

THE EVOLUTION OF MULTILATERAL EXPORT CONTROLS: A CRITICAL STUDY OF THE COCOM REGIME

TIMOTHY AEPPEL

With the increasing importance of high technology to the international economy, the need for effective export controls has been an area of increasing concern in recent years. The "Coordinating Committee on Export Controls" (CoCom), whose members include most of the NATO countries, has played an important role in controlling exports to communist countries. In this article, Timothy Aeppel argues that differences of perspective arising from the various "national styles" of CoCom member countries have reduced the effectiveness of CoCom. He then examines specific types of governmental disagreements about CoCom requirements, and discusses the ways in which those requirements have been circumvented. In conclusion, Mr. Aeppel asserts that for CoCom to overcome its internal disputes and remain an effective institution, concessions will have to be made on all sides.

I. INTRODUCTION

The Western alliance has been an exceptionally sturdy vehicle for advancing economic and military security in the advanced industrialized world. Despite occasional disputes, the allies are bound together by a wide range of shared economic and political interests. However, recent years have brought unequivocal changes in the international system, particularly the diminishing ability of the United States to dominate its European and Japanese friends. Nowhere is this more evident than in allied disputes over technology transfer to the socialist states. This facet of intra-Western relations has become explosive in the last half-decade, bringing into question the cohesiveness and viability of the alliance.

Timothy Aeppel is a candidate for the MALD degree at the Fletcher School of Law and Diplomacy.

The allies all agree that some form of control over the flow of military technology to socialist states is necessary. But that is where harmony ends. Problems arise in the "grey areas" surrounding this basic agreement — such as how "strategic" items are distinguished from harmless exports, the significance of East-West trade and its role in international politics, and even how technology itself is defined.

The key question being asked from Bonn to Tokyo, however, is how a collection of pluralistic societies such as the Western alliance can balance the competing needs of economic development and trade with pressing national security concerns. This article will consider how the West, which includes Japan for the purposes of this analysis, has sought to deal with this nettling question. It will first examine the origins of the current international regime governing strategic trade with the East, then show how conflicting national "styles" have created a crescendo of conflict among the allies and how these disputes have seriously weakened the existing regime of multilateral controls, if not the alliance itself.

The conflict over technology transfer to communist nations has grown along with East-West trade. Over the past 15 years, annual trade of the Council on Mutual Economic Assistance (CMEA) nations with the advanced industrialized countries grew tenfold — from \$3.5 billion to over \$35 billion.¹ When viewed in perspective, however, this surge in East-West commerce is still a trickle compared to trade among the Western nations and Japan. At the same time, the prospects for continued growth in East-West trade in the near term has dimmed, largely due to the shortage of hard currency in the East as well as the propensity of centrally planned economies for self-sufficiency.

While the Europeans and Japanese have held to a steady course of expansion in East-West trade, U.S. policy has been characterized by erratic shifts. Indeed, the Reagan administration appears to be taking the United States full-circle, back toward the Cold War-era policies of "economic containment". The root of the problem is that Americans have never viewed trade with the East as mutually beneficial. Instead, "such trade has usually been portrayed as one-sided, inherently concessional, and morally questionable."² The Europeans, in contrast, view trade with the East as a necessary and beneficial activity, both from an economic and political standpoint.

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1. Raymond Vernon, "The Fragile Foundations of East-West Trade," *Foreign Affairs* 57 (1979): 1035.
 2. Angela E. Stent, *Technology Transfer to the Soviet Union: A Challenge for the Cohesiveness of the Western Alliance* (Bonn: Europa Union Verlag, 1983), pp. 107-8.

This schism between U.S. and allied perspectives has made the establishment of effective controls elusive. Literature in the field overflows with examples of regulations made useless through conflicting national policies and gaping loopholes. One of the more colorful, recounted by former Senator Paul Tsongas, involves the efforts of Ethiopia's national airline to buy sophisticated Boeing 767 passenger jets. The U.S. refused the export licenses on the grounds that sensitive gyroscope technology embedded in the plane could make its way into Soviet hands via Africa. Like any snubbed shopper, the Ethiopians took their business elsewhere — in this case Paris — where they bought the French Airbus containing identical equipment.³ It seems the French also had access to the technology but did not consider it to be of strategic significance.

Such snafus point up the obvious: to be effective, export controls must not only be multilateral, but also founded upon mutually acceptable definitions. The U.S. is no longer the technological fountainhead of the world. Secretary of Commerce Malcolm Baldrige recently testified to Congress that whereas ten years ago American firms were on the cutting edge of 70 percent of the world's technologies, this figure now stands at 50 percent and is expected to slide to 30 percent by 1994.⁴ The rise of European and Japanese competitors has transformed an already tangled political issue into one with strong commercial implications.

These opposing forces collided head-on during the recent Urengoi pipeline dispute, when several European governments openly defied the U.S. embargo on energy-related equipment. This episode illustrates how East-West trade restrictions have gradually become a major snag within the alliance, even though they only marginally affect the Eastern consumers they are meant to inhibit. Hence, all indications are that without a major realignment of views between the U.S. and the other Western allies, continued conflict is inevitable. This should not be surprising, for, as former Secretary of State Henry Kissinger pointed out, "the perception of common interests is not automatic, it requires constant redefinition."⁵ In redefining the nature and purpose of export controls, the allies will need to develop a consensus over what purpose trade restraints are designed to serve, as well as how broadly they should be applied.

