-addressed envelope is enclosed for your convenience.

4. The question on the attached Copyright Owner's Permission asking whether your material may be placed on sale in the Government Printing Office is one which is required by legal authority. As indicated in paragraph 1 above, we have no intention of placing this material on sale; therefore, we do not ask that you answer that question in the affirmative.

5. Like all institutions of higher learning which deal with academic subjects undergoing rapid growth and change, we must rely on a great many materials such as these to supplement our standard texts. As a government agency, we are also obliged to be meticulous in obtaining proper authorization for local reproduction of any materials we use. Your cooperation in assisting us in our academic endeavors is very much appreciated.

6. As the need for this material approaches rapidly, we would appreciate a reply as soon as possible.

(Signature)

2 Atch

1. Copyright Owner's Permission
2. Envelope

requesting permission represents an abandonment of fair use. *By requesting permission, the petitioner subjects himself to the terms imposed by the response.* In borderline cases the copyright holder—for example, a publisher who wishes to recover the cost of replying to the letter—may be tempted to charge a fee. (It should be noted, too, that the requester's inability to locate the copyright holder may not necessarily absolve him from a later charge of infringement.)

The copyright status of the selection should be investigated very carefully before an attempt is made to secure permission, in order to eliminate materials in the public domain and to determine the proper authority to which the inquiry is to be directed.

Among types of requests that are usually

granted without fee are the following:

- Requests for permission to quote passages of reasonable length for citation of works of original scholarship (customary from writers of dissertations and scholarly books).
- Requests for permission to prepare tapes, disc recordings, or transcripts in braille for the blind.
- Requests to reprint portions of publications for one-time use in experimental or curriculum development programs, but only for free distribution to a specific and small group of students.
- Requests to copy selections from a book or to reproduce illustrations to accompany book reviews or journal articles that make reference to the book.

Copyright protects published materials from unauthorized duplication, but often an author or publisher is willing to permit limited reproduction of copyrighted material for legitimate purposes— education, for instance.

Air Force Academy personnel use form letters such as these in requesting permission to reprint published materials for classroom use.

Copyright holders examine requests carefully, and therefore it is important that the inquiry supply full and exact information concerning the material requested and its intended use. The request should identify the exact passages, diagrams, photographs, illustrations, or other materials desired. It should supply the title and author's name of the work in which the requested material is to appear and state whether it is a textbook, workbook, notebook, or whatever. Appended herewith is an example of one type of request for permission that may be used at any institution, with modifications as necessary.

United States Air Force Academy

COPYRIGHT OWNER'S PERMISSION _____ (Date)

1. The requested RELEASE is hereby granted royalty free subject to the condition that it be used (for instructional purposes only) exclusively at the United States Air Force Academy and will not be distributed, sold or released for use at any other institution, civilian or military.

2. The material covered by this release (may) (may not) be placed on sale in the Government Printing Office.

(Name of copyright owner or authorized agent)

By _____

(Title)

Notes

1. 17 USC Secs 1-5.
2. U.S. Constitution, Article I, Section 8 (8). House Committee on the Judiciary, 88th Cong., Second Session. Copyright Law Revision, further discussion and comments on preliminary draft for revised U.S. Copyright Law, 218 (Commission Print 1964).
3. Under present copyright law, a person who complies with the provisions for obtaining copyright acquires the exclusive right to print, reprint, publish, copy, sell, translate or make any other versions thereof.
4. For a more detailed discussion of copying by mechanical means see "Copyright or Wrong" by the author. *Air Force Judge Advocate General's Law Review*, XII, Winter 1970.
5. 223 F. 863 (D. Mass. 1914). The rule is different with respect to unpublished material in which common law copyright is deemed to exist, where presentation of material is confined to the classroom. In such a case the common law rights of the author would not be abridged because of the limited nature of the presentation for instructional purposes. See *Bartlett v. Crittenden et al.*, Cir Ct. Dist. of Ohio, (1849) 5 McLean 32, 2 Fed Cas 967 (Fed Case No. 1,076), which held that neither right of property in a manuscript nor copyright in published work is abandoned or transferred by an author using the manuscript or work to impart instruction to pupils.
6. 309 F. 2d 777, 781 (8th Cir. 1962).
7. The result of this study was S543 91st Cong., 1st Sess (1969).

This legislation did not pass the 91st Congress. However, it will be resubmitted during the 92nd Congress.

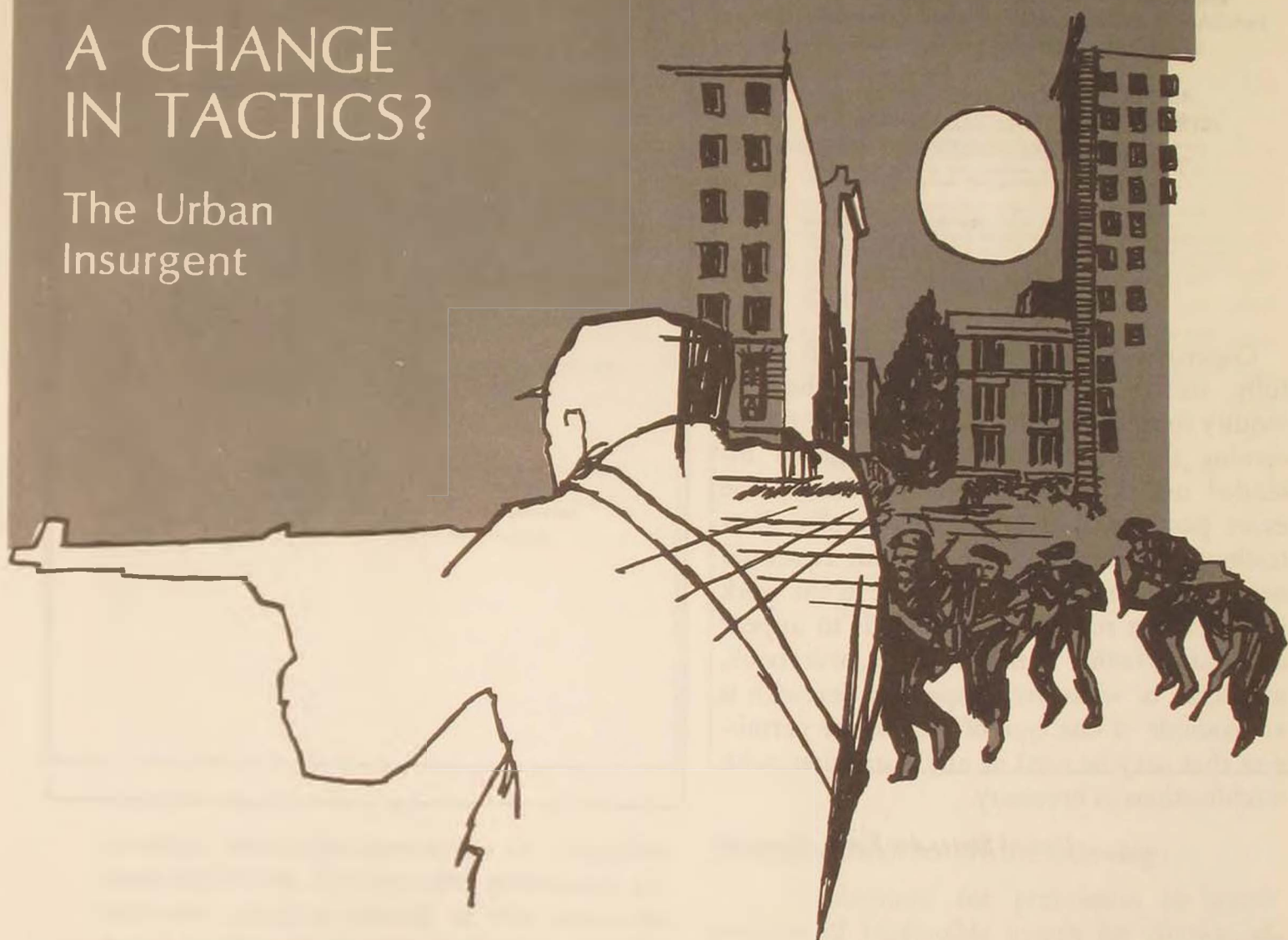
8. #504c(2) . . . In a case where an instructor in a nonprofit educational institution, who infringed by reproducing a copyrighted work in copies or phonorecords for use in the course of face-to-face teaching in a classroom or similar place normally devoted to instruction, sustains the burden of proving that he believed or had reasonable grounds for believing that the reproduction was a fair use under Section 107, the court in its discretion may remit statutory damages in whole or in part.

9. #107 (S543, *supra*) Limitations on Exclusive Rights: Fair Use. Notwithstanding the limitations of Section 106, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that Section, for purposes such as criticism, comment, news reporting, teaching, scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use, the factors to be considered shall include:

- (1) the purpose and character of the use;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

A CHANGE IN TACTICS?

The Urban Insurgent



FIRST LIEUTENANT ROBERT J. BLACK

DURING the mid-morning hours of 8 October 1967, young Mario Teran, a Bolivian army sergeant, very hesitantly entered the back room of an old brick schoolhouse near the Yuro Canyon in southern Bolivia. A few seconds later, a burst of gunfire was heard, and then all was quiet. Inside the building lay the lifeless body of Ernesto “Che” Guevara. This killing not only was the culmination of an abortive eleven-month attempt aimed at a violent overthrow of the Bolivian government but also seemed to serve as a turning point in guerrilla theory.

Che Guevara had always believed that, because of the successful effort in Cuba, all rural guerrillas had a mystique or *machismo* about them which insured success. Based on the successful Cuban experience, he formulated three major postulates which became the basis of his guerrilla thought:

- The forces of the people can win a war against the army.

- It is not necessary to wait for the fulfillment of all conditions for a revolution because the focus of an insurrection can create them.

- The area for the armed struggle in the underdeveloped Americas is the rural regions.¹

Since 1959 Fidel Castro and Guevara have tried to transfer the Cuban model of revolution, based upon these principles, to more than a dozen Latin American countries. Time and time again they tried, and time and time again they have failed. With each failure came a new and determined effort to succeed. In spite of the failures, they never gave up attempting and promoting rural-based guerrilla warfare. The solid belief in this method finally found open expression at the 1966 Tri-continental Conference and the 1967 Conference of the Latin American Solidarity Organization. These conferences are a Cuban-controlled mechanism for promoting guerrilla warfare in this hemisphere. At any rate, the dictate was laid down that rural-based guerrilla forces were the appropriate vehicle for overthrowing the governments of Latin American countries.

But what was out of focus for the Cuban model was the thinking behind it all, as well as the application to entirely different situations. For example, in Cuba, there was widespread resentment against the dictator Fulgencio Batista. In addition, Castro and Guevara were not the only resistance elements on the island. When Castro landed, pockets of organized resistance had already been formed, which were centered mainly in the cities, principally Santiago de Cuba. Throughout the entire operation, the urban underground played the major role in actual confrontation with the opposition. It served to divide the revolution into two fronts: one in the cities and the other in the countryside, principally in Ori-

ente Province. Also, the repressive tactics and counter-terrorism used by Batista possibly won more sympathizers for the movement than did Castro himself. At any rate, not until the waning days of the "insurgency" did Castro's forces ever number more than 1500, as opposed to more than 40,000 troops under Batista.

By their refusal to grant organized resistance movements in the cities proper credit, Castro and Guevara overlooked an extremely important aspect of any insurgency, the potential of an effective program of urban guerrilla warfare.

More recently, however, the importance of the large urban area as a political battleground has certainly not been overlooked. It is, in fact, receiving more and more emphasis and is currently being tried and tested, much to the chagrin of law enforcement officials all over the world. From Northern Ireland to Uruguay there have been concerted efforts by militants to achieve their objectives via the cities. Because it is important to monitor these individuals and groups and try to comprehend their ideologies, let us examine this "new" movement. Certainly, one of the questions that has to be answered is "Why?" Why the move into the cities? What pressures, both external and internal, are literally forcing these groups to develop a new battle plan?

In answering these questions, we must examine the problem and then proceed to some explanations. Although Che Guevara evolved into a rural guerrilla theorist, his early writing indicates that he did not overlook the importance of terrorism in urban areas. In his first book, *La Guerra de Guerrillas*, Guevara did, indeed, perceive the importance of the cities. He wrote:

There has been a lack of appreciation of the value of guerrilla fighting in the suburbs, but it is, in fact, very important. Appropriate operations of this kind, extended over a wide area, can almost paralyze the commercial and industrial life of an area and cause disturb-

ance and distress to the entire population. This makes the people anxious for violent developments to bring an end to their troubles. If thought is given at the beginning of the war to future possibilities, specialists can be organized for suburban fighting.²

The individual who fully appreciated the insurgent role of the cities and expounded further to develop an entire theory of guerrilla warfare in the cities was Carlos Marighella. Marighella was a Brazilian who believed that the key to violent overthrow of a government was to begin in the cities. He felt that through the cities his objectives could best be met. A communist and former member of the Brazilian Congress, Marighella began his urban-based terror campaign in the crowded cities of São Paulo and Rio de Janeiro in 1966. Ultimately, he shared the same fate as Guevara, and, like him, Marighella lives on through his writings.

Marighella's chief contribution was a 55-page manual on the mechanics of conducting an urban insurgency. It is called the "Mini-manual of the Urban Guerrilla." This manual has been published in Italian, English, French, Spanish, and Portuguese and has been widely distributed throughout the world. It has been banned in France and many countries in Latin America. It is currently making the rounds of the militant groups in the United States. In it, Marighella calls for extensive use of political robberies, kidnappings, jailbreaks, and all types of terror. He dwells on the finer points of ambush-setting, use of snipers, and all manner of sabotage.

