The Future of Cooperative Programs

By

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INTRODUCTION

Cooperative development and production of sophisticated weapons systems was a cornerstone of United States national policy in the mid 1970s and early 1980s. The United States shared significant levels of technology with our allies, mainly in Europe through NATO, to enhance the ability of the alliance to respond to the military threat from the Warsaw Pact. Two extremely successful programs, sponsored by the United States Air Force, were: the purchase by NATO of 18 airborne early warning and control (AWACS) aircraft with a corresponding modernization of the European air defense ground sites; and the five European nation consortium (Belgium, Denmark, the Netherlands, Norway, and the U.S.) to coproduce and purchase F-16 fighter aircraft. In both of these programs the United States shared the development of sophisticated technology with our allies. However, the benefits were realized on both sides of the Atlantic. The AWACS fleet represents the first collection of aircraft jointly owned and operated by a NATO air force. Also, the decision by the European governments to purchase the F-16 helped to insure a positive production decision by the U.S. Congress. On the American side, many more jobs were created to manage and produce the aircraft and its required and complicated support equipment. On the European side, investments were made to allow companies to coproduce and assemble aircraft and subsystems, efforts which continue even today due to subsequent sales of aircraft to third countries. These two USAF sponsored programs resulted from multinational agreements forged in the mid 1970s. They continue to this day because of the efforts to keep the systems up-to-date with state-of-the-art technological developments. But for the most part no new agreements on a similar scale have been made for other systems that would benefit the NATO alliance. There are various reasons for this lapse, including the military, economic, and political shifts in the world that have caused the United States and its allies to look at cooperative ventures in different ways than they used to be viewed. This paper will examine ways in which the environment for cooperative programs might be enhanced in the future for the benefit of the U.S. and our friends overseas. Due to the changes in the world political situation, there may be a shift away from cooperation on weapons systems prompted by a perception of a reduced military threat, but there are other avenues that might enhance, in the future, the quality of life for us and our close allies.

DISCUSSION

Events of the last year have dramatically changed our perception of what the future holds for the western world. Mr. Gorbachev's policy of *perestroika* and *glasnost* have shifted the Soviet Union away from the cold war policy of confrontation with the West, and toward a retreat from Eastern Europe and an introspective policy of reconstructing a sick, weak Soviet economy. Mr. Gorbachev realizes that to be a superpower, a nation has to have a balance in its military, economic, and political foundation. He knows that his nation has concentrated too heavily on the

military side of the triangular equation, and to create a basis for growth and stability he has to balance his nation's approach to these three pillars to develop a strong power base. The same is true, to a lesser degree, for the United States. Our political leadership senses a victory in the cold war. It came at the huge cost of many billions of dollars spent on military readiness. Now, Congress wants to realign the same economic, military, political triangle as it seeks ways to cut the defense budget to lower the deficit and concentrate more on the nation's social problems. There are ways for the United States to lead the western allies to higher levels of technology in an environment of decreasing military budgets. Cooperative development and production programs with our closest allies can have significant military, economic, and political benefits.

Over the past year the pace of change in the military equation between East and West has been startling. The Soviet have essentially pulled back from their cold war borders leaving the eastern European nations relatively free to shape their own destinies. This has created a relaxation of the tensions felt by the United States and the Western European governments. Now the priorities for weapons procurement have decreased significantly. A treaty to lower the level of conventional forces in Europe was generally agreed to during the historic international conference in Ottawa, Canada, in mid-February 1990. There, U.S. Secretary of State James Baker and Soviet Foreign Minister Eduard Shevardnadze announced agreement on major force reductions in Central Europe. The troop cuts will bring Soviet force levels down by about 370,000 and U.S. levels down by about 60,000. Both sides will then be left with force levels of 195,000 each in the middle of Europe. The U.S. and Soviets also announced at the Ottawa meeting that the U.S. and the principal powers in Europe had agreed on a plan to reunify East and West Germany.[1] These major military changes leave ample room for adjustments in the economic variable in the triangular equation.

