

THE POLITICS OF IDENTITY AND INTEREST IN EUROPEAN DEFENSE
INDUSTRIAL COLLABORATION

A Dissertation

Presented to the Faculty of the Graduate School

Of Cornell University

In Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

By

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May 2004

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THE POLITICS OF IDENTITY AND INTEREST IN EUROPEAN DEFENSE
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This dissertation is a social constructivist analysis of the ideational foundations of West European defense industrial cooperation. Traditional analytical approaches within International Relations theory, namely structural realism, do not highlight the role that social identity may play in shaping state behavior—except to regard it conceptually as predetermined, as methodologically unapproachable, or as epiphenomenal. The study of European armaments collaboration, however, demands that scholars consider identity as both official elite rhetoric and mass surveys maintain that an emergent, transnational European identity not only exists within the member societies of the European Union (EU), but it may also shape certain areas of state activity. This thesis uses social constructivism as an explanatory framework in order to ascertain the degree that this regional identity facilitates the Europeanization of defense production within the EU.

This dissertation explores five episodes of multinational European defense industrial collaboration conducted between 1967 and 1997: *Tornado*, *Eurofighter*, *Field Howitzer 70*, *Self-Propelled Howitzer 70*, and the *Anglo-French Reciprocal Purchasing Agreement*. Further, these cases are divided into high-technology and low-technology categories, with *Tornado* and *Eurofighter* forming a high-tech dyad, while the others denote examples of low-tech industrial and market-oriented cooperation. I hypothesize that the production of high-tech military equipment is bound to conceptions of self and of self-interest that promote nationalist behavior and thus

restricts the potential for multinational procurement collaboration. Low-tech weapons, on the other hand, do not challenge national identity and thus may reveal the influence of an emerging, cross-cutting transnational identity. This identity subsequently can be manifest in the potential willingness of states to rationalize intra-regional production and to integrate national defense equipment markets. I find, however, that while a distinct European identity exists, its effects do not extend far into the procurement field regardless of the level of technology involved within a given collaboration. Weapons procurement in the European Union remains intrinsically national in orientation.

BIOGRAPHICAL SKETCH

Willie Eugene Cobble received his Bachelor of Arts degree in 1992 with a major in political science from Vanderbilt University in Nashville, Tennessee. He graduated summa cum laude and attained membership in Phi Beta Kappa. He received a Masters of Arts degree in 1996 in Government from Cornell University in Ithaca, New York. While completing his PhD thesis, he gained employment in 1999 with the Center for Naval Analyses in Alexandria, Virginia. There he worked as a specialist on transatlantic defense industrial collaboration and Western European political integration. In addition, he also developed expertise in alternate operational concepts for amphibious assault ships, and navy force employment patterns. Later in 2004, he received his PhD in Government from Cornell University.

For my parents, and my little sister.

ACKNOWLEDGEMENTS

I am indebted to my wife Ronit, and to my stepsons, Eldad and Yuval, for their love and support throughout the life of my dissertation, from thesis conceptualization to final submission. Living with a graduate student in the throes of research and writing is never an easy task, but my family never wavered and for this I am eternally grateful.

I also wish to thank my committee, Judith Reppy, Thomas Christensen, Jonathan Kirshner, and Matthew Evangelista. Their guidance and forbearance gave me both the tools and the time to wrestle with the conceptual issues that underlie my thesis, and thus helped make it a better product than it would otherwise be. I am particularly grateful to my dissertation chair, Judith, and to her husband, John. Without their support, this dissertation would not have been completed.

Many within the Cornell graduate student community also assisted me during my intellectual journey, patiently listening to me as my ideas have evolved over the years and ultimately helping me to refine my arguments. I am especially obliged to Loren Gatch, David Leheny, Joshua Winchell, Alexander Moon, Steven Casper, and Nilanjana Bhattacharjya.

I am also grateful to the staffs of Northrop-Grumman International in Brussels, and of the PREST Institute in the University of Manchester. Both of these organizations invited me not only to use their facilities as a guest researcher, but also to use them as springboards for contacting European defense notables and gaining access to state, NATO, and European institutions. I would especially like to thank Thomas Darcy at Northrop-Grumman, and Philip Gummett and Andrew James at PREST.

