

# **ECONOMIC CONVERSION, DEMOBILIZATION AND REINTEGRATION**

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## **Summary**

Before the mid-twentieth century, with the exception of career military personnel, the transfer of human and material resources from military-serving to civilian-oriented activity at the end of hostilities was called “reconversion”. People and facilities that had been shifted to producing war materiel for a few years to support the military went back to what they were used to doing, designing and producing products for the ordinary civilian economy.

With the beginning of the long Cold War, a whole new set of military research, development and production enterprises arose, increasingly peopled with managers, researchers and workforces who had never done any civilian-oriented work. For them, military-serving activity was the norm. Transferring them to civilian-oriented activities was not reconversion, but “conversion” -- moving them into the milieu of an unfamiliar civilian economy. The enormous differences in style and character between the performance-driven, cost-insensitive world of the military sector and the cost-minimizing, acceptable-performance world of the civilian economy greatly complicated the transition. Retraining and re-orientation of personnel and dramatic reshaping of

facilities became a critical part of a successful transfer. There are two fundamentally different approaches to conversion: “internal”, in which people and facilities are transferred from military-serving to civilian-oriented activity without changing location; and “external” in which they are dispersed and reconnected to civilian activities elsewhere. The former is easier on the workforce, but because of differing military and civilian sector requirements, at least some conversion will have to be external, even with a well-designed comprehensive program of retraining and re-orientation.

The reintegration of demobilized citizen soldiers has always been less of a challenge in economically advanced, politically stable societies than in less politically cohesive countries with smaller, less developed economies. It is also easier where temporary soldiers are viewed as heroes returning from a popular war than when they have served longer or been part of a government or rebel army that has repressed and brutalized the public at large. In more difficult circumstances, effective demobilization has four main phases: assembly, in which the demobilizing forces are gathered together and disarmed; discharge; short-term re-insertion; and long-term reintegration.

## **1. Historical Background**

### **1.1. Before the Twentieth Century**

The idea of purposefully converting people and equipment from military-oriented to civilian-oriented activity is undoubtedly as old as warfare itself. Perhaps the most famous early allusion to the process is the oft-quoted prophecy of Isaiah in the Old Testament of the Judeo-Christian Bible, "And it shall come to pass in the last days...they shall beat their swords into plowshares, and their spears into pruning hooks: nation shall not lift up sword against nation, neither shall they learn war anymore."

Through most of history in most of the world, military forces were relatively small professional armies, set apart from normal civilian society. When the monarchies of Europe attacked France in the eighteenth century, determined to destroy the French Revolution, the French Revolutionary government raised a large army to defend the nation by mass conscription of the general population. From that point on, the citizen army became a permanent part of warfare, binding the civilian and military worlds more closely together.

### **1.2. The Twentieth Century**

Another major step in connecting those worlds was taken with the advent of World War I. Coming after more than 150 years of the Industrial Revolution, World War I was history's first industrialized war. Large armies of people who had been civilians until the war began were kept supplied for years with huge amounts of weapons, ammunition and other war materiel by the productive power of industry. The machinery of war had thus become dependent on the machinery of industry. When the war finally ended, the massive armies that had fought it were essentially disbanded. Millions of soldiers were demobilized and reintegrated back into civilian society.

When World War II erupted a scant two decades later, even larger armies were assembled, and economies were mobilized to support the war effort on a scale that dwarfed that of

World War I. World War II further obliterated the boundary between combatants and civilians. Until then, civilians were most often seen as either bystanders or as the spoils of war, not as legitimate targets of attack by the military of any "civilized" nation. But now the ground war moved right through heavily populated areas, engulfing whole cities in battle, and the air war saw wave after wave of deliberate attacks aimed at civilians in the cities where they lived and worked. Since the civilian labor force and the industries that employed them had become the backbone of the war effort, it was only logical that they had also become very important targets. As a result, whereas ninety-five percent of those killed in World War I were soldiers, nearly half of the tens of millions who died in World War II were civilians.

When World War II war ended, once again millions of soldiers had to be demobilized and reintegrated, but now the war-ravaged economies of Europe and Asia also had to be rebuilt, and industries had to be refocused on civilian production on a massive, unprecedented scale. In the U.S., the only major industrialized nation that emerged from World War II with its economy essentially intact, industries that had converted to military-oriented production in support of the war effort now reconverted to civilian-oriented production with remarkable speed and agility. In only one year, thirty percent of the economy was reconverted and millions of soldiers were demobilized and reintegrated without the unemployment rate ever rising above three percent.

### **1.3. The Cold War**

The Cold War soon became one of the principal elements of international relations and remained at center stage for more than four decades. In its service, the Western allies and their Eastern rivals maintained large and powerful military forces along with their vital support structures in industry and an extensive infrastructure of research laboratories and military bases. During the long Cold War, hot wars periodically erupted, waxed and waned, causing military budgets to rise then fall, but without any major attempt at systematic and permanent reductions in the size of military establishments or their industrial and scientific support base. There were cycles of expansion and contraction, but they were only temporary departures from a steady state of high military budgets that had become common in most of the world's nations.