3. Jon Zonderman, "Policing High-Tech Exports," *New York Times Magazine*, 27 November 1983, p. 103.

4. Quoted in Warren Richey, "Controlling U.S. High-Tech Exports," *The Christian Science Monitor*, 16 May 1984, p. 16.

5. Henry Kissinger, speech, New York, 23 April 1973. Quoted in Henry A. Kissinger, *American Foreign Policy* (New York: W.W. Norton & Company, 1977), p. 112.

II. ORIGINS OF AN INTERNATIONAL REGIME

Nations have long sought to restrict trade with enemies during time of war, even to the point of blockading an opponent's ports and coastlines. In recent history, however, export controls between East and West have crept into peacetime policy, embodied in national regulations as well as a loosely organized international regime. At the same time, the concept of "war-related" goods has blurred, particularly since the emergence of military strategies which aim at disabling an opponent's economic infrastructure as well as military capabilities.⁶

Amid these changing conditions, the perception of threat from communist states has also been evolving. Uneasiness about trade with the East dates back to the first years after the Bolshevik Revolution. In 1924, for example, the Soviets began building wooden planes, using spruce imported from Washington state for the wings and fuselage. This prompted the then governor of Washington to dash off a telegram notifying the President of this apparent American contribution to the military capabilities of a communist state.⁷ The exports were not halted.

A turning point came after World War II when East-West relations became decidedly frosty just as the Western allies were busily constructing numerous international organizations. It was only a matter of time before the move was made to multilateralize export controls as part of the emerging American containment policy. Already in 1940, the U.S. had established unilateral restrictions which were extended in 1946 to include atomic energy materials shipped to any nation. In 1948, Washington clamped down with licensing requirements on most exports to the Soviet bloc and President Truman's cabinet recommended a program to harmonize U.S. policies with those of Western Europe and Canada.⁸ Out of this effort emerged a Coordinating Committee on Export Controls (known as CoCom) and its senior body, the Consultative Group, which began operations in 1950. Members include the NATO countries, except Iceland, and Japan. The organization, headquartered in Paris, is often characterized as "secrecy-obsessed" and indeed only the general outlines of its operations are widely known.

CoCom is not based on any treaty and is without formal structure other than that which has evolved over time. It operates as a "gentlemen's agreement" among the 15 member nations, requiring unanimity to make

6. For a more detailed discussion of the economic implications of the indirect strategy of war, see B.H. Liddell Hart, *Strategy* (New York: Praeger Publishers, 1954).

7. Anthony C. Sutton, *Western Technology and Soviet Economic Development*, vol. 1, 1917-1930 (Stanford, Calif.: Hoover Institution Press), p. 260.

8. Gary K. Bertsch, *East-West Strategic Trade, CoCom and the Atlantic Alliance* (Paris: Atlantic Institute for International Affairs, 1983), p. 14.

a decision but lacking the necessary mechanisms for enforcement. The central focus is a set of three "control lists": a Munitions List, an Atomic Energy List, and an Industrial-Commercial List. Although all three lists are regularly reviewed, the Industrial-Commercial List, which contains many high technology items of both commercial and military uses, sparks the most intra-allied conflict. This list itself is subdivided into three parts, with List I containing embargoed items which can only be exported after obtaining permission from CoCom.⁹

During its first decade, CoCom operated under a clearly perceived communist threat. This tended to unify the allied approach to export controls. Harmony with the American perspective was assured, however, by the dependence of the NATO allies and Japan on U.S. economic and military aid. This connection was underscored by the 1951 Battle Act which stipulated that allies violating the embargo would be cut off from U.S. aid. In addition, the early CoCom list was perceived to be of manageable size, containing clearly critical items, most of which could only be found in the United States.¹⁰

From the outset, the unanimity requirement built into CoCom tended to frustrate Washington's desire for more extensive controls. This led American policymakers to take actions which hastened the decline of CoCom unity. In November 1962, for instance, in an episode bearing stark resemblance to the recent pipeline debacle, the United States tried to block European exports of large-diameter pipe to the Soviet Union. Rather than risk taking the issue up within CoCom, where the unanimity requirement would have meant certain failure, the U.S. pushed the embargo through NATO. Britain, in particular, chose to ignore the NATO directive. The dispute delayed completion of the Soviet oil pipeline by perhaps a year, but at great expense to the alliance.¹¹

Since the end of the Korean War, the overall trend in CoCom has been toward liberalization and a shorter list of restricted items.¹² This effort was led by the Europeans and Japanese, while the United States continued to push for tighter controls. By the mid-1960s, however, the economic losses to the U.S. arising from broad unilateral restrictions were perceived to be becoming intolerable. The result was the U.S. Export Administra-

9. List I includes: metalworking machinery; chemical and petroleum equipment; electrical and power generating equipment; transportation equipment; electronic and precision instruments; metals, minerals, and their manufacture; chemicals and metalloids; petroleum products; rubber and rubber products.

10. Fred J. Bucy, "Technology Transfer and East-West Trade," *International Security* 5 (Winter 1980-81): 147.

11. Stent, *Technology Transfer*, pp. 81-82.

12. According to U.S. Commerce Department statistics, the number of items on the CoCom list has fallen from 270 in 1951, to 149 in 1976, to 124 today.

tion Act of 1979 (EAA 1979), which among other things abolished export controls on all American goods available from foreign suppliers, except those specifically defined as vital to U.S. security interests.¹³

While American policy was being reassessed, it became evident that the technological gains achieved by Japan and Western Europe made it easier for foreign exporters to supply goods embargoed by the U.S. This trend is reflected in the American market share of CoCom members' trade with Eastern Europe, which declined from 21 percent in 1948 to 7 percent in 1957-59 and 5 percent in 1967-69.¹⁴ U.S. slippage in the market of Asian communist nations was even more noticeable. Such trends underscored the growing ineffectiveness of American unilateral controls on a wide variety of goods.