I am also thankful to the Center for Naval Analyses (CNA), which supported me during the writing of this dissertation. Not only did the Center provide me with employment, my friends and colleagues there—notably Henry Gaffney, Peter Schwartz, Katherine McGrady, Michael McDevitt, Eric Thompson, Kenneth Gause, Daniel Whiteneck, Dmitry Gorenburg, Dean Cheng, Peter Perla, and Christopher Weuve—encouraged me to complete the dissertation, assisted me on some lingering empirical questions, and above all, gave me the time to balance both writing and work in order to satisfy the requirements of each. On that note, I also wish to thank Captain Michael Franken, U.S. Navy, and his staff in the Chief of Naval Operations (OPNAV) assessments branch (N810). Captain Franken, in agreement with his CNA counterparts, released me from duty for a critical month during which I made some finishing touches to the thesis.

The Einaudi Foundation provided my principal funding. I also received support from the Cornell Peace Studies Program and the Mellon Foundation.

Last, but not least, I wish to thank Katherine Kelleher and her late husband, Jim. The Kellehers welcomed me as their guest and allowed me to spend a summer with them in Brussels to conduct field research. Without their generosity and without their contacts in the American defense establishment in Belgium, this dissertation would have been a far less pleasant exercise.

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CHAPTER ONE

Introduction

The idea of Europe is inseparable from the idea of defense

-François Mitterrand¹

Ideas are important. For two generations, we have seen the "idea of Europe"—the drive toward West European integration embodied first in the European Communities (EC) and later in the European Union (EU)—progress from promise, to crisis, to rejuvenation and renewed dynamism.² Decades of incremental change have produced "reinterpretations" of national interest and of autonomy that differ considerably from past periods.³ Today, Western Europe is closer to economic union and political confederation than at any other time. Multiple, overlapping institutions make this environment possible, influencing European affairs in almost every issue area. Yet as the idea of Europe has broadened and deepened to embrace a new collective identity and symbolize "pooled sovereignty," the idea of European defense stands unfulfilled and theoretically under-explored.

Defense cooperation in Western Europe is both considerable and long-lived, predating the formal creation of the regional integration movement.⁴ Regional militar-

¹ Cited in Marthias Jopp, Reinhardt Rummel, and Peter Schmidt, Integration and Security in Western Europe (Boulder, CO: Westview Press, 1991), 16.

² See Dorette Corbey, "Dialectical functionalism: stagnation as a booster of European integration," International Organization 49 (Spring 1995); Stanley Hoffman, "The European Community and 1992," Foreign Affairs 68 (Fall 1989): 26-34.

³ See Ulf Hedertoft, "The State of Sovereignty in Europe," in National Cultures and European Integration, ed. Staffan Zetterholm (Oxford, UK: Berg, 1994), 23, 27.

⁴ Josef Joffe and David Calleo, for example, argue that the institutional regional presence of the United States through NATO mitigated traditional enmity between Western European states. Moreover, it provided an informal security guarantee that permitted the integration movement to begin via NATO and

ies have been denationalized and harmonized under an integrated command structure formed forty-nine years ago, and have been bound together in increasingly sophisticated ways through a tapestry of interlocking alliances and policy-coordination groups. Nonetheless, the goal of regional security remains fundamentally incomplete, nationalized and fragmented in the critical area of arms procurement.

Indeed, as Western Europe has become a place of receding internal borders and diminished economic barriers, military production is the last great refuge of national preference—formally excluded from the integration processes sweeping through every industrial sector in the EU.⁵ The region thus finds itself with the paradox of a common defense without a common defense industrial base. Even as European armies combine into multinational units, the means for equipping these forces remains predominantly a collection of disparate national procurement schemes. Long-held state conceptions of sovereignty and of national advantage clash with competing notions of efficiency and of European "community"—a process producing procurement outcomes most often regarded as "second-best" or worse.⁶ As long as this tension exists and the "idea of defense" in Europe is unmet, then borrowing the logic of François Mitterand, the "idea of Europe" will remain unrealized.

Yet one cannot ignore the potential for the "idea of defense" to arise, nor dismiss the possibility that it may be already underway. To understand European integration, one must understand and appreciate change: changing state behavior,

the ECSC. Josef Joffe, "Europe's American Pacifier," *Foreign Policy* 54 (Spring 1984); David Calleo, *Beyond American Hegemony: The Future of American Hegemony* (Brighton, UK: Wheatsheaf, 1987).

⁵ Article 223 in the 1957 Treaty of Rome, officially recognizes the primacy of national preference and national sovereignty in defense procurement, and consequently denies any supranational competence in this area. Moreover, defense remains formally outside common market process. This treaty stipulation has stood untouched even as the Community has evolved through the 1985 Single European Act (SEA) and the 1991 Treaty of European Union (Maastricht).