Although Marighella is currently the most popular exponent of urban insurgency, he is certainly not alone. There is, in the United States, an individual who has been a pioneer in developing a philosophy of organized urban guerrilla warfare. His name is Robert Williams, and he is a founder of the Republic of New Africa and a leader in the Peking Communist-oriented Revolutionary Action Movement (RAM). He predicts the eventual applica-

tion of guerrilla warfare tactics to urban areas, particularly those which are densely populated. With special application to the United States, he sets forth a policy which, according to him, will result in the eventual overthrow of the United States government: "The new concept is lightning campaigns conducted in highly sensitive urban communities with the paralysis reaching the small communities and farm areas. . . . It sustains a state of confusion and destruction of property."³

He goes on to say that "when all communications and power facilities have been destroyed, the urban centers will cease to function and the economy will fall into a state of chaos. All manner of terror and violence will occur."⁴ When an attempt is made to analyze the various reasons or factors precipitating this change, a Pandora's box is opened. The factors are, indeed, complex and varied. To group, simplify, and analyze these factors is the purpose of this article.

Possibly the foremost factor in attempting to analyze such a shift is found in looking at the geographical movement of the people themselves. This movement entails a mass exodus from the rural areas to the already overcrowded urban centers. This move normally is accompanied by rising expectations and generally is thought to be a panacea for all conceivable ills. The migrants, seeking to break past ties and traditions, expect to find a new and better life in the exciting city atmosphere. But herein lies the major problem: when they arrive at a large city, they are confronted by a myriad of complications and pressures. Most migrants who come to the city are former sharecroppers or landless peasants. They represent unskilled labor. Consequently, in most developing countries there are very few opportunities for them in the cities. Here they remain, looking for work and always receiving the same negative answer. Remember, Che Guevara wrote that "one need not wait for the fulfillment of all conditions of a revolution

because . . . they can be created.”⁵ In the great slums surrounding the cities, the conditions need not be created because they are already there. Inadequate housing, poor sanitation, boredom, unemployment, corrupt landlords, and little educational opportunity are but a few of the conditions that can be exploited by a smooth-talking agitator.

Today, in many Third World countries, we are witnessing a social phenomenon unparalleled in the history of man, that is, the rate of urbanization or the rate at which people are flocking to the cities. In a recent article in the *Christian Science Monitor*, James Goodsell listed some problems facing the Latin American governments as a result of this particular problem. He wrote that over half the people in Latin America live in cities. In the past 15 years, the urban population has increased over 50 percent. In the next 15 years, this figure will double. Latin America, which is already more urbanized than Europe, will add 100 million city dwellers in the next decade and a half. With the highest birth rate for any area of the world (3 percent), Latin America has an even more spectacular urbanization rate: the cities are growing at the rate of 5 to 7 percent per year.⁶

These figures are sufficient to account for dramatic change and warrant a rise in terrorism in the cities, simply because, if revolutionaries are to have a popular base for a revolution, they must go where the population is. Also, city dwellers, for various reasons, tend to be more violence-prone than their counterparts in the rural areas. Loss of traditional values, changing environment, and overcrowding are just a few of the reasons to which this change is attributable. Overcrowding, in particular, is an extremely potent and potentially explosive problem area. More often than not, when migrants come to the cities they tend to congregate with others in their same situation and with similar backgrounds. Seldom in the history of man have so many crowded into so small an area, three

instances in the U.S. being Detroit's 10th precinct with 23,000 people per square mile, Cleveland's Hough with 33,000 per square mile, and Newark's 5th with 30,000 per square mile.⁷ Unfortunately, these figures are matched by other cities around the globe. Any time there is such a huge concentration of people, the potential for violence is ever present. Agitators, instigators, insurgents, troublemakers, criminals, etc., can have and are having a field day in the crowded conditions of large cities.

Mao Tse-tung reportedly has stated that a guerrilla is to the people as a fish is to water: take the fish out of his environment and he soon dies. In the seemingly endless sea of people migrating to the cities, there is little chance of being out of one's environment.

One of the reasons for Fidel Castro's success was that his base area, Oriente Province, had the highest percentage of rural inhabitants of any province on the island, 60 percent. Possibly, this was another factor overlooked when Castro evaluated his success and formulated his model. When Guevara embarked upon his ill-fated venture in Bolivia, he selected an area that was virtually uninhabited. Later figures gave the population density as less than one person per square mile. Quite obviously, anytime a group of assorted revolutionaries suddenly appear out of the jungle and begin preaching revolution, they immediately are highly suspect by the peasants—if not by the central powers. Carlos Marighella, well aware of the demographic shifts, constantly maintained that it would be a fatal error to send armed men to isolated rural areas and wait for an insurrection.⁸ He was convinced that the locale for revolution in the Americas was not the rural countryside but the cities.

Many urban-oriented groups today possibly would not have survived if they had begun in the rural areas and followed classic Mao guerrilla theory to the letter. One can only ponder the fate of such groups as the Weathermen,

the Panthers, and the Quebec Liberation Front (FLQ). It would be exceedingly difficult to organize and lead rural guerrillas in highly developed areas such as Europe and North America. Robert Williams further attests to the unlikelihood of the classic rural guerrilla's succeeding in highly developed areas, especially the United States. He says, "The old method of guerrilla warfare, as carried out from the hills and countryside, would be ineffectual in a powerful country like the U.S.A. Any such force would be wiped out in an hour. The new concept is to huddle as close to the enemy as possible so as to neutralize his modern and fierce weapons."⁹ By this he means to stay in the cities and strike out from there. The relative worth of the cities would prevent their being destroyed.

Possibly another reason for the increase in urban activities would be the need for ready cash to finance the movement. In the rural areas, the badly needed capital is virtually nonexistent. The rural guerrillas must rely on the peasants for their "daily bread." The urban-oriented guerrillas do not seem to have the "traditional patience" associated with the rural group. This may be because money is readily available. Banks, homes, and jewelry stores are but a few of the easy sources of instant income. This new-found capital can be put to good use in bribing corrupt officials, buying weapons, printing material for propaganda purposes, etc. It can also be used in a way that dates back to Robin Hood's day in medieval England, robbing the rich to feed the poor.

The famous (or infamous) Tupamaros of Uruguay have built a reputation of stealing from the rich to give to the poor. In this way they use stolen capital to bolster their support among the poor in the city and, hopefully, enlarge their safe areas. To demonstrate the effectiveness of such tactics, one need look no further than Uruguay. The Tupamaros recently held up a jewelry store and escaped with \$6 million in gems. It is thought that

most of this will eventually find its way back into the slums surrounding Montevideo.

Recently, chiefly as a result of the *Mini-manual* and other publications, there has been a rash of political bank robberies in such countries as Brazil, Uruguay, Guatemala, Venezuela, and Argentina, and the fever is spreading to the United States and Canada. In Brighton, Massachusetts, three daring students robbed a bank and vowed to use the "capitalist" money to finance efforts to overthrow "the system." Their efforts promptly secured them a place on the FBI's "ten most wanted" list.

This technique was developed by Joseph Stalin in 1917 during the Bolshevik revolution and later refined by Lenin. "Political robbery" is also being experimented with in other militant groups in the United States, according to testimony before a Congressional committee. The Black Panther Party, for example, regularly encourages black youths from the ghetto to rob a store and split the "take" with the Party. The common formula is $\frac{2}{3}$ for the participant and $\frac{1}{3}$ for the Party.¹⁰ It is chiefly this method, as well as contributions from interested parties and proceeds from the sale of magazines and buttons, that swells the Panther budget by from \$50,000 to \$100,000 per month.¹¹ It is not very surprising, then, why this factor becomes one of the major reasons for the shift into the cities.

If one is going to begin, instigate, conduct, and eventually win or lose a revolution, many items are needed to insure success. Quite obviously, the need for arms and ammunition is paramount. To begin a rural insurgency, one needs an adequate supply of weapons on hand and in reserve. If disaster strikes, and one or more arms or supply caches are found or destroyed, this places the entire movement in jeopardy unless adequate supply lines are once again established. But in the cities there are veritable gold mines of weapons and supplies. Sporting-goods stores, department stores, police stations, and armories are but a few of the

potential sources. This fact has not been overlooked in the United States, as well as in many countries around the world. According to a leftist magazine, *Scanlon's*, in 1969-70 there were 87 attempts to rob National Guard armories, police stations, and construction sites.¹² The express purpose was to capture weapons for use against "the system." Again, law enforcement agencies from Ireland to Argentina have been placed on alert to try to stop any attempt to procure arms in this manner.

Another aspect related to the procurement of arms is the establishment of munitions factories to help resupply the insurgents. In a rural area, smoke from a factory would be suspect immediately to government planes, but in a city, a properly concealed plant would appear as just another factory.

The continual need for publicity (propaganda) and its resultant effect upon the incumbent government constitute another factor influencing the urban guerrilla. It would be relatively easy to place a blackout on news of any newly formed group operating in the countryside. This would connote that all was quiet and that the central government was in full control and capable of handling any situation. Batista tried a blackout in Cuba but was not successful because he did not have control of the foreign press and because Castro was well versed in psychological warfare.

Again, in the cities it is much more difficult to place a clamp on events that happen in plain view of all. Any time a North American-owned company is bombed or attacked, it usually gets on the wire services. Soon afterward, a message is usually received by a radio station or newspaper, claiming credit for the terrorist act. Mention of this in the news media adds credibility to the insurgent movement, whether or not an organized group is actually responsible!

One of the major features fostering a seeming change in perspective is the availability of recruits. Che Guevara learned the hard way

that rural peasants are unpredictable and, more often than not, apathetic toward grandiose schemes and flowery promises. In contrast, there is a group of individuals who are more susceptible to the "revolutionary rhetoric." This group is composed of easily swayed college students and, to a lesser degree, the labor force.

University students, who are the more idealistic group, usually are quickest to resort to violent methods against the establishment. In many countries around the world, college students have appointed themselves "protectors of the freedoms and champions of the right to dissent." More often than not, the seeming majority of students will side with the "oppressed underdog" against the vague, abstract structure known simply as the "establishment." It makes little difference to them what issues are involved as long as the enemy is the established order.

Because most students are from the middle and upper classes and are used to the "good life," they have earned the ignominious nickname "weekend warriors." These are the individuals who mouth the rhetoric and occasionally throw a Molotov cocktail, but when it comes to actually abandoning all the comforts of home and moving to the rural areas, a profound change occurs. The hardships of a guerrilla campaign would be more than these "weekend warriors" would care to endure. They simply prefer the city to a jungle hideaway. Most could not adapt to the ways of a Che Guevara, a Fidel Castro, a Luis Turcios. To subsist on a minimal diet and endure the constant moving add up to too big a price to pay. Therefore, to use the energies and enthusiasms of the students, yet not turn them away, the action must be in the city. Guevara said an ideal revolutionary and fighter would be between 25 and 35 years old and in excellent health and physical condition. I dare say most young revolutionaries would hardly measure up to the rigorous standard needed to wage successful guerrilla warfare.

Another potential source of active support would be the labor force. Hopefully, the laborers would join the revolution early, refuse to go to their jobs, and, consequently, cause the economy to fall into a state of chaos; thus they help precipitate the eventual overthrow of a government. As labor unions are organized, these ready-made organizations would save valuable time in establishing an infrastructure. In most cases, they would follow the guidance and direction of their union officials and theoretically be easily subverted. In Chile, for example, President Salvador Allende has the full support of organized labor, and in the event of a power struggle or civil war he would rely on their support.

The urban insurgents, instead of waiting for the government forces to act before deciding what measures to take, are in a better position for intelligence-gathering activities. By clandestinely penetrating a police station or an army headquarters, they can obtain a great deal of information. In the guise of a typist, clerk, or janitor, the sympathizer can collect information easily and almost unnoticed by the authorities. In this way the insurgents can always stay one step ahead of the police.

Always paramount in the mind of any guerrilla is the need for rest areas, where he can rest and recuperate. Once a group in the rural areas has been located by government forces, it becomes almost an unending race. With the greater mobility of the pursuing forces, the best bet is with them. This is another one of the lessons that Che Guevara learned the hard way. Frequently in the past, guerrilla movements used the cities as rest areas. In the larger cities there are virtually unlimited possibilities for hiding or taking refuge. A recent *New York Times Magazine* article discussed the extent of the underground in the United States and its apparent success at hiding fugitives from the authorities.¹³

One of the chief rest areas, especially in

Latin America, is the university campus. Principally because of the tradition of autonomy, the university has long been a haven for "political refugees." Since the founding of these universities some 400 years ago, there has evolved a tradition which restricts the authority of any government official on a university campus. The result has been the evolution of the university not only as a center for learning but also as a refuge for tired revolutionaries. Recently this tradition of autonomy has been broken: in Venezuela, the top leaders of the Venezuelan Liberation Front were apprehended only when the Army violated the 400-year-old autonomy rule and moved onto the campus to apprehend the leaders.

As a result of the Cuban revolution and its later impact upon hemispheric solidarity, there has been a concerted effort on the part of U.S. military missions in Latin America to improve upon the counter-guerrilla training. The results have been quite favorable, as evidenced by the failure of rural guerrillas to overthrow any government in more than ten years. As exemplified by the Bolivian army in its experience with Guevara in 1967, the armies have indeed improved. Prior to the emphasis placed on counterinsurgency training, the Bolivian army was comprised of approximately 10,000 men, of whom 1200 would be considered "trained." In addition, they had earned a reputation of fighting in three wars and losing all three. Surely, the Bolivian army seemed to be no match for the wily Guevara. But in a matter of time they were indeed to become excellent guerrilla fighters.

Another boon to the military has been the great advance in new and better equipment to fight guerrillas. There is today better and more effective counter-guerrilla equipment than ever before. The helicopter, with increased firepower, has made life very difficult for the rural-based guerrilla. Consequently, insurgents are moving to the cities, principally to insure their own survival. In the cities, helicopters and increased firepower are relatively

useless. Also, the military, as compared to the police force, might provide yet another clue: a new recruit in the police force receives far less training than his counterpart in the military, yet the policeman is in the public's eye every day as contrasted to only short periods of time for the armed forces. Thus, more is expected of the police, and they have less to begin with. This situation is changing, though ever so slowly. Only recently have the research and development departments of industry channeled their efforts to aid the "cop." It is hoped that this new aid will help stem the growing tide of urban subversion.