In the early 1970's, expanded economic relations between the allies and the East reflected the détente policies which had come into vogue under the Nixon Administration. In a broader sense, however, the era represented America's only genuine departure from a traditional hardline on export controls. For the first and only time since the Cold War, U.S. trade policy conformed to the pragmatism of European and Japanese policy. The new "open-door" toward the East brought Soviet and East European scientists into the U.S. on an unprecedented scale. This prompted the U.S. Department of Defense to ask the Defense Science Board to examine what kind of technology these visitors could obtain. The result, known as the Bucy Report¹⁵, ranked legitimate channels of technology transfer according to relative effectiveness and found that personal contact led to the most efficient transfer.

The Bucy Report launched a wide-ranging reassessment of U.S. export control policy which would have considerable implications for the international regime. At the same time, concern was growing in the West, particularly the U.S., that the Soviets were using rapprochement policies to obtain military-related technologies. Although experts dispute the actual degree of Soviet dependence on Western technology, recent Administrations have chosen to emphasize the connection. Secretary of Defense Caspar Weinberger has commented: "Without constant infusions of advanced technology from the West, the Soviet industrial bases would experience a cumulative obsolescence, which would eventually constrain

13. Robert Hawkins and Thomas N. Gladwin, "Conflicts in the International Transfer of Technology: A U.S. Home Country View," in Sagafi-nejad, *Controlling International Technology Transfer* (New York: Pergamon Press, 1981), p. 228.

14. Wilbur F. Monroe, *International Trade Policy in Transition* (Lexington, Mass.: Lexington Books, 1975), p. 42.

15. Defense Science Board Task Force on the Export of U.S. Technology, *An Analysis of Export Control of U.S. Technology — A DoD Perspective*, (Washington, D.C., 1976).

the military industries. . . ."¹⁶ Other observers have argued just the opposite, emphasizing that the inefficiencies of the Soviet system have made it less able to absorb new technologies.¹⁷

As the CoCom regime entered the 1980's, a number of unresolved issues made the chances for effective export controls less likely. The crumbling of détente, together with the growing divisiveness within the alliance, foreshadowed an inevitable policy collision. A major sticking point had been a 1974 CoCom agreement aimed at limiting exports of high performance mainframe computers. The U.S. Department of Defense has long complained that this policy was not restrictive enough since it overlooked smaller computers with potential military applications. The U.S. imposed its own restrictions on the export of smaller systems and has pressured the CoCom allies to follow suit. The breakthrough came this past summer when the regime finally agreed on a comprehensive set of controls for computer technology. The general accord was reached on July 12 in Paris. The new guidelines slightly relax the controls on large mainframes while clamping down on the export of increasingly sophisticated personal computers and superminicomputers. The agreement is particularly significant since it is expected to serve as a model for accords now being negotiated in regard to other militarily sensitive technologies. Although this development gives the current situation a more optimistic outlook, serious problems remain unresolved.

III. NATIONAL STYLE IN EXPORT CONTROLS: THE ROOTS OF CONFLICT

The French are reluctant even to admit CoCom exists, much less discuss its policies. The U.S., meanwhile, is one of the few members which publishes information on the organization and publicly debates its functions. This difference in approach is more than just a quirk. The French penchant for secrecy, contrasted against the American demand for openness, illustrates one way differing national "styles" are expressed in the realm of export controls. Such contrasts offer a number of subtle explanations for the current conflict among the allies.

Although this section distinguishes American from European and Japanese styles, it is important to note the inherent danger in such an oversimplification. Each nation has its own cultural and political factors which influence policy decisions. For example, the Federal Republic of Germany's policy of *Osthandel* (trade with the East) is linked closely to

16. Weinberger's annual budget report to Congress, February 1982, cited in Stent, pp. 3-4.

17. Marshall Goldman, "Why Not Sell Technology to the Russians?" *Technology Review*, Feb./Mar. 1984, pp. 70-80.

intra-German relations. The French, meanwhile, are influenced by Gaullist traditions of uncompromising independence in foreign policy, while the Japanese remain cautious in their dealings with Moscow because of the unresolved Northern Territories dispute.¹⁸ For the purposes of this section, broadly considered national approaches will help to explain why the allies find it difficult to harmonize their export control policies. This will be done by examining the varying alliance styles as expressed through foreign policy, business-government relations, and bureaucratic structures.