⁶ Ethan Barnaby Kapstein, "International Collaboration in Armaments Production: A Second-Best Solution," *Political Science Quarterly* 106 (1991-92).

changing interests, and importantly, changing conceptions of state identity. Just as other forms of military cooperation have evolved, so too have efforts in arms production collaboration. Defense production collaboration has been a feature of the European security landscape since the formation of the North Atlantic Treaty Organization (NATO) in 1949.⁷ Since then, procurement cooperation has evolved in a steady, if piecemeal and largely *ad hoc*, fashion to involve increasingly complex interactions and to touch upon nearly every kind of military hardware from bridging machines to combat aircraft. Given this considerable regional legacy, as well as emergent political and economic trends that significantly reduce the potential for procurement autarky both within and outside the EU, we can expect even greater collaboration in the coming years.

The issue explored in this dissertation, however, involves more than changes in levels of procurement cooperation. I posit that the conduct of this collaboration is far more significant, because it could denote integration hereto unanticipated and unaddressable in mainstream International Relations theory. Indeed, important qualitative changes have emerged since the late 1980s in Western European weapons production. Cross-border mergers of defense firms and permanent international joint-venture agreements have slowly taken shape and by century's end a few notable examples have coexisted alongside traditional partnership initiatives such as licensing, co-development or international subcontracting.⁸ As analysts, moreover, we must look beyond the forms collaboration may take, to the motives driving the behavior. The

⁷ The NATO signatories established the Military Production and Supply Board (MPSB) within months of initiating the defense pact. This first institutionalized effort to harmonize alliance militaries focused on standardizing ammunition and simple subsystems and components, like truck parts. Keith Hartley, NATO Arms Co-operation (London: George Allen and Unwin, 1983), 33.

⁸ Richard A. Bitzinger, "Customize Defense Industry Restructuring," Orbis, Vol. 38 (Spring 1994): 273; Trevor Taylor, "Defence Industries in International Relations," Review of International Relations Vol 16 (1990): 65-66; François Heisbourg, et. al., European defence: making it work, Chaillot Paper 42 (Paris: Institute for Security Studies-Western European Union, 2000), 106-107.

mainstream International Relations literatures view procurement collaboration through a strictly rationalist and materialist lens. Realist and liberal institutionalist approaches portray cooperation as a process dominated by egoistic, utility-maximizing state actors. These entities engage in production partnerships to capture the tangible gains of defense production: creating security and/or protecting national economic interests. While these theoretical approaches differ in their appraisal of the likelihood of collaboration, the importance of coordinating institutions, the relevance of relative versus absolute gains problem, or the tension between autarky and efficiency in state calculations, they share a critical similarity. Identity and interest are exogenous to social interaction. Observable phenomena simply reflect actor behavior without in anyway affecting the nature of the actor itself.⁹ Propelling both models, as Alexander Wendt notes, is the *a priori* assumption of the "self-interested state."¹⁰

European Identity

Henry Nau argues, rightly, that before we can use self-interest as a frame of reference however, we must first define the "self."¹¹ In Western Europe, as in no other region, conceptions of the self, of sovereignty, of interest are in flux. By the early 1990s, a discernible European identity had assumed measurable proportions and coexisted with fifteen separate national identities. The idea that a collective European identity is both a product and a cause of the integration movement has become an arti-

⁹ Alexander Wendt, "Anarchy is What States Make of It: The Social Construction of Power Politics," International Organization 46 (Spring 1992): 392.

¹⁰ Wendt, "Anarchy," 392.

¹¹ See Henry Nau, "Identity and International Politics: An Alternative to Neorealism," Paper presented at the Annual Meeting of the American Political Science Association, September 2-5, 1993.

cle of faith for many in the social sciences.¹² These scholars share Karl Deutsch's stance that regional integration is a function of a "sense of community:"

a matter of mutual sympathies and loyalty, of 'we-feeling,' trust and mutual consideration; of partial identification in terms of self-images and interests; of mutually successful predictions of behavior.¹³