The shift to increasing economic versus military priorities can be no more obvious than through the concept of a single European market as envisioned by Europe 1992. This single market involving 12 nations and over 320 million people will be a formidable competitor in the world economic scene.[2] The United States is in an enviable position through its current relationships in industrial cooperation to maintain a foothold in future joint ventures in weapons procurement in the future. However, Europe 92 has created concern in the United States that protectionist measures are on the rise in Europe which will lead to much more restricted markets. The U.S. defense industry is especially concerned with this development although many U.S. multinational companies are in an excellent position to share in this new environment. There have been tendencies in this country be become much more protectionist due to the perception that the United States is losing its technological edge and that we are losing jobs to these expanding overseas markets. On the contrary, the movement towards a unified European market by 1992 opens up many possibilities for U.S. and European firms to cooperate. Cooperation can have benefits for both sides of the Atlantic. The European Community takes 25 percent of U.S. exports, making it our leading trade partner. There are areas of technology where the Europeans are stronger and areas where the United States has a lead. Europe, for example, is a leader in consumer electronics, high definition television, nuclear fusion development and waste management technology. On the other hand, the United States has advantages in areas like semiconductors, environmental control, and telecommunications. Cooperative joint ventures in areas like these could improve the standard of living for all of us and should not be viewed as the U.S. giving up any leads in technology as some in Congress are likely to argue.[3]

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[1]Fulton, E. Kaye and Mollins, Carl. "A Giant Step Towards Peace." Maclean's, 26 February 1990, pp. 18-21.

[2]Shotwell, Charles B. "U.S. Foreign Military Sales After Europe 1992: Reconsidering Market Strategies." *The DISAM Journal of International Security Assistance Management*, Winter 1989/90, pp. 86-92.

[3]Madia, William J. "Technology and the European Market of 1992." *Vital Speeches of the Day*, 1 February 1990, pp. 238-241.

Congress molds American political attitudes toward cooperative programs, but the signals have not been very encouraging in recent years. Negative Congressional attitudes were especially prevalent during the negotiations over the FSX deal with Japan. The Senate Armed Services Committee was particularly concerned over the possibility of fewer jobs for domestic industries and the perceived bolstering of Japanese aerospace industries through the transfer of U.S. technology. In reality, the benefits of transferring aged U.S. technology, as represented in the F-16 so that it can be improved, is beneficial to U.S. industry. The amount of workshare U.S. industry will receive and the flow of technology back from Japan will be significant as Japan makes improvements to the technology provided from the F-16 program. This program is unique in that another nation will take the lead for codevelopment and coproduction. The U.S. finds itself in the unusual position of monitoring the amount of workshare and technology flowing into the country instead of the other way around. The FSX program will provide U.S. industry with about $2.5 billion of work during the life of the program involving over 22,000 man years of labor for the U.S. workforce.[4] It will also provide new technologies as the Japanese improve U.S. avionics systems, possibly laying the foundation for substantial improvement to our aircraft in the next century.

Other initiatives in codevelopment will be encouraged through what is commonly referred to as the Nunn Amendment. The Nunn-Roth-Warner amendment to the Fiscal Year 1986 Defense Authorization Bill gave a political and economic push to codevelopment projects. It authorized the expenditure of up to $200 million per year in joint research and development projects with our allies and an additional $50 million per year for cooperative tests of European weapon systems to encourage the procurement of off-the-shelf foreign systems.[5] Under this amendment, the services propose codevelopment projects to the Department of Defense where they are prioritized and possibly approved for funding. Nunn Amendment funds will then be available for two years, after which the services must use their own funds to continue the project. This relatively small program, in comparison to the overall Department of Defense budget, has been embraced by the services and other countries as a step in the right direction. The Europeans see opportunities for their own systems and a widening of a two-way street in shared technologies between Europe and the United States. However, there are other policies of the U.S. government that tend to narrow the possibilities for future cooperation.

One of the most significant statements on related U.S. policy was issued by President Bush on April 16, 1990. [See "Presidential Policy on Offsets in Military Exports," *The DISAM Journal*, Summer 1990, pp. 46-47.] Enormous amounts of money and high levels of technology are generally involved in cooperative programs. The United States has been the primary sources of these technologies and our allies have shared in the cost of developing and producing these new weapons systems. Since a lot of money is being spent by our allies in the United States, they typically want to see some economic and political return (i.e., compensation) in their own countries for their investment in new U.S. systems. These returns are referred to as "offsets." In fact, most countries now have their own written policies in regards to the minimum level of offsets that are acceptable for participation in a cooperative program. Basically, the new Presidential policy prohibits United States government participation in any guarantees of offsets to any allied government or participating industry. This prohibition goes so far as to say that no agency can encourage, enter directly into, or commit U.S. companies to any offset arrangement as they relate to any sale of defense articles or services to other governments. Additionally, no U.S. funds may be used to finance offsets. Any exception to the new Presidential policy must be approved by the

[4]Cheney, Richard, United States Secretary of Defense. "The FSX Agreement." *The DISAM Journal of International Security Assistance Management*, Summer 1989, pp. 27-31.