One of the final reasons for this apparent shift to cities would be found within the policies and guidance of the overseas Communist parties. In Latin America, most Communist-inspired urban activity conducted against a power faction usually is directed by the Moscow-oriented Latin American Communist parties. These groups favor mainly a peripherally nonviolent, peaceful coexistence policy. Generally they argue that they are against violent overthrows because the efforts usually are not lasting. This is true partly because many individuals have worked tirelessly creating a façade of respectability and do not wish to jeopardize it by being forced to go underground by an incumbent government. This does not mean, however, that they are opposed to violence or will not use violence. If it suits their objectives without endangering the legitimacy of these parties, then violence will be used. Usually, it takes the form of terrorism, bombings, kidnappings, or assassinations. This action is centered primarily in the cities because any violence there can be kept easily under the scrutiny of the central committee.

This is essentially the formula for the Communist Party U.S.A. In 1960, some four years before the first large-scale riots in the United States, the House Unamerican Activities Committee published a staff study entitled, "Mob Violence as a Communist Weapon," which includes this statement:

There is considerable evidence that in the U.S., as well as on a world scale, the Communists feel the present tactical situation calls for increased utilization of rioting and mob violence and that the U.S. Communists will follow the Moscow policy that, in effect, internal violence is the order of the day and that riots are one of the weapons that they are to use in order to achieve total victory.¹⁴

This ideology is generally alien to Cuban thought and intended action. But, because of their monumental failures, nationalistic insurgents have been looking elsewhere for guidance and assistance. Many have gone to the Communist parties, and they are being coached in tactics that can be directed easily and controlled from a central source.

THE MAIN object of this writing has been to answer the question, Why are the insurgents tending to move to the cities? In order to provide some answers, I have necessarily focused principally upon the pros rather than the cons of moving to the cities. Nothing has been mentioned about the problems that face the urban insurgent, but certainly they are many. Nor has this been an attempt to *justify* the movement; rather, to *understand* why the movement is occurring. Historically, insurgents have mounted a *real* threat only when striking with a combination of tactics; that is, by dividing the counter-guerrilla forces into two fronts—one in the cities and one in the countryside. When this balance has been achieved, the insurgency has become extremely difficult, if not impossible, to defeat. Cuba and Algeria serve as two excellent examples.

It is doubly important not only to monitor the rhetoric of a revolution but also to analyze each and every situation and the pressures exerted upon it. No two insurgencies will ever be the same; therefore, constant monitoring is necessary to arrive at the best plan of action to defeat any potential threat to international security. Only a systematic approach, tailor-

made for each fluid situation, will enable us to cope with and ultimately overcome this threat of internal subversion. All indications point to increased urban terrorism in the future. Because of the seeming shift in centers of opera-

tion, the policies and procedures that apply to rural insurgency must be examined and revised as needed.

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Notes

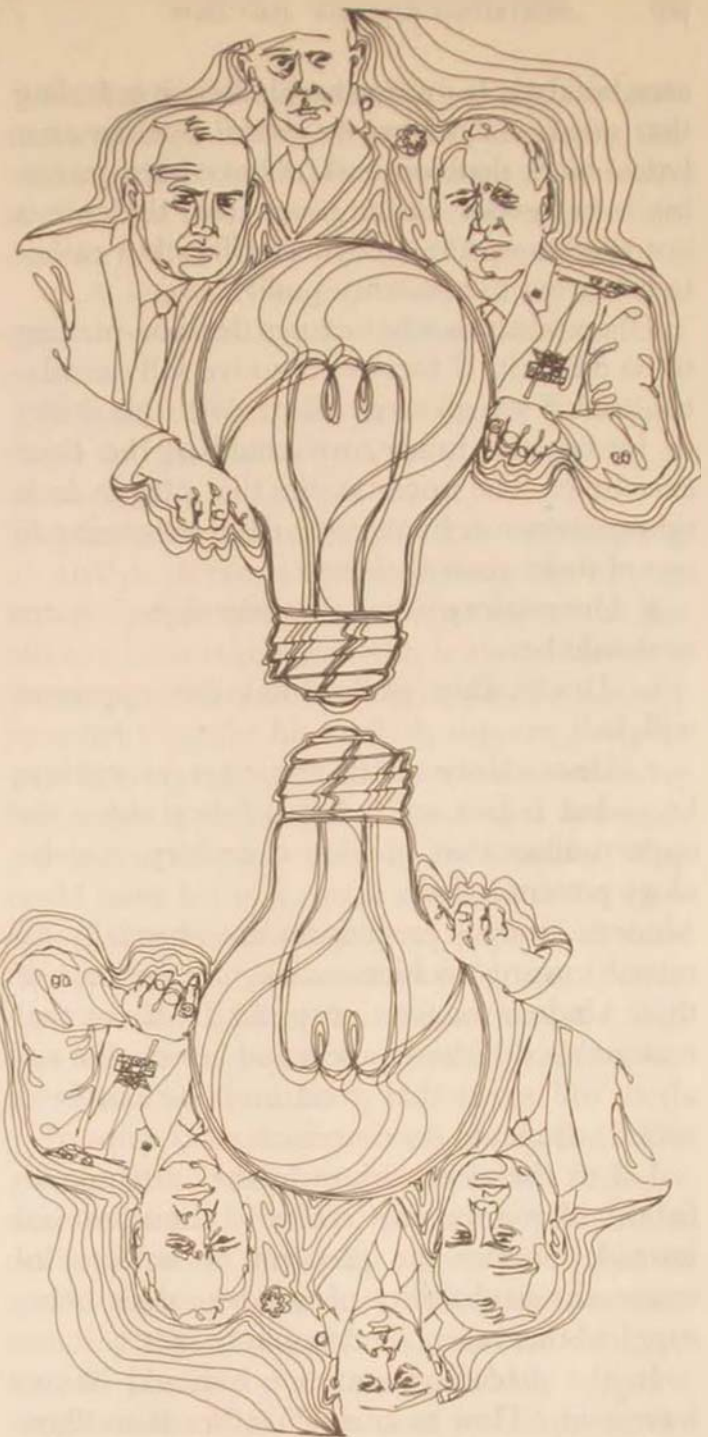
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In My Opinion

MORE ON DECISION-MAKING

R. H. BLYTHE, JR.

IN AN ARTICLE published in the *Air University Review* for May-June 1971, Major General Glenn A. Kent wrote regarding the future of analysis as a factor in decision-making. His views deserve the careful attention of analysts and decision-makers, since they reflect the thought of someone who has legitimate claim to both titles. From his position of vantage, Kent seems to say, "A pox on both their houses." But his opinion seems to



be that the analyst's pox is the more serious because he states that "the influence of analysis may be near its zenith and decline is in the offing."

Is this incipient decline coming about because decision-makers feel that analysis in general does not contribute to better decisions? Do they feel that experience and judgment unperturbed by the findings of analysis provide a better basis for decisions? In which

case, analysis is unnecessary. Or is it a feeling that good analysis can be useful but the analytical work decision-makers have been receiving is not good? In the latter case, the cure is not to give up the analytical effort but rather to take steps to ensure its quality.

Uncertainty is what causes decision-making to be difficult. If facts were universally available, and if we all were gifted with the ability to foresee the future, we could all be chief executives. The uncertainties that plague decision-makers can be recognized as belonging to one of three general classes:

a. Uncertainty as to what our objectives are or should be.

b. Uncertainty as to what our opponent will do.

c. Uncertainty about the state of nature; i.e., what is fact and what is fancy about the opportunities that physics, chemistry, and biology present to us.

Modern analysis procedures are especially directed toward decision-making in the face of these kinds of uncertainty; and I believe that reasonable decision-makers and reasonable analysts will agree that good analysis can be a useful adjunct to good decision.

Let us therefore abjure further attempts to fix the blame for past errors in decisions and instead consider the problem of how to increase the probability of good analysis being supplied to a receptive decision-maker.

In the preceding sentence I should like to have said, "How to *ensure*" rather than "how to increase the probability of" good analysis. But analysts and decision-makers are both fallible human beings whose performance and outputs are necessarily subject to some risk of failure.

General Kent has pointed out clearly the two common shortcomings of analysis:

a. Bias

b. Incompetence.

He does not specifically use the word "incompetence." Rather, he refers to several manifestations of incompetence, such as wrong objec-

tives, inadequate models, and poor presentations, both written and oral. I have chosen to subsume all of these under the term "incompetence."

What can be done to eliminate bias? If an analyst allows himself to be a party to presenting a biased analysis, there must be a reason. Most probably the reason is that he expects to enjoy some reward, or at least to avoid censure, by presenting an analysis that he expects will please someone who is in a position of authority over him. Such authority is established by the organizational structure and its rules. To avoid its being applied to frustrate an analyst's objectivity, this authority should be assigned to someone who is not a decision-maker and presumably has nothing to gain one way or the other from the results of the analysis.

The product of the working analyst and the quality of his performance should be evaluated by an analyst higher in the organizational structure and not by someone who has a parochial interest in the outcome. Then, although the analyst's professional output is still for the benefit of the decision-maker, it is not subject to his influence. The independence and objectivity of the analyst can be ensured by imposing rules that do not provide the decision-maker an opportunity to advance, retard, or otherwise affect the career of the analyst.

There remains the problem of how the highest-level analyst in an organization—the one who is ultimately responsible for the work of his unit—can himself be protected from the blandishments of "pleasing the boss" and transmitting this pressure, as through a conduit, to the working analyst. Organizationally, there is not much that can be done to help this person. It is of some value that he be given a sufficiently high grade, with commensurate prestige in the organization, that he can meet the ultimate decision-maker eye to eye and not cringe. The point of attachment of the analyst's unit to the overall organizational

structure suggests a possible effect on this problem, but this factor is of more apparent than real importance.

Probably of greater importance than any of the relationships indicated by organizational structure are the rules under which the analyst operates. The organizational rules may take the form of simple, unexpressed policy, or they may be prescribed in formal regulations. Informality is the more desirable, but formal rules may be necessary to promote objectivity and intellectual freedom and, indeed, to provide protection from capricious and unreceptive decision-makers. Such rules, whether written or merely understood, allow the analyst direct access to any decision-maker he deems to have need for the results of his analysis. He must be free to say whatever is necessary in presenting his analysis. To aid him in this, he may be permitted to operate under the disclaimer that his remarks, written or oral, do not necessarily reflect the official or authorized views of his commander. Even if called upon by an authority higher than his own command, he must be free to present results which may be at variance with his command's official position, again under the provision of the disclaimer. The analyst cannot be totally unfettered, however; he must, for example, be restricted by any and all security regulations. Finally, it can be said with some confidence that in addition to the protection afforded by any of the provisions just discussed, the analyst will be most benefitted by a tough skin and a tender conscience.

Next, how can competence be achieved? The hiring and firing of the analysis staff should be left up to the senior analyst. Competent analysts are available; they can be attracted by a combination of adequate salary and the opportunity to work with other competent analysts. The importance of the second condition should not be underestimated. Let an analysis unit get a reputation for hiring incompetents and it becomes impossible to attract the competent.

Having so handily disposed of the analyst's shortcomings, what can be said about the decision-maker? Again, the problems divide naturally into two general classes, which are counterparts of those described for analysts:

a. A tendency to establish a firm position prior to completion and consideration of an analysis.

b. Lack of the training necessary to understand and particularly to assess the findings of an analysis.

The first of these is a major factor in tempting an analyst to reach a biased result. An unprotected analyst who is aware that a position has already been taken and who is also sensitive to the responsibility of feeding his family is sorely tempted to make his analysis support the pre-established position. This is an unfortunate solution for both parties. The analyst has suppressed or glossed over the information that could have led to a useful result, and the decision-maker has developed an unjustified sense of confidence in his untested judgment. But in the case of decisions by government, the biggest loser is the public itself, which must suffer for the bad performances of both.

In some cases it may be necessary or justifiable for the decision-maker to take a firm position without benefit of prior analysis. If the decision-maker then calls upon the analyst to conduct a study, there must be a clear understanding that the analyst is under no compulsion to produce a document which supports the decision. If analysis does not support the decision, then the decision-maker is free to seek other means of obtaining a supporting statement. (But he should avoid the plight of the drunk who must seek the lamppost for support rather than illumination.) In effect, the analyst should stand in the position of a certified public accountant. The CPA's seal of approval is on the statement of financial accounting, but it does not necessarily apply to claims made by management in the body of the annual report to stockholders. Similarly, the seal of the analyst should go only on stud-

ies executed without reference to prior decisions. Generally, it would be helpful to identify those parts of a document which have been produced as a result of analysis work.

It is not my intention to decry the uses of advocacy. In fact my position is somewhat different from the generalization by General Kent. He states that "it is probably permissible, although somewhat dangerous, for analysts to be allowed to take a position." He goes so far as to believe that "the analysis (the study itself) should not contain conclusions and recommendations." I believe this dictum should not be universally applied, although there are instances in which the analyst could avoid trouble by heeding it. However, avoidance of trouble should not be the analyst's main concern. Rather, he should be concerned that in making a decision the results of his analysis be given their proper weight. In some cases the contribution he can make will be very small because of important factors he could not take into account or because of lack of data that pressures of time prevented his assembling. On the other hand, when he believes that his analysis does adequately deal with the important factors, he should be a strong advocate of the position to which his analysis points.

If he refrains from advocacy on the grounds that it would be a violation of his scientific detachment, can he escape a share of the castigation his decision-maker will suffer if he adopts the wrong course because the analyst spoke too softly? Is not the analyst remiss if, after completing a competent analysis, he fails to persuade his decision-maker that the analytical results are worth adopting and supporting? Of course, the analyst could find some small solace in the post-decision lament, "See, boss, I told you so." But this would be scant comfort to a sensitive and competent analyst who had just witnessed the man he is supposed to advise being sliced into small pieces by a better-prepared adversary, perhaps one whose position is intrinsically weaker than

his own. Certainly, a physician should reproach himself if his patient suffers because the doctor failed to persuade him to follow the prescription necessary for a successful therapy.