The reality of this "we-feeling" as a part of the European socio-political landscape is not in doubt. While affective support for European integration and for the expansion of European policy-making beyond low politics has waxed and waned over time collectively and within individual member states, such support has existed at measurable levels since the early 1970s.¹⁴ This phenomenon has been evidenced in regional *Eurobarometer* surveys conducted on behalf of the European Commission. These polls indicate that large segments of each national public within the EC/EU identify with the idea of Europe, manifested either as an ideal or as the existing institutions of European integration. For example, in those states with the most overt popular enmity toward the EC/EU, the United Kingdom and Denmark, support for the common market averaged 38% and 37%, respectively, between 1975 and 1990.¹⁵

¹² See for example, John Keane, "Questions for Europe," in The Idea of Europe: Problems of National and Transnational Identity, eds. Brian Nelson, David Roberts and Walter Veit, (New York: St. Martin's Press, 1992), 59; Thomas M. Wilson, "An Anthropology of the European Community, in Cultural Change and The New Europe, eds. Thomas M. Wilson and M. Estellie Smith (Boulder, CO: Westview Press, 1993), 11.

¹³ Karl Deutsch, et. al., Political Community and the North Atlantic Area (Princeton: Princeton University Press, 1957,) 36.

¹⁴ Fluctuations in support notably correlate to the oil shocks of 1973 and 1979 and its resulting impact on national economies. Additionally, popular uneasiness with the increased competence of European institutions following the Maastricht Treaty in 1992 led to momentary dips in average net support for unification. Richard Eichenberg and Russell Dalton, "Europeans and the European Community: the dynamics of public support for European integration," International Organization 47 (Autumn 1993): 519; Karlheinz Reif, "Cultural Convergence and Cultural Diversity as Factors in European Identity," European Identity and the Search for Legitimacy, ed. Soledad Garcia (London: Pinter, 1993), 144.

¹⁵ Brigid Laffan, Integration and Co-operation in Europe (London: Routledge, 1992), 124.

While these figures pale in comparison to levels of support found in more pro-Europe polities such as France and Italy, with 61.5% and 73% positive respectively, they denote a reservoir of support for the procedural and institutional aspect of the integration project that cannot easily be dismissed anywhere in the region. What is perhaps more telling to the strength of the European ideal are those instances in which surveyors attempt to ascertain the affective territorial connections of their subjects. When asked in a 1990 *Eurobarometer* poll as to “the degree of attachment to their town or village, to their region, to their country, to the EC, and to Europe as a whole,” 48% of respondents identified with the Communities and 47% “Europe as a whole.”¹⁶ The national and sub-national responses exhibited greater levels of interviewee loyalty, with 88% claiming attachment to their states and 85% to their towns and villages.¹⁷ Strong support for these established political and social communities, however, does not diminish what is an emergent identification with the European ideal. Indeed, a subsequent *Eurobarometer* survey in 1992 noted that while half of all queried EC citizens still did not perceive themselves to be both “European” and their given national identity, 62% of respondents claimed that a European identity would be compatible with their national identities.¹⁸

This phenomenon has been supported, and arguably sustained, by ongoing efforts of both the States and the Community to promote a European identity since the early 1970s. From 1973 to 1985, there were three Heads-of-State summits—Copenhagen, Stuttgart, and Milan—in which the States, and thus the Community—set out to establish a “People’s Europe,” accompanied by a Commission-led regional so-

¹⁶ When disaggregated on the national level, there is again considerable variation. For example: UK (35 percent and 34 percent), Netherlands (28 percent and 31 percent), France (54 percent and 50 percent), and Italy (61 percent and 59 percent). Reif, “Cultural Convergence,” 138.

¹⁷ *Ibid.*

¹⁸ Brigid Laffan, “The Politics of Identity and Political Order in Europe,” *Journal of Common Market Studies* 34 (March 1996): 99.

cialization campaign in which Europeans would be prepared “for *Citizenship* which involves the Community dimension in addition to their national, regional and local affiliations.”¹⁹ Economic and institutional advances on the ground have complemented this process: the creation of the single market, the rapid growth in cross-border labor mobility through the 1980s, and the establishment of a common judicial space through the 1990 Schengen Agreement. Of course, these efforts pale in comparison to the creation of a European citizenship through the 1992 Treaty of European Union, and the complementary “promotion” of quasi-national European symbols: a flag, an anthem, and a common currency.