The European style of dealing with the East has been to maintain a "dual strategy" in diplomatic and economic matters — keeping up military strength while at the same time maintaining open dialogue and commercial ties with Moscow and Peking.¹⁹ This approach is based on the assumption that East-West trade is a mutually beneficial activity, which opens up new markets to European manufactured goods in exchange for commodities in short supply in the West, especially energy supplies. At the same time, the Europeans have always had relatively limited, regional political expectations of détente. From their perspective, the Soviet Union has stuck to its commitments in Europe, even though it may have stepped on American toes in other parts of the world. This helps account for the consistency of European policy toward the East. The Japanese, meanwhile, have stayed aloof from the political entanglements of East-West détente, preferring to base their approach on expanding commercial links with individual communist nations.²⁰

The U.S., by contrast, has frequently jolted the alliance by pursuing what Secretary of State George Schultz has called "lightswitch diplomacy" — using East-West trade as an on-again, off-again tool in short-term political signalling.²¹ An example of this was the American grain embargo, instituted by former President Carter as "punishment" for a specific Soviet action — the invasion of Afghanistan. This American use of negative linkage derives from EAA 1979, which separates export controls created for national security reasons from those instituted for foreign policy purposes. National security controls are only supposed to be used when it is evident that an export would significantly contribute to the military strength of a potential adversary. Foreign policy controls, meanwhile, can be used only where necessary to further American foreign policy goals. According to a 1983 report by the Office of Technology

18. John R. McIntyre and Richard T. Cupitt, "East-West Strategic Trade Control: Crumbling Consensus?" *Survey* 25 (Spring 1980): 88-89.

19. Stent, *Technology Transfer*, p. 2.

20. McIntyre and Cupitt, "East-West Trade Control," p. 89.

21. George P. Schultz, "Light-switch Diplomacy," *Business Week*, 28 May 1979, p. 24.

Assessment, the 1979 law was designed to strike a practical balance between security needs and the "ability to use trade leverage in the conduct of foreign policy."²² No other CoCom member has legally recognized this distinction.

The underlying issue is differing views of what export controls are supposed to accomplish. During the frostiest days of the Cold War, under the sway of American domination, the CoCom controls were used as a form of economic warfare. Khrushchev is said to have once remarked that the U.S. should embargo buttons because they are used to hold up Soviet soldiers' pants. While this may be extreme, a 1983 RAND report on high technology trade points out that:

The danger is not so much the possibility of sudden and disastrous give-aways, but rather that high-technology trade may help the Soviets to upgrade over the longer term the traditionally neglected "civilian" industries that will provide broad, infrastructural support for new weapons systems tomorrow.²³

The U.S. has generally held to the position that export controls should be used to limit Soviet economic development, while the other CoCom members have tended to base their regulations on more limited goals.

The more liberal attitude of the Europeans and Japanese is usually attributed to their relative dependence on East-West trade. It has been estimated that the total economic activity resulting from machinery sales to the Soviets in 1978 amounted to only 0.09 percent of the GNP of the 14 major Organization for Economic Co-Operation and Development (OECD) nations.²⁴ The figure, however, obscures a much heavier reliance on East-West trade for certain members of OECD, with some influential industries especially involved, including steel. Indeed, in the case of West Germany, East-West trade accounted for over 6 percent of all foreign trade in 1980. Table 1 illustrates the differing degrees of dependence on East-West trade among the allies. Even with the lifting of the U.S. grain embargo in April 1981, American trade with the Soviets is less than that of the major industrialized nations of Western Europe and Japan. American non-agricultural exports to the Soviet Union represent

22. U.S. Congress, Office of Technology Assessment, *Technology and East-West Trade: An Update* (Washington, D.C.: GPO, 1983), p. 3.

23. Thane Gustafson, *Selling the Russians the Rope* (Santa Monica, Calif.: The RAND Corporation, 1981), p. vi.

24. Philip Hanson, *Trade and Technology in Soviet-Western Relations* (New York: Columbia University Press, 1981), p. 236.

less than a quarter of the total bilateral trade between the superpowers.²⁵ Even in 1976, during the last days of détente, the U.S. ranked tenth among the Western states in manufactured exports to the socialist countries, behind Belgium and Sweden.²⁶

Table 1
EAST-WEST TRADE IN 1980

	USA	EEC	FRG*	France
Volume (billions \$)	5.28	56.80	23.80	10.21
Share foreign trade (%)	1.14	4.14	6.20	4.20
Share GNP (%)	0.20	2.00	2.90	1.58

Source: *OECD-UN*

*includes intra-German trade (\$5.9 billion)

In addition to differing economic realities, the U.S. style has been influenced by a tendency to view trade with the East as immoral. Prior to the Nixon Administration, U.S. firms often avoided East bloc trade because of potential consumer boycotts and bad publicity. In 1964, for example, the Young Americans for Freedom launched a nationwide campaign that forced Firestone to back out of a contract to sell a synthetic rubber plant to Romania. In the same year, business executives testifying before the Senate Foreign Relations Committee on the issue of expanding East-West trade requested anonymity in the published reports of the hearing.²⁷ More recently, however, the American business community has become less reluctant to trade with the East. Many U.S. business executives believe that even if American firms do not sell to the communist bloc, the companies of our allies will. Losing markets, they argue, is more detrimental to U.S. business interests than losing technology is to American security interests.

The Europeans and Japanese argue that the same tangle of American regulations also hinders them. Any organization wanting to export an American-made item which is subject to U.S. controls must request a license from the Department of Commerce. In addition, the recipient of the export must agree to re-export provisions and must state that the item will not be put to critical military uses. "The impact of this policy is increased regulation on any firm which uses technology covered by the

25. U.S. Congress, Joint Economic Committee, *East-West Commercial Policy: A Congressional Dialogue with the Reagan Administration*, 97th Congress, 2nd Session (Washington, D.C.: GPO, 1981), p. 1.