What can be done to prevent or at least discourage decision-makers from taking positions prior to analysis from which subsequent retreat is embarrassing? And, related to this matter, what can be done to help the decision-maker in better comprehending the results of an analysis? Education and on-the-job evolution seem to be the only available remedies. The processes which a man goes through in making up his mind about some difficult problem cannot be prescribed by regulation, but decision-makers can be educated so that they can better understand the significance of an analysis. Perhaps it might even be possible to establish educational facilities that would enable staff officers to become familiar with at least the rudiments of modern decision-making theory. If a good course of study could be developed and enough officers exposed to it, then surely the overall quality of Air Force decision-making would tend to improve.

In this connection the analyst has the responsibility to speak and write clearly in terms that the decision-maker can understand. As decision-makers increase their formal training in analysis and as analysts strive harder to avoid the jargon of their trade, analysis will be more useful and decisions more likely to be effective.

No cure for the ills on the analyst's side of the house has been suggested except in general terms. Hence a pragmatic solution is suggested:

- The analysis unit could be staffed by civilians only or by a mixture of civilians and military. From the standpoint of minimizing the risk of bias, an all-civilian unit would seem to have advantage. With military personnel on the staff, the risk would be lessened if their efficiency reports were prepared by the civilian chief of the unit. The advantage of a mixed military-civilian unit would come from

the development of military personnel who would be able to evaluate analytical studies when their turn came to be decision-makers. A small number of military personnel who have received professional training in the analysis field already exists. Advantage should be taken of their very considerable capabilities, not only for the usefulness of these abilities but also to prevent the likely loss of such people if they feel their talents are not being fully used.

- The head of the analysis unit must be a civilian. The military man's career is so heavily dependent on pleasing his superiors that complete objectivity cannot realistically be expected.

- The regulation which describes the duties and responsibilities of an analysis unit could be patterned after the present AF Regulation 20-7. Some strengthening of the barriers protecting the analyst from the possibly adverse effects of his objectivity could be added. But if fully enforced, the present regulation could serve the purpose as it stands.

My earlier remarks about the need for better comprehension of analyses by the decision-maker will not be formulated into a spe-

cific recommendation, as this is best left to someone from that side of the house.

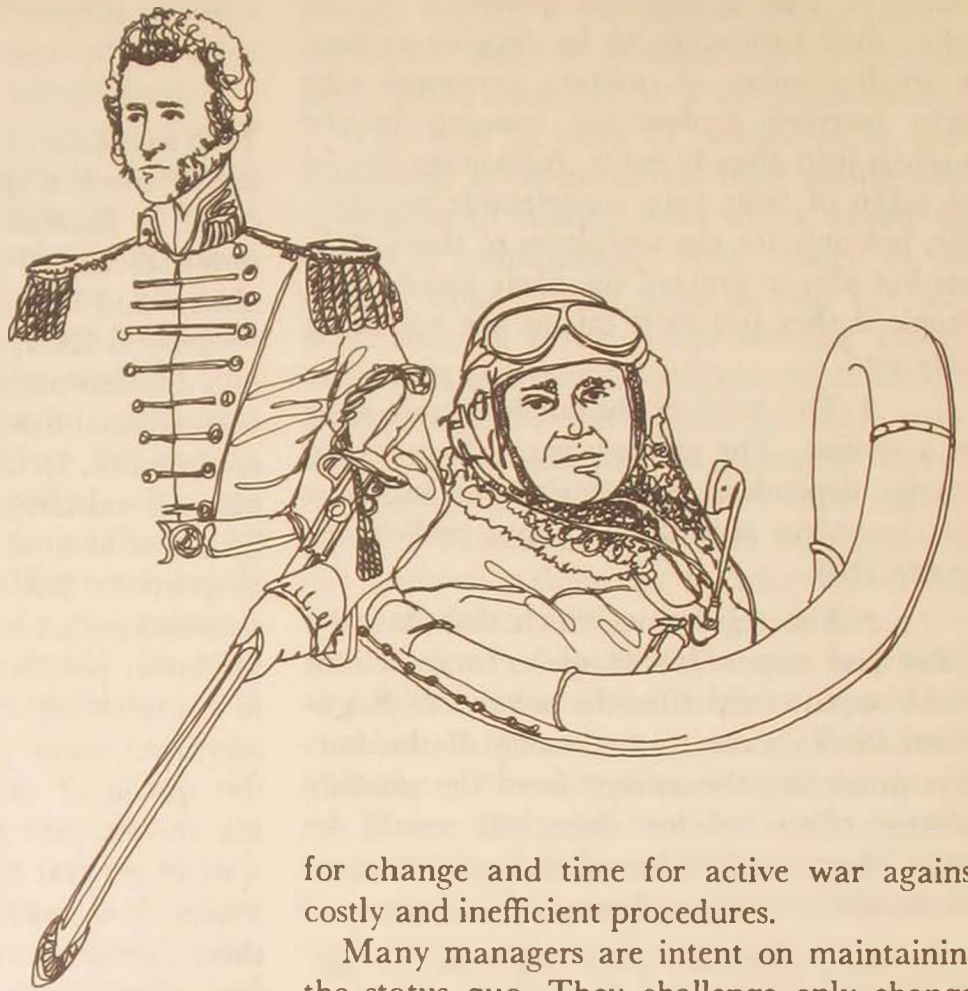
THE PROBLEM addressed here is how to make use of modern quantitative analytical procedures to increase the probability that decision-makers will make good decisions nearly always and best decisions as often as possible.

General Kent, speaking from the viewpoint of a decision-maker, pointed out two classes of occupational diseases of analysts: bias and incompetence. In this follow-on opinion I recognize the existence of these ills and in fact believe that at times they have reached epidemic proportions. But I have pointed out that decision-makers are exposed to two parallel classes of illness: preconceived positions and inability to comprehend analytical procedures. I have suggested some pragmatic measures to curb the spread of the diseases which may affect the analyst, and I have offered some ideas of a more general type for helping the decision-maker. It seems reasonable to conclude that if these disease-prevention measures can be put into effect, the result will be better decisions.

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VALUE MANAGEMENT

JEROME G. PEPPERS, JR.



WE SHOULD declare war today! We should declare war today on nonessential, unneeded, and unprofitably redundant events and activities. For much too long, managers have tried to coexist peacefully with resource expenditures that were not effective, necessary, or profitable. It is time to meet the requirements of intelligent and aggressive management.

Every organization in this world experiences wasted resource applications. Some have more than their share because their managers either do not care about or are not concerned with what actually happens in the organization. There are managers making decisions and committing resources who have little idea of what is going on or why it goes on in their activity. Wasted resources and high costs are inevitable in this environment; yet many have chosen to attempt peaceful coexistence with such counterproductive practices. It is time

for change and time for active war against costly and inefficient procedures.

Many managers are intent on maintaining the status quo. They challenge only change, not what already exists. Although intelligent change may be the only profitable resource application possible, it will never occur unless that which exists is challenged and evaluated for essentiality. Far too often the status quo has been accorded the sanctity of tradition and considered beyond question. Requirements established yesterday are seldom evaluated today for need or contribution to organizational goal accomplishment.

Even worse, a dedication to keeping things in a familiar and comfortable rut breeds stagnation of human intellect and consequent organizational stagnation. The organizational atmosphere is polluted, and a job becomes a necessary evil rather than a challenging and fulfilling use of the individual's talents. Mediocrity becomes acceptable, and professionalism becomes a meaningless word of little applicability.

So, what can the interested manager do?

How can he declare war on waste without first selling his proposals to a multitude of contemporaries?

It is the intent of this article to offer a management approach that can be implemented and used by any manager, at any level, on his own or in conjunction with a directed program throughout the organization. This approach borrows from a proven concept known as value engineering.

Value engineering may be defined for this purpose as *an organized effort directed at analyzing and evaluating systems and components of systems, to establish essentiality and efficiency in the performance of essential tasks*. This form of analytic and evaluative effort can become an invaluable tool for the manager interested in both effectiveness and efficiency.

Unfortunately, this concept is not likely to be immediately accepted. Many people, managers in particular, will say that the value engineering concept is applicable to production enterprises and to industrial and process engineers but not to general management. Many will claim that the concept has little real value because of a bad experience in which value engineering in production has allegedly reduced product reliability or performance. It is obviously true that value engineering, like other concepts, has borne its share of mistakes. It should be just as obvious that these mistakes have likely received publicity out of proportion to the real situation. The concept can be profitably used in management, and it should be. It offers dramatic new vistas for managerial involvement in organizational functioning. It can create a fresh look, which we might name "value management."

Value management is perceptive management. This means that the organized, analytic, and evaluative effort of an involved manager brings visibility to that manager—visibility of the what, the when, the how, and the why of his allocated resource expenditures. It offers the golden opportunity to see, to understand,

to challenge. It opens the door to intelligent change and encourages a fresh approach to the problems of the organization.

Much of that which causes or contributes to the organization's problems can be traced to the rigidity created by ritualistic demands of that which already exists. This is often referred to as tradition. For many, tradition has an aura of respectability that will not permit even the most casual question of value. For them, tradition is carried on even though it contributes little to attainment of organizational goals. Thus this reluctance to question, or challenge, permits tradition to retain its respectability and continue to consume resources without verified need for continuance. The manager in this environment is a pseudo manager. He has not recognized the problems he should be solving because he has accepted tradition and its problems as essential.

Every organization must cope with tradition and "the way we do things." Some have more of this problem than do others. Governmental structures have years of bureaucratic functioning to live with and strong traditional rites and procedures. This is also true of some old-line business and industrial concerns. Managers in these organizations face a real challenge in their efforts to develop an effective unit functioning efficiently.

Perceptive management considers and challenges all the requirements imposed upon the organization. Each is evaluated on the basis of its cost in resources and what it contributes to organizational functioning. Those requirements that cost but do not contribute are obvious candidates for early elimination. These are not difficult to identify if the manager cares enough to question them. Those requirements that cost and also contribute are relatively easy to evaluate because their role is rather obvious. The real challenges are those in between: those that are neither obviously unneeded nor obviously needed.

Many ritualistic or traditional requirements have existed so long that they are no longer

thought of as subject to question. Some are so deeply ingrained in organizational activity that they are unrecognizable as requirements that might be challenged. They continue to exist and cost even though they may not contribute to getting the job done. These are the requirements that should be challenged and considered for elimination.

An example might be the requirement for Naval officers to possess a sword. This traditional personal weapon is of little if any value to the modern Navy. Yet the requirement lingers, involves resource expenditure, and may well constitute a significant irritant to the individual officer. Does it contribute to the mission effectiveness of the Navy?

Might we also question the traditional role of officer of the day? How about the innumerable staff duty officers and, in many locations, their duplicative functions and layers of manning?

In another area, why do we continue to have buttons on the sleeves of men's coats and jackets? Why are cuffs still provided on some trousers but not on others? Is "three on a match" superstitiously avoided because of recent ill fate to one of the three, or is it now just a carry-over, traditionally, from the past?

Is the flight crew preflight of an aircraft essential or a perpetuation of the days when the aviator cared for his own aircraft? Are maintenance and service people so unprofessional they can't be trusted but the flight crew can?

These examples are not intended to belittle. They are presented to illustrate the persistence of tradition.

Tradition, however, is only one of the situations in which value management may be effective; custom, habit, and emotion are others. Why else would we be familiar with such shopworn clichés as "There's a right way, a wrong way, and the school way"? Habit, of course, is difficult to challenge. Often it is not even recognizable or identifiable. Just as often it is considered a useful feature that permits us

to perform reflexibly. But habit can also be treacherous because it has long life and its age is assumed to denote its essentiality.

Stereotypes, generalizations, and biases contribute to the stranglehold of custom, habit, and emotion. They are extremely difficult to identify and challenge because they are part of us. Yet, if we do not identify and challenge these constraints, we are condemned to a tomorrow limited by today's attitudes, beliefs, and requirements. Beneficial change and efficiency improvements are unlikely in that environment.

Managers with guts are needed: managers with the guts to challenge, the guts to eliminate the nonessential, the guts to reduce requirements where practical, the guts to make unpopular but needed decisions, the guts to delegate and trust their subordinates, the guts to accept the fact that humans do make mistakes, the guts to manage. Until these gutsy managers are in responsible positions, we will continue to operate in our time-honored customary manner. Value management might well be a first step for those managers who see, in themselves, a better future.

VALUE management asks questions and demands specific answers. Its first question requires a reply that definitizes the manager's missions and objectives. What, specifically, is the organization established to accomplish? Without this information, fully understood, the manager can only be coincidentally successful. He has to know the what, when, and why of his job if he is to apply his resources intelligently, with proper priority, to the tasks at hand. Without this information he functions only reactively to events, and the organization is, practically speaking, without guidance. Additionally, without this information, the manager cannot forecast and work to cooperate intelligently with the future he envisions. He finds himself welded to the events of

today, being washed by the waves of progress but not helping to create them.

Continuing uses of value management depend upon the response to the first question. All the other questions that will be raised must relate to the missions and objectives that the organization strives to accomplish. Thus, for every requirement of resource expenditure, some value judgments must be made.

The questions to be asked in value management will center around what, why, cost, and alternatives. Each requirement of function, goods, or service must be periodically challenged with these questions, so that management may decide upon retention, change, or elimination. Over time, then, organizational activity is trimmed and streamlined for efficient effectiveness. The questions, simply stated, are: What is it? Why is it being done? What does it cost? What is it worth to mission accomplishment? What else would net the same results? What would it cost? Which is the most economically effective alternative?

Responses to these questions must have more basis than "Just because" or "We've always done it this way." A major element of the value management approach is its demand for definition through continued questioning until a useful degree of specificity is attained. That specificity permits evaluation of the function, goods, or service against its contribution to the attainment of the missions and objectives.