[5]Brandt, Craig M. and Bleakley, Gage A. "International Armaments Codevelopment: Nunn Amendment Spurs Interest in Collaboration on Weapons Development." *The DISAM Journal of International Security Assistance Management*, Spring 1989, pp. 105-112.

President through the National Security Council. The new guidance does not prohibit negotiations for offsets by a foreign government with the U.S. commercial industries involved, as long as there is no U.S. government encouragement, participation, or commitment for the offset arrangements which might finally be realized.

In the past, United States participation in offset arrangements had been critically important to our allies. In the F-16 Multinational Fighter Program, U.S. guarantees for offsets were spelled out in the Memorandum of Understanding (MOU) governing the program. These guarantees involved the following: 10 percent of the procurement value of the original 650 U.S. aircraft buy; 40 percent of the procurement value of all European Participating Government (EPG) purchases of the F-16, including final assembly of the European airframes and engines in Europe; and 15 percent of the procurement value of all third country sales of the F-16.[6] While these arrangements are allowed to continue under a grandfather clause in the new Presidential policy, offset guarantees for future cooperative agreements are not permitted. These new rules will have a significant impact on negotiations for new ventures. On the one hand, there will be government-to-government negotiations on the terms and conditions of an MOU. These will include financial, industrial, operational, contractual, and legal issues. On the other hand, governments other than the United States will be negotiating directly with industries in their own counties and with U.S. companies on the terms and conditions of offset arrangements. Realistically, without agreement on these offset arrangements there can be no cooperative program; and without U.S. oversight or authority to observe the progress of any offset negotiations, it is possible that important, possibly vital, arms sales to our allies could be dictated by the ability of U.S. companies to come to terms with foreign governments on offset levels.

Future cooperative ventures should not depend solely on the outcome of successful negotiations on offset arrangements with U.S. companies. There are times when a U.S. government guarantee of offsets would be in our best interest. For example, assume the U.S. plans to go ahead with the development of a new technology. This development will take place whether or not there is any participation by a foreign government. If cooperation reduces the cost of the development program because of costsharing with our allies, then might it not make economic sense to share some of these savings through guaranteed offsets to other participants? The U.S. share of the program would still be less then if we had gone ahead alone, and even with offsets, remains cheaper. In the production phase of a program, there are some savings associated with cooperation, such as quantity discounts, improved learning curves to reduce production costs, and lower overhead costs as a percentage of quantities. Under the new Presidential policy, the sharing of these savings is placed in the hands of the contractors. While any offset agreement cannot affect the price of a U.S. purchase, the effect will be felt in product prices to our allies. So now under a cooperative venture our allies recognize that the U.S. benefits to a greater extent than do the other partners. Is this still a truly cooperative program? Our allies are likely to feel that it is not. In recent discussions of a proposed Mid-Life Update (MLU) to the F-16 under the new Presidential Policy, questions and issues such as these arose and complicated negotiations. The EPG raised the issue of the degree of true partnership in the program many times. Basically, the only issue left unresolved after many months of tough negotiations is one involving industrial offset agreements between the EPG and European and U.S. industries. If offset arrangements are unsuccessful, then an important modernization effort could be scuttled outside the control of the U.S. government. In spite of this environment of worsening cooperation in the development and production of new technology, there are possibilities for improvement.

What can be done to facilitate these improvements? The potential solutions follow the same major areas outlined as problem areas. There are new and different approaches that can be taken in the military, economic, and political approaches to cooperative programs.

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[6]F-16 Memorandum of Understanding, revised April 1988, p. 36.