26. Martin Schnitzer, *U.S. Business Involvement in Eastern Europe* (New York: Praeger Publishers, 1980), p. 11.

27. Stent, *Technology Transfer*, p. 14.

policy, whether that firm is U.S.-based or not."²⁸ The long-term impact of such a policy, according to critics, could be to reduce the competitiveness of American technologies because of the perceived costs of additional regulations.

Another aspect of conflicting national styles involves the degree to which the allies distinguish among the various communist states. A policy of even-handedness emerged in CoCom after the collapse of the "China differential" in the late 1950s. This caused internal strains, however, because it meant that export policy had to be based on the technological capabilities of the weakest state, i.e., China. The upshot was to create an informal accommodation for selling goods to the USSR which the Soviets already demonstrated the ability to produce, "even though the same products could not be sold to the Chinese because they would add to China's more limited capabilities."²⁹ By the end of 1978, however, it was clear that a *favorable* China differential was in operation.

The American style has been to distinguish not only between the Soviets and the Chinese, but also among the various Eastern European states. In general, the Romanians and Hungarians are treated better than other Soviet bloc states by the U.S. because of their relative independence from the Soviet Union in economic and foreign policy. The European and Japanese style, meanwhile, has been to favor a more genuinely even-handed policy. The West Germans in particular have argued that "to give preferential treatment to any makes a mockery of the overall embargo situation."³⁰

Styles among the allies also differ according to the level of domestic business-government cooperation. European and Japanese business leaders command much more political clout than their American counterparts. As a result, firms in Japan and Europe have had much more influence over the crafting of export control policies.³¹ The one exception to this is the American farm lobby, a powerful group in domestic American politics which has been able to manipulate U.S. export control policy to its advantage.

The American business community has grown increasingly critical of the inefficiencies built into the domestic control system. A manager for E.I. Dupont de Nemours, for example, describes how his company's

28. Seymour E. Goodman and M.R. Kelly, *We Are Not Alone: A Sample of International Policy Challenges and Issues*, Discussion paper prepared for the Workshop on Policy Issues for Computers, Communications, and Information, Massachusetts Institute of Technology, 20-22 March 1983, p. 10-11.

29. Jonathan B. Bingham and Victor C. Johnson, "A Rational Approach to Export Controls," *Foreign Affairs* 57 (Spring 1979), 918.

30. Stent, *Technology Transfer*, p. 28.

31. McIntyre and Cupitt, "East-West Trade Control," p. 93.

efforts to sell sophisticated laboratory equipment to the Russians in 1982 was thwarted by intractable Washington bureaucrats. The devices in question, liquid chromatographs used to identify components in solutions, contained a microprocessor chip and were therefore denied the validated export licenses necessary. Dupont then discovered the same quality microprocessor chip was available in the Soviet Union. But even after the company appealed to the Commerce Department, the licenses were denied.³²

Such "war stories" point up another major factor influencing national style: the domestic bureaucratic structure which implements export controls. CoCom lacks the staff or resources to manage international transfers of technology to the East. The organization operates on a virtual shoe-string budget, with annual allotments of less than \$500,000 and under 14,000 square feet of office space.³³ As a result, the bureaucracies within the individual member states must manage East-West trade. However, as pointed out by one high-level State Department official in recent congressional testimony, there are substantial differences in the laws, regulations and procedures used by each CoCom government to comply with the multilateral agreements. An example of this would be the CoCom rule which allows individual members to ship certain types of embargoed products to civil end-users at the discretion of the national government. Differing ideas as to what constitutes an appropriate end-use or acceptable end-user have led to significant inconsistencies.³⁴

Europe and Japan have relatively small bureaucracies working on matters of export control, including CoCom-related business, while the U.S. has a large and specialized system. According to Fred Bucy, the result is an American system which is "glacially slow," often resulting in delays of 6 to 18 months for routine export license requests. Indeed, Washington's review mechanism involves officials from the Departments of Commerce, State and Defense, as well as the various intelligence agencies, while the European and Japanese systems are much simpler. Further complicating the American system are a number of ongoing jurisdictional battles among the various bureaucracies.³⁵ As a result, critics charge that

32. Telephone interview with Manager of Quality Assurance and Regulatory Affairs Group in the Diagnostic Bioresearch Division, E.I. Dupont de Nemours, Wilmington, Del., 21 April 1984.

33. U.S. Department of Defense, *The Technology Transfer Control Program: A Report to the 98th Congress, 2nd Session*, Washington, D.C., 1984, p. 52.

34. From testimony of Ernest B. Johnson, Deputy Assistant Secretary for Economic and Business Affairs, Department of State, U.S. Congress, Senate, Committee on Banking, Housing, and Urban Affairs, Subcommittee on International Finance and Monetary Policy, *East-West Trade and Technology Transfer* (Washington, D.C.: GPO, 1983), p. 108.

35. For detailed discussion of the most recent conflict between the Department of Commerce and Customs over matters of enforcement see Zonderman, "Policing Exports," p. 134.

the Japanese and Europeans gain a competitive advantage over U.S. firms due to the rapid review and approval mechanisms within their governments.³⁶

Viewed broadly, the European and Japanese bureaucratic mechanisms appear fundamentally less security-oriented than their American counterparts. This is reflected in the European emphasis on the role of their Foreign and Economic Ministries in export controls, while their Defense Ministries are sometimes totally excluded. The U.S. Department of Defense, meanwhile, has steadily expanded its role in the realm of export controls and is currently pushing for the creation of a military review subcommittee attached to the Paris headquarters of CoCom.³⁷ From the U.S. point of view, such a subcommittee would ensure that a full evaluation of the military implications of technology transfer takes place.