The key to successful value management is ideas: ideas about alternative methods, processes, procedures, and requirements. Without ideas, progress is impossible. Ideas will be the energy of the future just as they have been the energy of the past. The organizational atmosphere, created by the attitudes and actions of the managers, must encourage people to think and present their ideas. People must understand that their thoughts are wanted and, even more important, that their thoughts will receive a full and fair evaluation prior to decision. After all, no flash of genius is of

real value until communicated to those who can use or apply it.

Perhaps this is the greatest demand that can be placed upon the manager: the adoption of a positive attitude toward the ideas of others. Often those ideas will not be in sympathy with his own. Often they will require a change in his thinking or a change in his behavior—neither of which is generally welcomed warmly by anyone without full realization of probable benefits. Regardless, to establish and maintain an innovative climate, the manager must create this positive attitude toward ideas.

Humans, a broad categorization that includes managers, unconsciously tend to impede the progress of ideas in their travel toward adoption. The stumbling blocks of delay and denial are represented by oft-used phrases that reflect, but do not state, the desire to maintain the status quo. Phrases like "We tried that once before." "That's in Joe's area." "We've got enough to do now." "Let's not go too fast." "That's too minor to worry about." "We've got enough projects already."

None of these dodges, alone, seems dangerous or unrealistic. Each, however, has the likely result of stopping the idea because each implies little supporting interest on the part of the speaker. This kind of response from management constitutes a sure, albeit slow, road to stagnation and, unchecked, can change a promising talent into a no-man: the manager with a closed mind who can invariably invent all the hypothetical reasons why an idea cannot work or should not be used. Additionally, of course, the change into the no-man is accompanied by the status quo decision—or, worse, indecision. No manager should be unaware of the perils of this course of action/inaction.

So what should the manager's role be in the handling of ideas? He should establish an encouraging, innovative climate. He should consciously work to acquire the positive approach, which requires objective evaluation

prior to decision. He should look for opportunities to foster creative thinking and the innovative approach to the requirements and problems of the organization.

Candidates for challenge are unlimited in every organization. Value management can be applied to everything done by or required of the organization. It certainly warrants consideration and use by the manager interested in efficiency.

Among the innumerable procedures, processes, directives, policies, and the like that an organization entails, haven't each of us mentally challenged literally hundreds of requirements during our lifetime? All that value management does is apply purpose and discipline to the challenge, periodically. Perhaps some time should be devoted daily, certainly at least weekly, to consciously applying the value management concept. Many efficiencies may be realized.

For example, almost every organizational element has its own operating instructions supplementing those of higher echelons of authority. Often these are justified in many ways, and there is no question that some are truly required. There are some which, just as surely, are needless, wasteful, and irritating. Others do not contribute sufficiently to the mission to warrant their retention. The obvious need is to review and challenge all such operating instructions and then take the intelligent action indicated by the value management analysis. When it is determined that a local operating instruction is needed, the manager must then decide what should be said in that instruction. The usual tendency is to write in detail—"The people won't understand if I don't"—but this tendency must be overcome. Instructions, policies, and other rules or directives should be written to direct what must be accomplished; the details should be left to the discretion of the doer.

The value manager writes new directives this way, and he rewrites in this way those existing ones which survive his challenge.

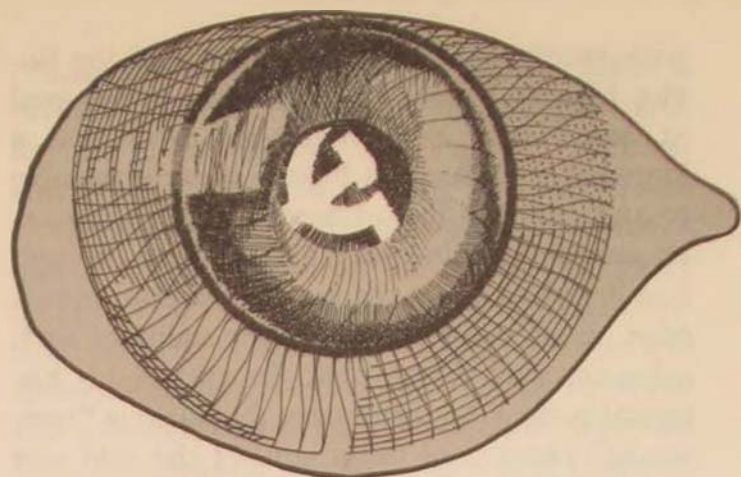
Policies, rules, directives, and instructions may be likened to specifications in that they describe an end result and its characteristics. This form of direction offers tremendous aid when wisely accomplished. But when we do not accomplish it wisely, it often becomes a monster. Someone once said, relative to unwise requirements, that an elephant is a mouse built to government specifications. We don't need many elephant mice, and we would all agree that an elephantine result for a mouse requirement would be a waste of resources. This, basically, is where value management pays: we keep requirements and resources in tune with the goals and objectives through continuing analyses and challenges.

Value management has applicability in any area and at every level of managerial performance. It is not a concept applicable only to the top man or only to technically oriented organizations. It can be effectively used by first-line supervision as well as by an organization's chief executive. Obviously, though, it works best when it has boss interest, that is, when each level works with the knowledge that the boss is interested in increasing the value return of all management efforts.

CHALLENGE requirements and things that are making demands upon your resources! Ask the vital value management questions and continue asking them until the answers enable a value judgment. Make your management techniques produce optimum return from only those resources necessary to accomplish the defined objectives or goals. Make value management your plan for today and tomorrow.

School of Systems and Logistics, AFIT

Books and Ideas



COMMUNIST-WATCHING ON A GLOBAL SCALE

DR. KENNETH R. WHITING

IN THESE DAYS when so many books about the Soviet Union and Communism in general are exercises in self-flagellation, it is a relief to find two writers who regard the leaders in Peking and Moscow as still interested in making life uncomfortable for the "imperialists," especially the Americans. Foy D. Kohler, former U.S. Ambassador in Moscow, concentrates on Soviet policy, while Brian Crozier takes on world Communism as a whole.† Some reviewers will probably classify both books as too "hawkish" or as outdated "cold warrior" stuff, but to this reviewer they are cool assessments of the real world, not the world some would postulate on no other grounds than it would be more pleasant if such a world existed.

Kohler's credentials as a Kremlin-watcher are impeccable. He was Counsellor in the U.S. Embassy in Moscow for two years and Ambassador for four, and his other qualifications, which he lists on page x of the Preface, are impressive indeed. A professor at the University of Miami for the last three years, he

had the opportunity to write this book in a scholarly environment; but fortunately that environment has not spoiled his easy style of writing.

In his Introduction he lists some of the fundamental factors the citizen needs to keep in mind while examining Soviet policies: first, the disparity between the urban-industrial Soviet Union and the backward rural segment of the nation; second, the influence of the past on current Soviet life and politics; third, the monopoly of power in the hands of a minority (the Communist Party apparatus); and, fourth, the enormous size of the U.S.S.R. He then devotes his first five chapters, about 100 pages, to the historical development of Russia from the founding of the Kievan state to the Khrushchevian period, or some 1200 years. Unfortunately the historical survey is so abbreviated that it is more likely to bewilder than enlighten. For example, in a relatively short paragraph on page 25, he manages to dispose of Herzen, Chernyshevsky, and the revolutionary movement under Nikolas I and Alexander II. Since the libraries are filled

† Foy D. Kohler, *Understanding the Russians: A Citizen's Primer* (New York: Harper and Row, 1970, \$10.00), xix and 441 pages.

Brian Crozier, *Since Stalin: An Assessment of Communist Power* (New York: Coward-McCann, 1970, \$6.95), 247 pages.

with excellent histories of Russia and the Soviet Union, Kohler's contribution is minimal at best. There can be no argument that a knowledge of Russian history is indispensable to an understanding of Soviet policies, domestic and foreign; but such a fast gallop through a millennium is not the way to get that knowledge. Kohler does point up the value of such a background when, near the end of his historical survey, he scrutinizes the various "revisionist" versions of the origins of the cold war and puts his finger on their main weakness:

In the last analysis, they all share one basic and mortal defect. This is their authors' ignorance of the other half of the equation—the nature of the Soviet system, and in particular the necessity of "legitimacy" for Communist minority rule in the Soviet Union. These revisionist writers have thus been unable to understand the inexorable compulsions that caused Stalin to make the decisions he did make in the conduct not only of foreign but also of domestic affairs. (p. 105)

Beginning with Chapter VI, however, he gets into the meat of the book, an analysis of how the Soviet state is ruled and what its foreign policies have been, are now, and will probably be in the immediate future. This segment of the work, three-quarters of the total, is his real contribution. In Chapters VI and VII he analyzes the strengths and weaknesses of Nikita Khrushchev's reign and then describes many of the leaders now charged with Soviet policy—these appraisals often reflecting his personal meetings with Soviet leaders. The next three chapters are devoted to the Sino-Soviet split and the fracturing of the Communist monolith, i.e., polycentrism. Chapters XI through XVI deal with Soviet foreign policy in recent years, a *tour d'horizon* in which he describes a series of U.S.–Soviet confrontations, the German problem, and Soviet policies in Latin America, Southeast Asia, and the Middle East. In an Epilogue he pulls the whole thing together and even indulges in a little mild crystal-balling.

Since all this coverage is encompassed in some 300 pages, the pace is rapid and the details sparse, but the value lies in Kohler's acute evaluations of why certain Soviet moves were made in the world arena. Firsthand acquaintance with the Soviet leaders who were determining Russian policies in the 1960s gives his account a credibility often lacking in academic works. After all, an ambassador who in 1964 had over fifty microphones dug out of the walls of the U.S. Embassy in Moscow is not likely to regard Soviet-American relations as a contest governed by the diplomatic equivalent of the Marquis of Queensberry rules. Time and time again in his analysis he points out how hard-nosed the Soviet leaders really are, how the present members of the Politburo were mostly trained under Stalin, and how convinced they are that "History" is inevitably on their side in their rivalry with the United States.

It is this last conviction, the messianic concept of victory in the world revolution, that poses a real dilemma for the Soviet leaders, since the pursuance of that objective tends to conflict with the promotion of Soviet national objectives on many occasions. Furthermore, since Moscow lost its monopoly of leadership within world Communism, there is probably a lurking suspicion in the Kremlin that a Communist victory on a global scale could easily present as many problems as does the present state of affairs. The Moscow-Peking tensions are a vivid example of how the facts of nationalism have obfuscated the rosy visions of Marx and Lenin about a conflict-free Communist world. The frenetic efforts of the Kremlin leaders to reunite the Communist movement under a single leadership (Moscow's, of course) seems destined to failure. All the Kremlin's men cannot put that Humpty-Dumpty together again.

Kohler sees little chance of a "liberalization" of the regime coming to fruition in the Soviet Union. Since the Communist apparatus needs the existence of a bogeyman on the

outside to justify the oppressive institutions on the inside, Moscow's anti-American propaganda will continue. Kohler puts it succinctly in the following passage:

Thus, as long as Communism endures—and this is likely to be a long time—free societies will be faced with the direct challenge of a relentlessly hostile political system, established in the heartland of the great Eurasian land mass and reaching out from there to spread its ideology and its power to all parts of the earth. It behooves us to know and understand that system. Indeed, such knowledge and understanding may be a matter of freedom or slavery, or even of life and death. (p. 420)

BRIAN CROZIER, author of eight books, former foreign correspondent, one-time political affairs editor of the prestigious *Economist*, and now Director of the Institute for the Study of Conflict in London, is an old hand at the fine art of revolution-watching on a global scale. In one of his early books he states that he "first became rebel-conscious in Indonesia, Malaya, and Indochina in 1952. Since then I have taken every opportunity of meeting rebel leaders and studying rebellions, either by direct observation or by reading."¹ His "direct observation" included interviews with Ho Chi Minh, Sihanouk, Souvanna Phouma, Nasser, and many others. In 1963 he published a study on the emerging nations, probing the problem of how the newly independent countries were faring politically and economically and their future prospects.² In 1965 came his little book on Southeast Asia, in which he pointed out that an "American retreat from Vietnam might bring peace—under Communist rule—to Vietnam and its neighbors. But in strategic terms, it would be a defeat of the first magnitude for the West as a whole."³ In sum, Mr. Crozier is very knowledgeable on the subject of revolution-making, Communist-controlled and otherwise, and he has a most definite point of view.

Like Caesar's Gaul, Crozier's *Since Stalin* is divided into three parts, entitled, with a singular lack of originality, "The Past," "The Present," and "The Future." The Crozier version of the past begins with Khrushchev's famous indictment of Stalin at the Twentieth Party Congress on 25 February 1956, or as our author puts it: "The Idol Toppled." He sees tremendous repercussions emanating from Nikita's denigration of his former chief, who had been the supreme authority in world Communism for over a quarter of a century. Mao Tse-tung, not consulted or even forewarned about this supreme effort in washing Communist dirty linen in public, was appalled, although it probably only reconfirmed his low opinion of Nikita's dialectical expertise.

The most immediate result of the idol toppling, however, was the explosion nine months later in the Soviet satellites, first in Poland and then in Hungary. The nonruling Communist parties, especially those of Italy and France, were still straining to swallow the denigration of Stalin when they had to explain the ruthless use of Soviet tanks in Budapest. Togliatti, head of the better than two-million-strong Italian party, however, used the Khrushchev speech to further his own political fortunes. On 17 June 1956 he declared that the Soviet model was no longer obligatory for Communist parties outside the Soviet Union and that world Communism was becoming *polycentric*, his euphemism for Khrushchev's "different roads to socialism."