SOLUTIONS

Cooperation with our NATO allies does not have to end with the decrease to the military threat in the European theater. Instead of leaning toward military technology we could increase our cooperative ventures in other areas. Space, for example, is a prime area for increased cooperation between the United States and its closest allies. The European Space Agency has made great progress in its use of expendable launch vehicles. Ariane launches have become increasingly reliable just at a time when the United States is suffering some highly visible setbacks in its own expandable launch vehicle program. The possibilities of shared technologies and shared costs in this area could be of enormous consequence to all nations involved. How much cheaper could these vehicles be made if common support equipment was used with shared launch facilities, for example? There are many launch areas at Cape Canaveral that have not been used since the early days of the Apollo program's quest for the moon. The United States and its Space Shuttle program could be invaluable to our allies. Establishing a space station in low earth orbit is a near term goal of the United States. It is clearly recognized that building such a structure will be enormously expensive. A space station also offers the possibilities of new technologies, processes, and products due to the unique environment found in the zero gravity and the vacuum of space. The unique construction requirements for a space station will require the presence of man and his construction abilities. The space shuttle, with its ability to transport people and oversize cargo, offers an important capability which the United States could share through cooperation with our allies. In fact, our goals for space adventures in the future may well be impossible for any one country on its own. The sooner we start to expand our thinking in regard to sharing technology and capabilities, the sooner progress can be made. The only limitation to joint ventures in space between our closest allies and the United States is the limitation of human thinking. Who knows where cooperative ventures could lead us together, versus where unilateral efforts might lead a single country? As the cold war ends and the need for military cooperation loses its emphasis, increased thought needs to be given to other technological ventures that push state-of-the-art technology. Space exploration and exploitation is one such area to carry on the cooperation in new technology. There are many other such areas, including health and medical technology, environmental areas, transportation technology, etc, that could be done more efficiently and more economically. Economic considerations, of course, may well be the driving force to new cooperative efforts in the future.

There are other important possibilities available through cooperation with our allies, not the least of which are economic. As mentioned earlier, the Nunn-Roth-Warner amendment to the Fiscal Year 1986 Defense Authorization Bill provides a significant example of what dedicated resources can do to push along new cooperative efforts. But why stop at just a pure national resource? Why not create a much larger pool of research funds with United States resources and those of our allies for new joint ventures. An international committee could provide oversight on how these resources would be spent to further those technologies judged to be important to those involved. With enough participation, a pool of research and development possibilities could be created that would be unprecedented. These new technologies could then be further refined by the nations involved without regard to where a breakthrough might have originated, thereby alleviating present-day concerns that past cooperative ventures tended to favor the United States and were essentially a one-way street from America to Europe. Nations participating in such a research and development pool should also look at removing barriers to the movement of ideas. The removal of such barriers carries with it a validation of trust; therefore, only countries that can be truly depended upon and that are trustworthy should be able to join in the fund. These new technologies, jointly owned, would only be subject to review for release outside the consortium, not between members. This transformation among governments would not be easy, as there are many barriers presently in existence for the exchange of technologies from the United States to even our closest friends; but if it is the case that significantly expanded knowledge and capabilities

are possible, internationally rather than on our own, might not the risk carry potentially large rewards? Tariffs, taxes, and other import/export restrictions would need to be removed to facilitate the maximum economic benefits from such a consortium for all the partners involved. To further minimize the costs for all partners, they must agree to the industrial participation of their respective national industries only through strict compliance with procedures that encourage full and open competition. Too many times in the past, nations have viewed cooperative ventures as a way to subsidize national industries, sometimes directly through government funding. In an environment where pooled research and development funds allow industries in all participating countries to cooperate on new technologies, each would have equal opportunities to compete for full-scale development and production of new systems as source selections are made based on conditions specified for full and open competition. Contractor infrastructure and availability of skilled resources should not be a hindrance to the ability of other nations' industries to compete, since from the very inception of research these companies will have opportunities to gain the knowledge and skills necessary to make and keep them competitive. The perceptions involved in this transformation are critical to cooperation. Industrialists in all involved countries would have to perceive the opportunities for involvement and success as fair and open. What might be more important, however, is how cooperative programs will be viewed by national governments and the political implications their views might entail.

The political barriers to a new era of cooperation in new technologies may be hardest to overcome. The sovereign rights of any nation are sacrosanct. No nation will easily relinquish the oversight which it feels is be needed over new technology and industries. The value of deterrence, however, has never been more obvious than it has been over the past years. The United States and our allies won the Cold War by demonstrating their political will and making the investments necessary to remain strong. In the post-war era, the same political will to maintain capabilities will be needed. It seems likely that defense industries will come under increasing scrutiny and some will probably not survive through to the next decade. In a national emergency, this loss of production capability could be a disaster. The political will and leadership to foster new cooperative programs could help avert this potential catastrophe. Our allies also realize that it is in their best interests to maintain the ability to produce weapon systems wherever this capability exists. President Bush also recognizes the importance of fostering solidarity with our allies. In his March 1990 report on the National Security Strategy of the United States States, he states,

> Our most difficult decisions will include not only which military forces or programs to adjust, increase, reduce, or eliminate, but also which risks can be ameliorated by means other than military capability—means like negotiations, burdensharing, economic and security assistance, economic leverage, and political leadership.