IV. COCOM: THE FOCUS OF CONFLICT

The Bucy Report, as earlier noted, launched a large-scale reassessment of U.S. export control policy which created repercussions for the entire international regime. The report defined technology not as the end-products of industry, but rather as the design and manufacturing know-how they reflect. The report also distinguished "evolutionary" from "revolutionary" technology: evolutionary advances are steady improvements in existing technological capabilities, while revolutionary advances represent conceptual breaks from the past. This distinction suggests that the most effective controls would focus on protecting revolutionary advances, thereby protecting the West's technological edge over the socialist states.³⁸ These conflicting notions as to how to define and control technology, together with the breakdown of détente, have contributed to growing tension within the Western alliance. CoCom in many ways embodies what is wrong with the alliance, particularly the disunity and distrust which makes a workable compromise elusive. This section will examine a variety of these problems, viewing both the nature of the problems and their implications for the future.

A fundamental problem for CoCom is the lack of mutually acceptable definitions, such as what constitutes "strategic" or "militarily significant" items. A recent RAND Corporation report points out that nearly "any export, including feed grain or drilling technology, can be considered a "significant contribution" to Soviet military potential, provided one

36. Bucy, *Technology Transfer*, p. 140.

37. U.S. Department of Defense, 1984, p. 13.

38. See Bucy Report.

adopts a sufficiently broad definition."³⁹ The U.S. has tended to favor broad definitions, consistently maintaining a longer list of unilaterally controlled items than CoCom maintains. The American system is structured around the Commodity Control List (CCL), which currently carries 215 numbered categories, of which only 124 coincide with the CoCom list.⁴⁰ The CoCom lists are reviewed and updated every three or four years in order to reflect changes in technology. But due to the accelerating pace of technological change, some analysts contend that CoCom regulations lag behind the latest developments.⁴¹

In an effort to find a more relevant and mutually acceptable frame of reference, the U.S. Congress ordered the Department of Defense to develop a Militarily Critical Technology List (MCTL). The result: a 700-page hit parade of the latest in technological products, product groupings, and product designs. One analyst has suggested that if this list were to become the basis for American controls, the entire Commerce Department would be overwhelmed by the task of enforcement. The problem is that "it lists techniques which could be harmful to us, with no clear conception of how or why technology transfer actually takes place."⁴² Included in this list of "militarily critical" technologies are those relating to videodisc recording and polymeric materials. American efforts to promote this approach have met with resistance both from the American business community and the other CoCom members.

The MCTL illustrates the problem of "dual use" technologies in that the same computer technology which goes into pocket calculators also goes into missile guidance systems. A report by the U.S. Government Accounting Office concluded that Washington "requires export licenses for more dual-use items than is necessary to protect national security. This practice . . . results in a licensing system characterized more as a paper exercise than as an instrument of control."⁴³ However, the U.S. is currently pressing CoCom to tighten up even further on such items as computers, electronics, and communications equipment.

The situation is further complicated by the changing time-frame for commercial applications of new technologies. In the early days of electronics, most research and development was financed by the government, and military applications preceded commercial applications. Now, how-

39. Gustafson, *Selling the Russians the Rope*, p. 3.

40. Interview with Toli Welihozkiy, Acting Director, Foreign Availability Division, U.S. Department of Commerce, Washington, D.C., 18 May 1984.

41. Bertsch, *East-West Strategic Trade*, p. 35.

42. Zonderman, "Policing Exports," p. 132.

43. U.S. General Accounting Office, *Export Control Regulation Could Be Reduced Without Affecting National Security* (Washington, D.C.: General Accounting Office, 1982), p. 5.

ever, technologies are being developed in the private sector which only later appear in weapon systems. "Because of this shift in the driving force behind technological innovation, militarily critical technologies and products of significant military value are now making their way to potential adversaries through the commercial marketplace."⁴⁴ Large-scale integrated circuits, for example, were developed in private laboratories and used in calculators more than five years before weapons containing them were deployed.

The recent intra-allied brawl over the sale of energy-related technology to the Soviet Union illustrates some deeper implications of the "dual-use" controversy. The Europeans insist that the development of Soviet energy supplies will offer them a valuable alternative to Middle East oil, indirectly increasing their national security. The United States, on the other hand, sees the project potentially giving Moscow leverage over the Europeans, thereby damaging *Western* security. While the impact of the embargo on the Soviets has been minimal, its costs to the U.S. have been greater than ever expected, both in political and economic terms. The Office of Technology Assessment concluded that the embargo "may produce a chilling effect on the climate in which U.S. firms operate and on the business decisions they make."⁴⁵

Inherent in the dispute over the Siberian pipeline are differing views over the role of export credits in East-West trade. The U.S. has long sought to stop the Europeans from offering subsidized credits to the CEMA nations. The Europeans, meanwhile, argue that offering rates of interest below market rates is a standard feature of international business, applied both to East-West and West-West transactions.⁴⁶ However, the underlying concern in Washington is that profits from the pipeline could significantly increase Moscow's future hard-currency earnings. A report by the Joint Economic Committee estimated that this could eventually lead to a 30 percent increase in the volume of West European and Japanese trade with the Soviets, largely in technology.⁴⁷