Crozier does well to use 1956 as the key date, since it was in that year that Moscow called into question the desirability of emulating a system that had spawned a Stalin and tacitly capitulated to the nemesis of a unified Communist world: plain, old-fashioned nationalism. (The attempt to cover the nakedness of the capitulation by the use of the term "polycentrism" was a scanty fig leaf that fooled few.) Indeed, Moscow's realization of the attractiveness of nationalism led in 1960 to a new criterion for nations in the Third

World to be eligible for Soviet support and largesse: any state that was defending its political and economic independence against imperialism and guaranteeing "democratic rights," i.e., permitting the organization of Communist parties, could now call upon Moscow for help inasmuch as it was automatically designated a "national democracy." This development was nothing more than a reversion to Lenin's old concept, enunciated in 1920, that a two-stage revolution was necessary in colonial and semicolonial areas: first the "war of national liberation," largely conducted by the national bourgeoisie; then, at some later date, the socialist revolution.

Having set the stage, Crozier then goes into the major section of his book, "The Present," some sixty percent of the whole. He begins with a brief rundown on the Soviet economic performance over the last decade, pointing up its strong position in heavy industry and its inglorious exploits in the areas of consumer goods and agriculture. He has great fun with Khrushchev's 1961 boast that the Soviet Union would surpass the United States in per capita industrial output by 1970—a prediction that now shares its author's oblivion in the U.S.S.R.

Communist China is then analyzed in a similar fashion. The absurdities of the Great Proletarian Cultural Revolution and its dénouement, the use of the PLA as a governing force, are described succinctly. China's economic and technological progress over the last two decades leaves Crozier unimpressed; but the comparison between China and Japan is a little unfair, considering the stage of industrial development of each in 1949.

In a rather long section on the European satellites, Yugoslavia, Cuba, and North Vietnam, he sees all the economic, social, and bureaucratic weaknesses of Communism magnified in these smaller versions of the model, the Soviet Union.

The rest of "The Present" is devoted to the problems now bedeviling the various revolu-

tionary movements throughout the world. For example, there is what Crozier calls "competitive subversion," or the struggle going on amongst the Muscovite-inclined Communists, the Maoist-inclined Communists, the Fidelistas, and the New Left. This phenomenon is especially evident in the struggles to control various "front organizations" such as the World Council of Peace, youth organizations, Communist-controlled labor movements, etc. As Crozier points out:

The spectacle of Chinese delegates thumping the table, grabbing the microphone, shouting to drown the Soviet spokesmen's voices, had a high-audience value against the grey background of monotonous anti-Western resolutions and speeches. (p. 120)

Soviet control of front organizations was not helped by the invasion of Czechoslovakia and the ensuing "Brezhnev doctrine" in 1968. The inability of the Kremlin to control world Communism is also evident in the recent conflicts within the powerful French and Italian Communist Parties (CP's). Waldeck-Rochet has tried hard to paper over the splits emerging as an aftermath of Czechoslovakia, even to the point of expelling Roger Garaudy from the Politburo in February 1970, but the discontents are still seething beneath the surface. Luigi Longo, in very un-Communist fashion, is allowing dissident voices within the Italian CP, but Crozier feels that the changes in that party are only *tactical*, not *doctrinal*, i.e., not real, only apparent.

Crozier's discussion of the groups of revolutionaries he calls "Fundamentalists" is especially interesting. These groups vary from the old Trotskyites to the vague collection of movements coming under the general rubric of "New Left." On the whole, all give at least lip service to what they consider the fundamental truths of Marxism-Leninism, but most of them add new "truths," such as Maoism or Guevarism, or follow the teachings of Marcuse. Needless to say, these accretions to Marxism-Leninism disturb the Russians no

end. One example may suffice to point up how these new doctrines can conflict with traditional Communist teachings. According to the late Che Guevara and his semiofficial philosopher Regis Debray, it is not necessary to wait until all the conditions for making revolution exist; a guerrilla insurrection can create them. Both Moscow and Peking regard this concept as heretical. Marcuse, by his advocacy of student-led anarchistic violence and his lumping of industrialized Communist nations in with the capitalist ones, hardly gladdens the hearts of the elite in Moscow and Peking. They see the New Left philosophers as weakening the appeal of Marxism-Leninism. But, as Crozier points out, the resiliency of Communism is amazing. He describes it thus:

But the Communists have always shown capacity to weather such challenges and continue, by sheer persistence and organizational cohesion. The patience of organization men is their ultimate asset—one which ensures that in the long run Lenin and Stalin are more dangerous than Bakunin. (p. 168)

In his third section, "The Future," Crozier deals first with the Soviet power base, which he finds rather awesome, while a similar survey of the Chinese military posture does not impress him. He looks into the question of whether radical changes might occur in the Soviet Union or China and sees no chance of "liberalization"; but he does see an outside chance of change engendered by military take-overs. He also sees every reason for the repair of the present Sino-Soviet rift. As he puts it, ". . . China should avoid having enemies both on the landward and seaward sides. . . . One of the untrumpeted achieve-

ments of Mao Tse-tung is that he made enemies of both the super-Powers: America to the East and Russia to the West." (p. 183) Since Crozier firmly believes Mao to be mad, he has no trouble visualizing a more rational regime following the Great Helmsman's death.

Most of this section is devoted to Moscow's strategy for the 1970s inasmuch as the author regards Russia as the most important power center of Communism: "For if communism is ever to spread over all or most of the world, the chances, overwhelmingly, are that the prevailing variety of communism will be the Soviet kind." (p. 192)

THE Kohler and Crozier books together provide the reader with a broadly sketched picture of Communism on a global scale but with the emphasis on the main power base, the Soviet Union. Both authors strive to keep the more misty elements of Marxian dialectics out of their works and concentrate on the elements of power available to the various Communist regimes and their clients in the Third World. Both books are well worth reading.

If the authors seem to be overstating the Communist danger, remember that over a billion and a quarter people on the globe today have no chance to voice their opinion of their Communist overlords—a rather awesome record for a movement that first came to power just over a half-century ago.

Finally, both Kohler and Crozier write lively prose—no small boon for the readers of books on Communism.

*Air University Institute for
Professional Development*

Notes

1. *The Rebels: A Study of Post-War Insurrections* (Boston: Beacon Press, 1960), p. 7.

2. *The Morning After: A Study of Independence* (New York:

Oxford University Press, 1963).

3. *South-East Asia in Turmoil* (New York: Penguin Books, 1965), p. 198.

ANTITHETIC AMERICAN EXPERIENCES IN CHINA: STILWELL AND CHENNAULT

LIEUTENANT COLONEL GORDON K. PICKLER

FOR the last three decades acrimonious controversy has raged between the adherents of Major General Claire L. Chennault and the supporters of Chennault's implacable foe, General Joseph W. Stilwell. These two extraordinary military figures of World War II were the archetypes of contrasting attitudes engendered by American involvement with the Chinese Nationalists during the 1940s. Since then, two factions have formed—not only in the military but in the academic community—to give vent to their respective biases.

On one side, General Stilwell's views have been adopted by a host of critics. Their interpretation has been that the Kuomintang's unwillingness to change the traditional way of conducting military affairs was the principal cause of the Nationalists' defeat. The liberal wing of American academia has employed Stilwell's condemnation of the Chiang Kai-sheks and has found no positive aspects in the husband and wife's efforts to lead China out of its morass of problems. Those of the Stilwell persuasion denigrate Chennault as a notorious and unreasonable advocate of the use of air power in China.

On the other hand, the staunch partisans of Chennault (of whom there are still many to revere the memory of this air tactician and his efforts to build a modern Chinese air force)

decry Stilwell's obstructionism. They disparage the liberal wing's criticism of the Chiangs and point out that Stilwell thwarted every attempt to give substantial air support to the Nationalist military command in its sporadic attempts to stave off the Japanese. Because of the lack of experience in coordinating ground and air forces, the Nationalists were unable to use their air units effectively during the civil war.

A recent book has again stimulated serious dispute between the respective admirers of these two deceased military leaders. This study by Barbara Tuchman, the prestigious author of the Pulitzer Prize-winning *Guns of August* (1963), is very readable.† Regrettably though, this latest book, unlike that other work, shows her as extremely partisan. Mrs. Tuchman conceives of Stilwell and his experience with the Chinese as representing the essence of American involvement in China between the Revolution of 1911 and the end of World War II. The elaboration of her thesis results in a totally inaccurate impression. The fact is that American concern with the Chinese army only commenced with the arrival of Stilwell in 1942, whereas the German influence had long been asserted and made a more lasting impression on the Chinese army. What was quintessentially American was not Stilwell or his attempts to reform the army, as Mrs.

† Barbara Tuchman, *Stilwell and the American Experience in China* (New York: Macmillan, 1971, \$10), xv and 621 pages.

Tuchman claims, but American involvement in Chinese civil and military aviation. If one were to single out a military figure as representative of "the American experience in China," Claire Chennault more than Joseph Stilwell would be that individual.

Mrs. Tuchman, with her skillful pen, has succeeded in presenting an absorbing but uncritical biography of Stilwell. In the process of using her main character's unpublished material, covering the 1920s and 1930s when Stilwell was a military attaché in China, she has endeavored to present new insights on military events in China. However, these same insights can be gleaned from the published papers in the official Department of State series, *United States Foreign Relations*. For the wartime years, when Stilwell was the Commanding General of the China-Burma-India Theater and American lend-lease coordinator for China, new documentary material has not been presented. Rather, Mrs. Tuchman has drawn heavily on Charles Romanus and Riley Sunderland's admirable three-volume work in the series of official Army histories, *The U.S. Army in World War II*. Moreover, in the array of archival and manuscript collections which Mrs. Tuchman lists in the bibliography, there is a noticeable lack of new material. Essentially, this is a hero-worshipping biography of Stilwell, with a smattering of Chinese history.

Mrs. Tuchman has fallen into the trap that ensnares most authors writing on American wartime relations with China: she embroils herself in the controversy between Stilwell and Chennault. Moreover, in totally embracing her subject's biases, she accurately depicts Stilwell's weakness—a total disdain for air power—which limited his ability to function as a competent military attaché or wartime theater commander. In this regard it is possible to fault Mrs. Tuchman's judgments, lack of insight, and misinformation on every page in which she discusses the emotional clashes that Stilwell

had with his opponents. (To give a rejoinder in each case would entail a discussion of great length.) Although she claims to expose Stilwell "warts and all," she provides little but venomous passages penned by Stilwell himself about other personages.

Stilwell's limitations are evident in his early tours in China and presage his shortcomings as a theater commander in the 1940s. For instance, in 1938 the Soviet Union was providing substantial assistance to the Chinese Nationalists to help them ward off Japanese air power. The Russians sent volunteer pilots, who engaged the Japanese in combat, and ground personnel to assemble and maintain the Russian light bombers and pursuit aircraft that were sent in large numbers. The hub of this activity was located at Lanchow. Washington officials, extremely interested in determining the extent of Russian aid and influence, ordered their representatives in China to assess the developments. As an attaché, Stilwell was ordered to proceed to Lanchow but balked at the instruction, preferring instead to observe infantry engagements between the Japanese and Chinese. According to Mrs. Tuchman, he became so agitated about the order that he considered retiring. She defends Stilwell's resentment and obstinacy in this instance, finding fault with the War Department for its failure to inform Stilwell of the vital nature of the mission. (p. 185) This was hardly the case, since attachés had been directed to report all the Russian air activity which they observed.

Stilwell's total disregard for the contribution that air power could make to the ground war in China is discussed in the book, but it is placed in the context of Stilwell's opposition to Chennault's extravagant proposals. The problem is that the uninformed reader is left with the impression that Stilwell's judgments and disdain for the use of air forces constituted essentially the correct stance. The fact that there were no channels for coordinating tactical air support for the ground forces is not brought out. When General Albert C.



Brigadier General Clinton D. Vincent, USAAF, Commander, 68th Composite Wing, and Major General Claire L. Chennault, USAAF, Commander, Fourteenth Air Force, with Lieutenant General Joseph W. Stilwell, USA, Commander, China-Burma-India Theater, at Kweilin Airfield, China, 1944.

Wedemeyer took command of American forces in China, he found that there were no air specialists on his predecessor's staff. Thus, it was impossible to carry out the coordination needed to help Stilwell's Chinese ground troops hold up the Japanese advance. (Letter, Wedemeyer to Major General L. S. Kuter, November 20, 1944, 145.81-171, Air Force Archives)

Regrettably, Mrs. Tuchman's concentration on Stilwell leads her to play down the role of other American military personnel in China who exerted great influence. She introduces briefly a Naval Attaché, Marine Colonel James McHugh, an unabashed air power advocate, who had first served there as an assistant attaché in 1937 and 1938. In this capacity he had worked unstintingly to gather intelligence information about Japanese aircraft. Madame Chiang had provided him with a special pass authorizing him to travel about

the countryside to examine downed planes. Chennault, for whom he had high regard, gave him a mechanic to assist in gathering, dismantling, and examining fragments of aircraft parts such as bearings and crankshafts as well as bombsights and navigation equipment. McHugh also went about China taking pictures of the Russians' aircraft and reported on their activities in vivid detail. His intelligence reports, now filed in the Air Force Archives at Maxwell, are well written and provide a rich source of information on the air war in China.

Stilwell had resented McHugh's close relationship with the Chiangs in the 1930s. When the Marine returned to China in the early forties, he renewed his friendship with the Chiangs and tried to exert influence on Chennault's behalf to the detriment of Stilwell. Stilwell's attitude toward McHugh led General George C. Marshall to believe that McHugh had a strong pro-Nationalist orientation and



General Stilwell, preparing to inspect the front lines of the Tenth Army under his command, checks a map with Colonel William C. Bentley, Air Officer of the Tenth, who piloted him, just before taking off from Okinawa in an AAF L-5 cub plane to fly over the battleground.

an overly friendly relationship with the Chiangs. As a result, General Marshall obtained assurances from the Navy Department that it would prohibit McHugh, who was on his way to the United States, from ever returning to China. (pp. 338-39) It is unfortunate that Mrs. Tuchman, who had access to McHugh's papers at Cornell University, did not see fit to focus more attention on this most interesting military representative.

In chronicling Stilwell's innumerable grievances and relations with Chennault, Mountbatten, Wavell, Chiang Kai-shek, and others, Mrs. Tuchman sides with her subject. She allows Stilwell, always the aggrieved party, to levy accusations and charges, yet she does not present the other side.