As the Cold War came to an end in the late 1980s to early 1990s, a sustained, major reduction in global military spending began. According to the Bonn International Center for Conversion, world military spending fell by more than a third, from a peak of about \$1030 billion in 1987 to \$680 billion in 1997 (in inflation adjusted US dollars of base year 1993). The decline in world military spending reflected a considerable drop in the demand for both weapons and soldiers. Numbers of military personnel fell accordingly, but less sharply than spending, dropping from 28.8 million at the peak to about 20.0 million in 1997, a decline of just under 24 percent. In this environment of declining military spending, with reduced demand for weapons, military personnel and the infrastructure of military bases, the question of how people and facilities can be effectively transferred from military-serving to civilian activity once again came to the fore. But during the decades-long Cold War, a number of changes had occurred that made this transfer process considerably more complicated.

## **2. The Nature of the Problem Today**

### **2.1. Conversion and Reconversion**

In those countries with large and advanced military industries, most especially the United States and the former Soviet Union, there was a substantial divergence between the nature and mode of operation of the military-serving and the civilian-serving sectors of the national systems of industrial research, development and production. The output of war materiel that supported the militaries fighting World War II had been produced largely by enterprises whose personnel and facilities were accustomed to producing civilian goods. For a few years, they switched to making tanks instead of trucks, bombers instead of civilian aircraft. When the war ended, those firms needed to "reconvert" to what they had been doing before, to go back to "business-as-usual".

In the aftermath of World War II under the impetus of the Cold War, a whole new set of military research, development and production enterprises arose and grew over time, increasingly peopled with managers, researchers and workforces who had never done any civilian-oriented work. For them, military-oriented activity was not some temporary aberration; it was "business-as-usual". Even firms that served both military and civilian customers, such as the U.S. aerospace firm Boeing, kept their military products divisions carefully separated from the civilian side of their business.

At its best, civilian-oriented research, development and production aims at producing products of acceptable quality at the lowest possible cost. These products are expected to be reliable and function well under relatively predictable and benign operating conditions, but they must also be cheap enough for ordinary consumers to buy. Military-oriented research, development and production are driven by a very different goal. Since every increment of performance in a weapons system is considered to be potentially decisive in battle, there is great pressure to produce products that deliver maximum performance. Ideally, these products should also be capable of operating in hostile, often unpredictable environments with high levels of shock, vibration and stress, under a wide range of temperatures and pressures. Cost is almost never as important as performance.

The difference between the cost-minimizing, acceptable performance environment of the civilian world and the performance-driven, cost-insensitive environment of the military world grew wider in the last half of the twentieth century. It makes a very big difference in the skills and orientation of their workforces, and in the capabilities and cost of their equipment and facilities. This chasm must therefore be effectively bridged in order for people, equipment and facilities to be successfully transferred from the military to the civilian sector. This is an especially important problem when it comes to engineers, scientists and managers.

There was also a growing divergence of both product and process technologies between the military and civilian sectors. A World War II vintage bomber, for example, was not all that technologically different from a civilian aircraft of that day. But the technological difference between a modern jetliner and a B-2 "Stealth" bomber is enormous. This is the result of decades of specialized and separate military research, development and production.

For these reasons and others, the problem of smoothly and efficiently transferring personnel, equipment and facilities from military to civilian activities is no longer one of "reconversion", but one of "conversion". It is not a matter of going back to what is familiar, but forward into new territory. This has substantially changed the nature of the problem. So too has the growth of an extensive infrastructure of specialized military research facilities and a vast global network of military bases.

## 2.2. Demobilization and Reintegration

While analysts have paid considerable attention to the problem of military, industrial and base conversion, much less attention has been directed to the problems of demobilization and reintegration. The latter has not been all that great a problem in countries with large, well-developed economic and political systems, and generally cohesive societies. Soldiers leaving the military to return to civilian life are relatively easily absorbed. But in much of the less developed world, where few nations have large and advanced military industries or research facilities, successful demobilization and reintegration are by far the greater problems. That is truer the lower the general level of economic development, the more tenuous the national political and social cohesiveness, and the more common violent conflict. In Africa, for example, demobilization and reintegration are first order concerns.

Where soldiers are returning from service in a popular war, or are considered heroes by the local population because they were part of a widely respected defense force, reintegration will tend to be smoother and easier to achieve. If, on the other hand, the soldiers are returning from an unpopular war (such as American soldiers returning from Vietnam), or have been part of a government or rebel army that has repressed and brutalized the people of their own country (such as the Khmer Rouge in Cambodia), reintegration will be a much more difficult and lengthy process.

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### **Biographical Sketch**

**Lloyd J. Dumas** is Professor of Political Economy and Economics at the University of Texas in Dallas. Trained both as an economist and an engineer, his areas of expertise include: national and international security; human fallibility, terrorism and technological disaster; the economics of military spending; and economic transition and development. He has published more than 100 works in 11 languages in books and journals of economics, engineering, sociology, history, public policy, military studies and peace science, as well as such periodicals as the *New York Times*, *Los Angeles Times*, *International Herald Tribune*, *Science*, *Technology Review* and *Defense News*. His sixth book, *Lethal Arrogance: Human Fallibility and Dangerous Technologies*, was published by St. Martin's Press (December 1999). Dumas has spoken at nearly 200 conferences and special lectures since 1980, addressed the United Nations, testified at government hearings, and discussed the policy implications of his work on more than 200 TV and radio programs in the U.S., former Soviet Union, Canada, Europe and the Pacific. He served as Vice Chair of the Texas Governor's Taskforce on Economic Transition, and as consultant to the Los Alamos National Laboratories. In 1999 he co-organized (with Ali Mazrui) an International Conference on Peacekeeping, Development and Demilitarization in Africa, sponsored by the Rockefeller Foundation and the U.S. Institute of Peace.