The Europeans have been especially sensitive to what they perceive to be American hypocrisy in these disputes. While Washington bowed to the domestic farm lobby by lifting sanctions on grain, the one export category in which the U.S. dominated the Soviet market, it continued to call for allied restraints on the sale of oil and gas equipment, an area in which Europe and Japan have the greater economic stake.⁴⁸ Episodes

44. Bucy, *Technology Transfer*, p. 137.

45. U.S. Congress, Office of Technology Assessment, p. 6.

46. Stent, *Technology Transfer*, p. 115.

47. U.S. Congress, Joint Economic Committee, p. 2.

48. Stent, *Technology Transfer*, p. 5.

such as this underscore the element of suspicion which has grown up around the CoCom regime. The Europeans, for example, argue that the current system of controls gives U.S. corporations a double advantage over foreign competitors — the American firms can side-step U.S. law by exporting to communist countries through overseas subsidiaries, while the U.S. government can snare European firms through the re-export licensing system.

U.S. hypocrisy is also detected in the growing use of the exception mechanism within CoCom. When a nation determines that an item on the "dual use" control list is going to be used for nonmilitary purposes, it can apply in Paris for an exception. The Europeans and Japanese have looked askance as the U.S. consistently chalked up the most exception requests of any member of CoCom. The growing use of exceptions by the U.S. is seen by experts as indicative of the declining American ability to control its partners. "The exceptions procedure, established to avoid sensitive confrontations with the allies and yet maintain surveillance over their activities, now is used primarily by United States firms in order to bypass more stringent national controls."⁴⁹

An alternative interpretation, however, is that the Americans are simply being more honest in obtaining necessary exceptions. According to this view, the fact that the U.S. lodged 50 percent of the exception requests in the late 1970s, while accounting for a mere 15 percent of the end products destined for the East, suggests that a good deal of East-West trade originating in Europe or Japan is simply circumventing the CoCom mechanism.⁵⁰

The U.S., meanwhile, argues that it has reason to suspect the motives of its CoCom partners. An oft-cited case from the late 1970s involves a Cleveland manufacturer of machine tools which was invited to bid on a contract to supply the Soviets ten metal-forming presses. It was clear that the machines would be used to produce aircraft bodies. After initially denying the export license, the U.S. government learned that the French had signed a contract to supply similar devices. The U.S. then reversed its decision due to foreign availability and submitted the necessary request for an exception under CoCom. The U.S. request languished for several years in CoCom, while the French never even bothered to file for approval.⁵¹

49. Beverly Kay Crawford, "Beyond Profit and Power: State Intervention and International Collaboration in East-West Technology Transfer" (Ph.D. Dissertation, University of California, Berkeley, 1982), p. 437.

50. For full discussion of exceptions issue, see Bertsch, *East-West Strategic Trade*, pp. 34-41.

51. For more details on the Cyril Bath case, see Bingham and Johnson, "A Rational Approach," pp. 904-05.

Suspicions resulting from this sort of incident tend to bring the entire CoCom mechanism into question. Viewed in machiavellian terms, it would seem possible that members could use CoCom to prevent overseas competitors from gaining commercial leads within particular industries. For instance, if the Germans wanted to export the most advanced steel alloy to Eastern Europe, another CoCom member could veto that sale until its own industry was able to match the technological advantage of the German supplier. Meanwhile, some observers argue that the U.S. is "prepared to wink at evasion of the controls by our allies because we recognize that too much pressure might cause CoCom to fall apart."⁵²

One issue that troubles the Europeans, as well as the U.S., is the number of transactions carried out at a high level which simply bypass the CoCom structure entirely. This occurred, for instance, when the British decided to sell Spey engines and Harrier jets to the People's Republic of China without first submitting a request to CoCom. "Indeed, four nations — Japan, the United Kingdom, Italy and France — apparently issue temporary licenses for sales exhibitions in the full knowledge that any resulting sale might not be approved unanimously by their CoCom partners."⁵³

Besides governmental circumvention, CoCom is also plagued by the problem of diversion through third countries. A typical scenario involves a complex web of front-companies and trans-shipping agreements. In 1983, for example, the Soviets were caught attempting to import a Digital Equipment Corporation VAX 11/782 computer system by running the merchandise through a maze of free-world ports, including West Germany and Sweden. The case now stands as the single largest seizure of strategic goods ever made by the West.⁵⁴ It also illustrates the growing effort among the allies to coordinate national enforcement mechanisms. The diversion was first detected through a tip given to the U.S. Customs attaché in Bonn. Following up on this tip, West German authorities seized ten tons of equipment in Hamburg. Later, another thirty tons of equipment was snared in Stockholm which had been shipped via Canada and Hong Kong. In all, seven shipments were taken.⁵⁵

The VAX case underscores the need for multilateral controls which reach beyond the CoCom structure. In addition to Sweden, such technologically advanced nations as Switzerland and Austria are not members of CoCom. The Department of Defense, responding in writing to congressional inquiries, points out that the U.S. maintains an ongoing dialogue

52. *Ibid.*, p. 906.

53. McIntyre and Cupitt, "East-West Strategic Trade Control," p. 102.

54. U.S. Department of Defense, 1984, p. 7.

55. Richey, 18 May 1984, p. 14.

with non-CoCom nations over export control issues. Importers in many third nations voluntarily abide by American re-export requirements. The Swiss even administer their own import certification program for strategic materials bought from the U.S., as well as observing U.S. re-export requirements.⁵⁶

U.S. intelligence agencies figure that detected diversion to the Soviet bloc tallies up to about \$38 million worth of equipment a year, much of it representing state-of-the-art technology.⁵⁷ Unfortunately, the increasing pace of technological change, together with the general miniaturization of electronics has made clandestine shopping easier than ever. One method, for instance, is for embassy officials from communist nations to buy controlled items available in the U.S. and then send them out of the country under the protection of the diplomatic pouch.