Chennault was a close second to Chiang as the character whom Stilwell vilified most. Although he was Chiang's Chief of Staff for Air, Chennault was subordinate to Stilwell, the

commanding general of the theater. The two Americans incessantly vied for their projects: Stilwell to revamp the Chinese armies and retake Burma, Chennault to build up the Chinese and American air forces in China. To further their projects, each needed to gain the lion's share of the supplies that were being flown over the Hump from bases in India and Burma. Eventually, the supply disputes had to be settled in Washington, where each had influential supporters and detractors. The presidential decision to emphasize air operations, in effect lowering the priority to reform and equip the Chinese armies, was a vital point in the controversy. In presidential briefings by the two rivals, Chennault was the more persuasive. Stilwell, Mrs. Tuchman concedes, did not argue effectively. But while Chennault is allowed a degree of professional skill, he comes off poorly in the book as a megalomaniac obsessed with the idea that he could bring

about the defeat of the Japanese Empire with a relatively small air force based in China. Undoubtedly, Chennault's enthusiastic plans were too grandiose and full of fallacies. Stilwell apparently was correct in opposing the use of bases in China against Japan, for if the Japanese thereby suffered losses, they would open an offensive to take the airfields, and the Chinese army would be unable to save them. Yet there is probably a measure of truth in Chennault's allegation, made in his *Way of a Fighter*, that Stilwell deliberately withheld aid until he knew it was too late to save Kweilin Air Base. Stilwell was a man intent on insuring the correctness of his policy. (pp. 297-302)

Mrs. Tuchman uses Stilwell's diary notations and innuendoes to insinuate that Chennault was profiteering from a prostitution ring in the system of hostels which the Chinese ran for the Fourteenth Air Force. Her method of

footnoting makes it impossible to ascertain whether a subsequent investigation established Chennault's culpability in this nefarious affair. (p. 378) She then asserts that Chennault's financial operations in China were one cause of General Arnold's disfavor and determination to replace Chennault in July 1945 with General George E. Stratemeyer. The fact is that Arnold's decision had nothing to do with Chennault's wrongdoings, if any, or his going outside the chain of command to obtain backing for his plans. (p. 520) Rather, Arnold felt that Stratemeyer was more capable of directing aerial logistics, which was the most likely type of air operations to take place during the rest of the war. (Letter, General H. H. Arnold to Lieutenant General Albert C. Wedemeyer, June 17, 1945, 825.161-1, Stratemeyer's Personal File, Air Force Archives) This is one example, among many, that indicates the au-



thor's tendency to rely on one convenient source—the Stilwell collection at Carmel, California. These documents prove to be a far from impeccable source for interpretation.

Tuchman, in repeating Stilwell's allegations and disparaging remarks, levies accusations against many highly placed officials. For example, she suggests that President Roosevelt yielded to the will of Madame Chiang in ordering immediate use of the C-46 cargo transport to fly the Hump before the plane's airworthiness had been ascertained. She repeats Stilwell's claim that flaws in the aircraft design, which became apparent in turbulent conditions associated with flying the Hump, "proved lethal for many fliers, further embittering the already sour morale" of the Air Transport Command. (p. 352) This simply was not true according to many members of the Hump Pilots Association.

STILWELL played a negative role during much of his time in China. He expended a great deal of effort combating attempts to increase the size of Chinese and American air forces and sought to place restrictions on all aid in order to coerce the Chinese into reforming their armies. This policy finally culminated in the disruption of relations between Chiang and Stilwell. After two years of resentment and animosity, the situation reached an impasse, and Stilwell was recalled by Roosevelt.

The manner in which Mrs. Tuchman treats the incident which led to Stilwell's recall is in keeping with her biased portrayal of him. Roosevelt had been pressuring Chiang to place Stilwell at the head of all Chinese and American forces, but without success. Finally, the President sent Stilwell a telegram for delivery to Chiang, indicating that no further

Lieutenant General Henry H. Arnold, Commanding General, Army Air Forces, with General Stilwell, Brigadier General Clayton L. Bissell, and party, on tour at an air base somewhere in China, February 1943 . . . Chennault and Stilwell return from Kweilin.



delay was to be tolerated in giving Stilwell this command. It was this incident—Stilwell's delivering of Roosevelt's ultimatum—that exacerbated relations beyond repair. Stilwell delivered the ultimatum to Chiang in a jubilant and vengeful spirit, without any semblance of softening its effects.

The author's handling of this one incident is typical. (p. 493) General Patrick Hurley, Roosevelt's special envoy to China, was in a conference with the Chinese, negotiating the granting of just such a commission to Stilwell, and witnessed Stilwell's presentation of Roosevelt's message. However, Hurley is only allowed to speak from a footnote, thus depreciating his validity as a reliable reporter. Tuchman charges Hurley with giving highly dubious testimony in the congressional hearing that followed the Communist take-over of China. Perhaps the tone of those hearings was not conducive to testimony free of emotion and bias. However, General Hurley later maintained, in an interview to members of the U.S. Air Force Historical Division in January 1949, that Chiang was about to confer full command of the Chinese armies upon Stilwell. But Stilwell would not be dissuaded from delivering the degrading ultimatum. Although he was in a precarious position career-

wise, still he would deflate the Generalissimo's ego and embarrass him as head of state. Stilwell celebrated his short-term victory in malicious doggerel about Chiang in which he called the Chinese leader a "little bastard." (p. 494) Inevitably, Washington removed the frustrated and inept general from the Chinese scene.

To the end of the book Mrs. Tuchman maintains that "Stilwell's mission was America's supreme try in China." (p. 531) Her continuing to press this thesis seems absurd when much of the evidence indicates that the building of a modern Chinese air force was the better expedient in lieu of reforming the army and thereby threatening the system of military bureaucracy. The effort to build a strong air arm represents the essence of American involvement in Chinese military affairs.

Mrs. Tuchman's well-written book has already gained the reading public's attention and will undoubtedly make a lasting impression. Unfortunately, her considerable skill as a writer will sway many who are not sufficiently versed in modern Chinese history to challenge her dubious contention that Stilwell best represents the American experience in China.

Tan Son Nhut Airfield, Republic of Vietnam

HAROLD E. HARTNEY: PURSUIT GROUP COMMANDER AND AUTHOR

DR. JAMES J. HUDSON

MANY students of World War I consider the 1st Pursuit Group the finest air combat force put into the field against crack German *Jagdgeschwaders* by the fledgling U.S. Air Service. The roster of this highly effective fighter organization contained such names as Eddie Rickenbacker, Frank Luke, James Norman Hall, Quentin Roosevelt, Douglas Campbell, Raoul Lufbery, Reed Chambers, James Meissner, Wilbur W. White, and Alan Winslow; but the man who left his imprint deepest in the soul of the unit was a Canadian, Lieutenant Colonel Harold E. Hartney. As group commander during the last three months of the war, he transformed the 1st Pursuit Group from a good outfit to a superb one. His book *Up and At 'Em*, † the story of his own and the group's activities in World War I, proved to have value to fighter organizations in the Second World War.

Hartney was born in Pakenham, Ontario, Canada, on 19 April 1888. He graduated from the University of Toronto in 1911 and

some three years later took his law degree from the University of Saskatchewan. During his student days at the latter institution he served as a lieutenant in a Canadian military unit, the Saskatoon 105th Fusiliers. Shortly after the outbreak of the war the 105th was mobilized, and in May 1915 it was sent overseas as a part of the 28th Battalion, Canadian Infantry. Although recently married, Hartney eagerly accompanied his men to England. Much to the dismay of the Canadians, further training was required before they were transferred to the battlefields of France. It was during this period that Harold Hartney witnessed one of the early Zeppelin raids on the English countryside and was "bitten by the flying bug." He applied for a transfer to the Royal Flying Corps (RFC) and, after a wait of several weeks, was accepted in October 1915.

Training on Maurice Farmans (both "Longhorns" and "Shorthorns") and FE-2B pushers, Hartney made rapid progress toward becoming a full-fledged pilot. However, in Janu-

† Harold E. Hartney, *Up and At 'Em*, edited by Stanley M. Ulanoff ("Air Combat Classics"; Garden City, New York: Doubleday and Company, Inc., 1971, \$6.95), xviii and 360 pages.

ary 1916 he was felled by rheumatic fever and spent the next several weeks in a British hospital. After still further rest under the watchful eye of his young wife Irene, who had arrived in England in the autumn of 1915, Hartney returned to flight training. Upon completion of his training at Norwich, the impatient young Canadian was posted to the RFC's Number 20 Squadron, then flying FE-2Bs on the Western Front. During the next several months Hartney participated in many photographic and bombing raids and chalked up five aerial victories over German aircraft. On 14 February 1917, while photographing enemy positions near Ypres, he was shot down by enemy fighters. Although Hartney was able to crash-land in friendly territory, he sustained severe injuries and was invalided to England, where he spent seven months recuperating.

Upon returning to duty in September 1917, he was transferred to the United States, with the rank of major, and ordered to take command of the 27th Aero Squadron, then training in Canada. A few weeks later the 27th was moved to Hicks Field near Fort Worth, Texas. It was at Hicks that the seasoned, hard-driving Hartney whipped the squadron into battle shape. Convinced that hundreds of hours of simple "banks and turns" were of little value, the wiry, mustached major drove his pilots through one emergency situation after another—mock combat, acrobatics, forced landings. (Those responsible for fighter training in World War II did not miss this technique.)

In February 1918, after some five months of rigorous training, the 27th Aero embarked for Europe. The squadron was scheduled for further flight training at Issoudun, France, but Hartney managed to convince Air Service authorities that his outfit was ready for combat, and on 1 June 1918 the 27th joined the 94th and 95th Aero Squadrons at Toul. These units, plus the 147th, which arrived at the front at approximately the same time as the 27th, made up the 1st Pursuit Group, Ameri-

ca's only pursuit group in combat at that time. The 185th Aero Squadron, a night pursuit unit, became a part of the 1st Pursuit Group a few weeks before the end of the war.¹

Under Major Hartney's aggressive leadership (he scored his sixth victory during June), in the Toul operation and the Château-Thierry campaign the 27th became the hottest pursuit squadron in the American Air Service. Hartney protested vigorously when the group changed to Spad XIII's from the maneuverable little Nieuport 28s ("The thing flies like a bloody brick, you know," p. 183); but Billy Mitchell and the Air Service seemed to hold no grudges.

On 21 August, Hartney, soon to be a lieutenant colonel, was appointed commander of the 1st Pursuit Group—a position he was to hold until the end of the war. Believing strongly that combat squadrons should be commanded by active flying officers, he practiced what he preached while leading the 27th. (The U.S. Army Air Forces in World War II followed his example.) Even after he became a group commander, Hartney continued an active combat role, displaying "that dearest commodity in a leader of fighting men, a thorough knowledge of his profession gained by experience."² Hartney was respected by all his fighter pilots, and he handled with equal effectiveness the steady, orthodox fliers and the wild, undisciplined Frank Lukes. Following his example, all his squadron commanders—Rickenbacker, Meissner, Alfred Grant, David Peterson, Jerry Vasconcelles, among others—continued in fighting roles.³

After the war Hartney served briefly in the Office of the Chief of Air Service in Washington. During the 1919–1921 period he distinguished himself in numerous displays of Air Service equipment. Perhaps the most newsworthy of these was the great New York-to-San Francisco transcontinental reliability test in 1919. Many of the air war heroes participated in this effort, and for days the airplane

Flying the highly maneuverable Nieuport 28, which was prone to shed its upper wing fabric in a steep dive, Major Hartney's 27th Aero Squadron of the 1st Pursuit Group became one of the most successful fighter squadrons in the American Air Service during the Toul and Château-Thierry campaigns. . . . Later, the 1st Pursuit Group changed to the Spad XIII, like the one shown here carrying the personal insignia of its pilot, Lieutenant Robert Souberin, formerly of the Lafayette Escadrille. Major Hartney opposed the change, preferring the tricky Nieuport to the rugged and unwieldy Spad. . . . Frank Luke, the tempestuous "balloon buster" from Arizona, who won the Medal of Honor for his exploits, stands beside one of his downed victims. He was officially credited with 18 victories before his spectacular death on 29 September 1918.



held the public eye.⁴ By 1921 Hartney came to the conclusion that he could best serve aviation outside the military service. In his words, "I resigned from the regular army and gave my whole enthusiasm to the building of air consciousness on the part of the public." (p. 299) After his release from the Air Service, he was instrumental in organizing the National Aeronautical Association, and for several years he served as its general manager and secretary. In addition, he helped found the Civil Affairs Division (one of the ancestors of the Civil Aeronautics Administration) and served as technical consultant and counsel for scores of aeronautical firms and agencies. Not the least of his contributions to aviation awareness were his books and articles. His *Up and At 'Em* (first published in 1940) has recently been reprinted in Doubleday's Air Combat Classics Series.

Up and At 'Em is more than the thrilling combat memoirs of Harold Hartney. It is also the story of the 1st Pursuit Group, the first American fighter group to engage the enemy. Led by such pilots as Lufbery, Luke, and Rickenbacker, the 1st Pursuit Group boasted of more aces, saw more action, and gained more victories than any other American group in the war. Despite an occasional awkward sentence and frequent editorial remarks, the author manages to capture the tension and excitement of one of the most stirring episodes in American military history. In his words, "It was a great wild game, the sport of sports." (p. 145)

The first seven chapters of the book deal with Harold Hartney's own career in the Canadian Army and with the Royal Flying Corps. The next seven chapters tell the story of the 27th Aero Squadron and the 1st Pursuit Group. From the relatively "quiet" Toul sector, the group moved to Château-Thierry and was thrown against some of the best *Jagdstaff-*

flen in the German Air Force. The experience was bloody, but the Americans learned their lessons well. It was around the survivors of the Marne inferno that the Air Service built for the autumn campaigns coming up. At Saint-Mihiel, American units fighting alongside their French and British allies began to look like an effective force. In the mud and rain of the Meuse-Argonne offensive, American pursuit squadrons proved worthy of their opponents in every way. One chapter is devoted to the saga of Frank Luke and Joe Wehner, and another narrates the fantastic record of Rickenbacker. A final chapter, entitled "American Aviation in the Coming War," deals with the efforts of air war proponents in the period between the two World Wars and makes judgments as to the future role of air power.