One of the most effective ways to foster this needed relationship with our close allies might be a relaxation of the new rules on offsets mandated by the President in April 1990. As mentioned above, this policy states that there will be no United States government involvement in the negotiation of offsets, or the financing of offsets, or the payment of premiums for codevelopment or coproduction in order to place work in the industries of an allied country. Although the Presidential policy does not prohibit negotiations of commercially guaranteed offsets between a U.S. industry and an allied government, it appears not to allow representatives of the United States government to maintain some oversight of these negotiations as they progress. Only when the companies and allied governments have reached some agreement on the level of offsets does the U.S. government review the agreement, and it reserves the right to disapprove the results of what were probably lengthy negotiations. This could lead to serious friction between the U.S. and its allies. It would be much better to allow a U.S. government representative to "sit in" with the negotiators and make recommendations as critical issues arise and possibly avoid needless reviews that possibly could lead to reopening negotiated issues because the United States does not agree to the deal. A second way to foster a positive relationship with our allies for new cooperative

ventures would be to review our policy that says we will never be willing to pay a premium for work placed in an industry of one of our allies. There are financial benefits to cooperative programs. As mentioned earlier, the pooling of resources with our allies for the development and production of new systems has significant financial benefits for each partner, including the United States. These savings are as a result of increased quantity discounts, the sharing of overhead costs, and benefits due to increased quantities purchased over shorter periods of time. If these benefits result in lower costs for the U.S. below those costs we would incur if we were to purchase the system alone, then we should be willing to share some of these savings with our allies to help them establish codevelopment and coproduction capabilities in their own countries. There is no doubt that the United States is the world leader in a host of sophisticated technologies. Our allies would like to share in the benefits associated with the procurement of these systems. A willingness by the United States to share some of the cost savings that accrue as a result of cooperation would foster new ventures that would benefit us all.

CONCLUSION

The climate for cooperative codevelopment and coproduction is not as healthy as it was in the late seventies and early eighties. The end of the Cold War has changed the possibilities for cooperation with our allies in the nineties. The reduced threat from the Soviet Union and the Warsaw Pact will mean less emphasis on the military priorities of the past. Additionally, the economic and political changes resulting from of the end of the Cold War will be profound. Europe is looking toward a unified trading bloc in 1992. This will mean that economic borders in Europe will cease to exist, increasing the possibilities for increased economic cooperation between European nations beyond that which has existed in the past. United States companies are in a good position to benefit from this new, larger market due to past cooperation with European governments and industry, but the emphasis will have to change from cooperative military projects to new ventures in space, health and medical technology, environmental areas, transportation technology, etc.

Politically, the United States has to expand on ideas that previously have been attempted to encourage cooperative development efforts. The Nunn Amendment is a good idea, but it could be funded multinationally instead of only by the United Sates to create a pool of new funding sources for companies in those select nations contributing to the fund. New technologies derived from these funds would then be open to further development by any company of a participating nations. This would open up new opportunities for economic development and advances in technology previously considered available only to United States industries. Presidential policy on how offsets are negotiated could also foster increased cooperation. Presently, U.S. government officials are not allowed to participate in, encourage, or facilitate any discussions on offsets to any other nations. Also, the U.S. government is not allowed to pay any premiums to any nation in order to help another country's industry to participate in codevelopment or coproduction. This policy should be modified to allow U.S. government people to maintain a liaison with the officials representing U.S. industries and those representing other governments. This communication would save time and possible friction between governments if it avoided negotiated positions being disapproved when presented to the United States for final disposition. The United States should also review its policy of never paying premiums for codevelopment and coproduction. The Presidential policy prohibits the United States from paying any costs that result from establishing development and production facilities in the industries of participating countries. With codevelopment and coproduction, the costs to the United States for its share of a cooperative program are less than if we had decided to proceed by ourselves. The "savings" associated with this shared procurement cannot be shared with our allies; therefore, they have to pay all of the added costs of establishing a share of the work in their countries. A relaxation of this policy would serve the United States very well in the establishment of a new future cooperative environment with our allies.

Advances in technology will not come to an end because we are no longer engaged in a Cold War with the Soviet Union. Nor will U.S. advances stop if we decide we want to keep our research and advanced capabilities to ourselves. Our progress, however, will be slower than if we and our allies shared in cooperative ventures. The pool of talent and resources of the western world has shown its value over the past forty-five years. We are at a turning point in the nineties. Do we all turn inwards to myopically review our own needs, or do we learn from the successes of previous cooperative ventures? The benefits of shared knowledge, shared resources, and cooperation will advance us all at a pace much more advanced than what any of us could accomplish alone. It is an important decision. One that could affect us all and how we live in the next century. We should grasp the opportunities now.

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