The latest indications suggest that the members of CoCom are beginning to respond to U.S. concerns. In early 1984, the U.S. Department of Defense published a glowing report which concluded that there has been acceptance of many American initiatives in CoCom since 1983. For instance, the U.S. recommended and received approval for an embargo on all electrical grade silicon, a keystone material for fabricating high-density microelectronic circuits such as microprocessors. "Thus it happens that CoCom is slowly being changed from its traditional 'clearinghouse' organizational concept into a more vibrant and relevant international organization in touch with the reality of the seriousness of technology transfer problems associated with East-West trade."⁵⁸

Other observers are less sanguine. Angela Stent counters that, while the Europeans have pledged their support for tighter CoCom regulations, it still "remains to be seen . . . whether this will be feasible once CoCom gets down to practical details."⁵⁹ The practical details, especially for the Europeans, are strongly influenced by domestic political concerns which make radical shifts in policy unlikely. The French socialists, for instance, are hesitant to take actions which might alienate them from the powerful French communist party. The West Germans would likely resist anything that might raise the level of tension in Berlin or impinge on travel between the two Germanies. Hence, the likelihood of the American viewpoint prevailing over various allied interests is quite small. It is clear that concessions will have to be made on all sides. Indeed, the recent agreement over computer technology reflected a subtle bargain, the U.S.

56. U.S. Congress, Senate, Committee on Banking, Housing and Urban Affairs, Subcommittee on International Finance and Monetary Policy, p. 113.

57. U.S. General Accounting Office, p. 25.

58. U.S. Department of Defense, 1984, p. 11.

59. Stent, *Technology Transfer*, p. 8.

allowing looser reign on mainframe computer exports while gaining more comprehensive controls on smaller machines and software.

Conclusions

It may be unrealistic to expect that any export control system will totally prevent the Soviets from acquiring desirable Western technology. Indeed, according to one U.S. Defense Department official:

Inadvertent leakage, clandestine acquisition, and indigenous development will combine to assure that this eventually takes place. The process cannot be halted; it can only be retarded. Thus, the true measure of effectiveness of controls of technology is how long the catch-up process takes. On that basis, the present system scores well⁶⁰

Despite the many problems which have grown up around the CoCom regime, it remains the most propitious multilateral forum for seeking consensus on a unified allied export control policy.

The current situation offers several policy alternatives, one of which would be to push for a more formalized structure for CoCom. A 1982 report prepared for the Trilateral Commission argued that CoCom needed the legal recognition which would come from an international treaty in order to make it a viable framework for multilateral controls.⁶¹ Most analysts, however, contend that efforts to give CoCom genuine enforcement powers would likely bring about the final disintegration of the regime.

Although CoCom will likely retain its current structure, the overall number of international organizations dealing with technology transfer issues is growing. Both the OECD and the Economic Commission for Europe have expanded their activities to include research into the implications of East-West trade. Their interest in the issues, however, has been defined largely in commercial and economic terms — closer in line with the European and Japanese viewpoints.⁶²

The only workable policy option appears to be further negotiation aimed at finding mutually acceptable definitions of what it is export controls are seeking to control and how this should be accomplished. This effort will be complicated by differing allied perceptions and styles

60. Maurice J. Mountain, "Technology Exports and National Security," *Foreign Policy* 32 (Fall 1978): 101-2.

61. Robert V. Roosa, M. Matsukawa, A. Gutowski, *East-West Trade at a Crossroads* (New York: New York University Press, 1982).

62. Crawford, *Beyond Profit*, p. 474-488.

— expressed both in national export controls as well as attitudes toward the CoCom regime. The U.S., for instance, appears dedicated to the view that East-West trade has reached the “safety limit,” while the Europeans and Japanese believe there is still room for beneficial development. Both sides do agree, however, in the “urgent need for a multilateral body capable of determining when these safety limits may be dangerously close.”⁶³

The American position is the subject of an intense internal political debate. In the foreword to a recent report to Congress on East-West commercial policy, Henry S. Reuss, former chairman of the Joint Economic Committee, wrote that the current “Administration seems to be following the practice of previous Administrations, which was to take controversial initiatives, without prior consultations with our allies, and then to complain about lack of unity in the West.”⁶⁴ The allies argue that the American approach has tended to create an unnecessary degree of unpredictability and is the root of many of the regime’s current problems.

Viewed from this perspective, it is clear that any transformation of the international regime will require a revamping of the American control system along with U.S. concessions in the field of multilateral controls. This point was underscored by former Japanese Foreign Minister Kiichi Miyazawa, who said Americans need “to acknowledge the plurality of interests of the allies and accept its consequences.”⁶⁵ Current allied negotiations offer an important opportunity to clarify and strengthen Western policy, and indirectly the alliance. But in order to succeed, all sides will need to be willing to make concessions.

63. Giovanni Agnelli, “East-West Trade: A European View,” *Foreign Affairs* 58 (Summer 1980): 1032.

64. U.S. Congress, Joint Economic Committee, p. ix.

65. Quoted in Agnelli, “East-West Trade,” p. 1016.