Although *Up and At 'Em* is certainly one of the finest books on America's air effort in the First World War, the author, perhaps relying on memory alone, does allow some errors to creep into his story. For example, Hartney writes that Major John F. M. Huffer, the French-born American, succeeded Major Raoul Lufbery as commanding officer of the 94th Aero Squadron. (p. 139) Actually, Huffer was the first commander of this unit. At no time did Lufbery, the 17-victory transferee from the Lafayette *Escadrille*, command the 94th. Instead, he was the officer in charge of instruction for the 1st Pursuit Group until his death on 19 May 1918. No doubt the young pilots of the group looked upon the heroic Lufbery as the real combat leader.

Also, the author mistakenly states that the 94th and 95th Aero Squadrons were the only American units in the Zone of Advance during April 1918. (p. 198) The 1st Aero, a corps observation squadron, flew several reconnaissance patrols over the Seicheprey-Fliray area on 11 April,⁵ some three days before Alan Winslow and Douglas Campbell scored their spectacular victories over the Toul-Gengault airdrome. Perhaps Hartney meant to say "pursuit units."

Captain Jerry Vasconcelles and Lieutenant Donald Hudson, both aces with the 27th Aero Squadron before transferring to the 185th Squadron, stand beside a British Sopwith Camel, an excellent aircraft which, late in the war, was often used as a night fighter.



In another section of the book the author states that 1st Pursuit Group pilots Frank Luke and Eddie Rickenbacker were the only American airmen to win the Medal of Honor for combat flights. Surely he must have known that Lieutenants Harold E. Goettler and Edwin R. Bleckley of the 50th Corps Observation Squadron won the nation's highest award, posthumously, for their efforts to find the "lost battalion" (the 308th Infantry Regiment) during the Meuse-Argonne campaign.

The long Combat Report detailing the 27th Aero's flaming air battle on 1 August 1918 is erroneously ascribed to Lieutenant Robert W. Donaldson. (pp. 177-78) According to records in the Gorrell collection in the National Archives, this document was actually the Combat Report of Lieutenant Donald Hudson, who later became a six-victory ace with the 27th Aero.⁶

In discussing the death of Lieutenant William Taylor on 18 September 1918, Hartney writes that after this tragedy "the 95th did not lose a man, up to the end of the war." Casualty lists in the National Archives reveal the 95th had five other losses after that date.⁷

Hartney states that General Billy Mitchell visited the 27th Squadron on 13 July 1918 during the height of the Château-Thierry campaign. (p. 165) Mitchell was only a colonel at that time, but of course this kind of slip is easy to make when writing 22 years after the fact.

The author's aerial victory lists contain numerous minor variations from the official list published by the Air Service. For instance, Hartney credits Frank Luke, the "balloon buster," with 21 kills whereas the Air Service records give him only 18. Rickenbacker is credited with the destruction of 26 "Huns," although he was not given official credit for that number until January 1960—some forty years after the fact.⁸ These criticisms are nit-picking to say the least. Even writers in the last decade have not been able to agree on victory credits. In many cases several pilots

shared in a kill, yet all received full credit for a victory. Had the fractional credit system been used, Air Service victory lists would have been greatly modified. Recent research by this reviewer would seem to indicate only one-half of the approximately eighty aces in the U.S. Air Service really qualified for the title "ace." Only eleven of the twenty-six aces listed in the 1st Pursuit Group would have earned aceship had the fractional system used in World War II been applied.⁹

Hartney was certainly a man of strong views. His comment, "The Germans have always been, are now and will always be the great disturbers of the world" (p. 288), is understandable, since at the time *Up and At 'Em* was written the Second World War was already under way. Nonetheless, his tendency to stereotype nations detracts from his book. He glories in American "individualism" and British "unbridled daring" and "singleness of loyalty, sportsmanship, courage, independence, and doggedness." Many would disagree with his statement that "the French, like the Italians, are more brilliant in spots but after ten centuries of almost constant warfare and economic struggle their blood has stabilized and it is only the exceptional individual who, through the hotness of his Latin blood and the keen scientific brain to which he is heir, can rise above a mass mind perplexed by politics, labor disputes, political confusion and the inevitable social and mental hodgepodge which has been the aftermath of the French revolution." (pp. 123-24)

Stanley M. Ulanoff, editor of the 1971 edition of *Up and At 'Em*, has provided an Appendix filled with enough data, specifications, and details to warm the heart of all air war buffs. Perhaps the most useful is "The U.S. Air Service in the Great War," a 27-page item, reprinted from the USAF ATC Pamphlet 190-1, *History of the United States Air Force* (1961). There are also lists of leading Allied and enemy aces, illustrations of World War I squadron insignias, a detailed list of American

Harold Hartney, a lieutenant colonel and commander of the 1st Pursuit Group during the last three months of the war, destroyed six German aircraft during his career with the Royal Flying Corps and the American Air Service. . . . Aviation Field No. 3 at Issoudun, France, where many American pilots, forced to fly combat in foreign-built aircraft during the Great War, received special training after their arrival from the United States.



contracts and deliveries from 1917 to 1919, and some 40 black-and-white photographs. Certainly, students of America's first air war,

whether professional scholars or aviation buffs, will be grateful to Stanley Ulanoff and Doubleday for reprinting the Hartney classic.

University of Arkansas

Notes

1. "History of the 1st Pursuit Group," Correll Histories, Air Service, American Expeditionary Forces, Series C, IX, 6.

2. Kenn Rust, "Aces and Hawks," *Air Power Historian*, October 1962, pp. 217-18.

3. James J. Hudson, *Hostile Skies: A Combat History of the American Air Service in World War I* (Syracuse, New York: Syracuse University Press, 1968), p. 123.

4. Bruce Robertson, ed., *Air Aces of the 1914-1918 War* (Letchfield, England: Harleyford Publications, Ltd., 1959), p. 105.

5. "Tactical History of Corps Observation," Correll Histories, AS

AEF, D, I, 6.

6. See Lieutenant Donald Hudson's Combat Report for 1 August 1918 in "History of the 27th Aero Squadron," Correll Histories, AS AEF, E, VI.

7. See casualty list for the 95th Aero Squadron in "Victories and Casualties," Correll Histories, AS AEF, M, XXXVIII.

8. Maurer Maurer, "Another Victory for Rickenbacker," *Air Power Historian*, April 1960, pp. 117-24.

9. "Victories and Casualties," Correll Histories, AS AEF, M, XXXVIII.

KEEPING THE PEACE —AFTER A (U.N.) FASHION

COLONEL HAROLD L. HITCHENS

THERE has always been something fascinating about the idea of an international organization to maintain world peace just as a police force maintains order in a community. From the seventeenth century "Grand Design" of the Duke of Sully (or even earlier) to the founding of the United Nations, philosophers, Utopians, international lawyers, and even statesmen have dreamed of such an organization. Generally it embraced the idea of the "great powers" acting together against a common or definable enemy or to preserve order in their areas of common interest. To some extent the Concert of Europe in the nineteenth century answered this prescription, and the United Nations, as originally con-

ceived, was to be no exception. The great powers, the victors of World War II, acting together in the United Nations Security Council, were to maintain peace by ready forces taking common action against any disturber of international order.

Only in Korea, in 1950, was a semblance of this concept translated into reality. Since then, the limited peace-keeping actions of the United Nations have been largely under the auspices of the General Assembly, the "middle powers," or more often the Secretariat, under the guidance of an active Secretary-General. Why this change? Basically it took place because the only two really great powers found themselves on opposite sides, engaged in the cold war. Any

thought of their concerted action to preserve the peace had to be abandoned. A progressive "de-Americanization" of the United Nations also set in as U.S. confidence in the organization declined. To a great extent this disillusionment reflected the explosion in the membership of the General Assembly: so many new, small, unstable nations were admitted that the Assembly had come to represent a vast disparity between real power and voting power.

Gradually the United Nations began experimenting with the "peacekeeping" alternative to collective security. As Larry Fabian says in his recent book,[†] "peacekeeping" . . . required no finding that anyone was guilty of aggression, no application of armed force by the UN against a delinquent state, and no enforcement of political settlements on disputants not voluntarily accepting them." The U.N. thus assumed the role of an "impartial" intermediary in small conflicts or crisis situations. This meant that the military arm of the United Nations would not be, as originally envisioned, mainly the forces of the great powers. Instead, the peacekeeping role was assumed by a group of middle and smaller powers, and it became not so much military operations in the traditional sense as a matter largely of noncoercive presence and services.

Fabian's book covers this transition in great detail, from Secretary-General Dag Hammarskjöld's first departure from conventional collective security through the various national preparedness proposals reflecting U.N. concern for peacekeeping, and concludes with a number of "guiding proposals" for future preparedness objectives. It is interesting, if not puzzling, that so much active peacekeeping responsibility has been assumed by so few nations—mainly the Nordic countries and Canada. The peacekeepers are "warriors among

diplomats," says Fabian, reversing Robert Murphy's phrase; and despite all the space devoted to peacekeeping preparedness by Fabian, Boyd, and many others, it is not peacekeeping know-how that is in short supply so much as the diplomatic consensus to apply it.

Russian foot-dragging in peacekeeping has been influenced by the fact that all the first such operations coincided with U.S. aims and depended on U.S. support. One effect was that, in practice, peacekeeping became a part of the Secretary-General's functions. Recognizing this, in 1960 President Eisenhower pledged that "to assist the Secretary General's efforts, the United States is prepared to earmark also substantial air and sea transport facilities on a standby basis, to help move contingents requested by the United Nations in any future emergency." But President Kennedy in 1963 and the Secretary of Defense in 1968 both eliminated this active preparedness emphasis, merely noting that the United States was ready to provide logistic services and support for peacekeeping operations.

The detail Fabian lavishes on peacekeeping preparations is extraordinary—one section on preparedness is entitled, "The 38th Floor and the Administrators," and he devotes pages and pages to staff meetings and other details. At the end, however, he can only say: "What ought to be evident from this short survey of the three preparedness generations is that each has been the product of a specific set of factors and their interrelations." Is there any historical event or development about which this could not be said?

Like all writers on U.N. peacekeeping, Fabian cannot resist issuing a prescription for the future. His includes superpower disengagement from peacekeeping operations, formal abandonment of collective security, em-

[†] Larry L. Fabian, *Soldiers without Enemies: Preparing the United Nations for Peacekeeping* (Washington: The Brookings Institution, 1971, \$7.50), 315 pages.

phasis on what is involved at the national level, and providing the U.N. with adequate resources for planning peacekeeping. But, as Fabian says, we would then still be light-years away from “. . . a standing, internationally controlled and recruited peacekeeping force able to be dispatched on the U.N.’s own authority to trouble spots around the world.” The fact remains, Fabian goes on, that “. . . holders of the power, responsibility, and influence needed to bring such a permanent force into being unreservedly do not want one—and these include the U.N. and all of its important members.”

Another book on the subject† should be of special interest to Air Force readers, for the author, Colonel Boyd, not only studied U.N. peacekeeping as the Air Force Research Associate at Columbia University’s Institute of War and Peace Studies but was Deputy U.S. Air Force Representative and Chief of Staff of the U.N. Military Staff Committee during 1965–69. Boyd focuses on three major crises—Suez, the Congo, and Cyprus—and in each one considers the background of the decision to employ U.N. forces, the alternatives to U.N. involvement, and the legal bases for the peacekeeping operations. He examines the characteristics of each peacekeeping force, the problems of creating such forces, and their composition, organization, and command and control. He then discusses the concept of “preventive diplomacy” underlying peacekeeping operations, looks at the political, legal, and financial problems involved, and spends considerable time on the military readiness implications. He concludes that

. . . there are many things that can be done within the realm of the politically possible to improve the readiness posture of military forces earmarked for possible United Nations

use and to insure that field operations, when and if undertaken by these forces, have a greater chance for success.

He recommends that one key to getting such operations under way is to augment the staff of the Military Adviser to the Secretary-General and authorize him and his staff to initiate steps “along these suggested lines.”

BOTH AUTHORS are to be congratulated for having trod with relative surefootedness among the vast accretion of murky U.N. documents on peacekeeping. (Roselyn Higgins, incidentally, has edited two big volumes of them, with astute commentary.) Likewise, both Fabian and Boyd, along with other authors who have examined U.N. peacekeeping, naturally overstress what in the complicated history of our times is a relatively minor collection of activities. Indeed, with the lush flowering of new national entities after World War II and all the internal and external disorder consequent to their fragmented structure, absence of effective self-governing traditions, and narrow nationalist aims, the part played by U.N. peacekeeping would seem to have an even less significant future. But in the long history of humankind the trend has been toward larger and more effective social organizations. There is every reason to believe that international society will be no exception and that we shall see more substantial international organizations, with the armed forces needed to maintain world order. All of us have a stake in this, for if, as H. G. Wells said, “human history becomes more and more a race between education and catastrophe,” it is also a race between the forces of dissolution and anarchy and mankind’s capacity to develop large-scale effective organizations for the enforcement of peace.

Arlington, Virginia

† James M. Boyd, *United Nations Peace-Keeping Operations: A Military and Political Appraisal* (New York: Praeger, 1971, \$15.00), 261 pages.

The Contributors

The following are the contributors to the yearbook. They are listed in the order in which they were interviewed. The names are in the order in which they were interviewed. The names are in the order in which they were interviewed.



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The Air University Review Awards Committee has selected "The Commander and the Minority Mental Process" by Lieutenant Colonel Earl W. Renfroe, Jr., USAF, as the outstanding article in the November-December 1971 issue of *Air University Review*.

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