Admittedly, a series of generational replacements will be required before this new identity becomes pronounced. Indeed, recent scholarship indicates that only a small percentage of Union citizens—less than 10 percent of the population in all states except Luxembourg—perceive themselves to be entirely European.²⁰ One can safely say, however, that a discernible European identity coexists along with fifteen separate national identities.²¹ This identity is certainly not hegemonic and will probably pose no serious challenge to either nationalism or intra-national regionalism for the foreseeable future. It nonetheless exists as a weaker identity within a hierarchy of identities.²² The percentage of respondents reporting both European and national identities in the 1999 *Eurobarometer* survey however—with the latter identity constituting

¹⁹ Cited in Henk Dekker, “European Identity: How European Are Young Europeans Expected To Be and How European Are They in Fact?” in Reconceptualizing Politics, Socialization, and Education: International Perspectives for the 21st Century, ed. Russell F. Farnen (Oldenburg: Bibliotheks- und Informationssystem der Universität, 1993): 523.

²⁰ Stefan Höljelid, “European Integration and the Idea of European Identity: Obstacles and Possibilities,” ECPR Joint Sessions/Workshop 19: Identity Politics, 2001, 14.

²¹ For a focus review of popular attitudes concerning “European” solutions toward national security issues see Werner J. Feld, The Future of European Security and Defence Policy, (Boulder, CO: Lynne Rienner, 1993), ch. 5, 11.

²² Laffan, “The Politics of Identity,” 99.

the primary identity—ranged from a low of 24 percent in the United Kingdom to 56 percent in Ireland in 1999.²³

This phenomenon of an evolving transnational identity that is entrenched and diffused throughout the Union is the primary driver of this research effort. My interest lies not in the existence of this identity but rather in its effect. Given that national identities have remained predominant, and as I hypothesize that identity shapes interest which then guides action, we can assume that most state behavior in this environment will continue to privilege national priorities over the communal good; self-interest over “other-interest.” What we still must discern, however, is exactly when narrow, national interest is likely to be the deciding factor for any given issue-area in the presence of a transnational identity.

European defense is one such domain in which official discourses and popular attitudes denote a willingness to redefine national problems as common concerns with communal solutions. First, in past *Eurobarometer* surveys that have gauged popular support for collective defense efforts, significant percentages of Western European mass publics report that they no longer see their national security as best served through national means but rather through *European* initiatives. Successive polls since the mid-1970s note that sizable pluralities, and occasionally small majorities up to 55%, of respondents in region-wide samples favor placing defence issues under EC/EU control, and even support the creation of a common European army.²⁴ By the

²³ Höljelid, “European Integration,” 15.

²⁴ Moreover, although considerable national diversity exists on this issue, national publics most opposed to completely unifying regional defenses still hold significant minorities in favor of such proposals. For example, Danish and Greek respondents exhibited the greatest resistance to the surrender of national security autonomy to the EC-EU. Nonetheless, 37 percent and 38 percent of each respective national sample supported the idea. Philippe Manigart and Eric Marlier, “European Public Opinion on the Future of Its Security,” *Armed Forces and Society* 19 (Spring 1993): 399-443.

Spring 1999 *Eurobarometer* survey, respondents were evenly split between those who supported national solutions to defense issues versus those favoring European ones.²⁵

One must note, however, that past surveys have not always inquired as to the saliency of defense issues. Consequently, one cannot determine if claimed positions were strongly held.²⁶ Further, they have not always specified exactly how the collective defense should be pursued, e.g., intergovernmental multinationalism à la NATO, supranationalism, etc. Europeans may desire more collaboration, but not outright integration; or possibly, may embrace integration “in name only,” so as to render the concept meaningless with escape clauses and empty symbolism. Whatever, the case, it is clear that over fifty years of defense harmonization under NATO and the WEU, among other institutions, have led Europeans to see such cooperation as normal, and to expect more of it.

Second, official debates within Europe about the conduct and future of defense industrial policy are often “presented in an European rather than a national context.”²⁷ Increasingly over the last thirty years, this has become commonplace, as the regional good is at least rhetorically emphasized over the welfare of any of its national components, e.g., the creation of an *European* aerospace industry through multinational collaboration, or the building of an advanced *European* defense industrial base. Michael Heseltine exemplified this discursive trend while serving as the United Kingdom’s Secretary of State for Defense in 1985. Asked about British and Allied efforts to promote greater and more efficient weapons collaboration, he claimed:

I am fighting for Europe. Neither I nor my ministerial colleagues, I believe, are fighting purely for national interests. . . . If Europe wants to be

²⁵ Höljelid, “European Integration,” 16.

²⁶ Manigart and Marlier, “European Public Opinion,” 336.

²⁷ Todd Sandler and Keith Hartley, *The Economics of Defense* (Cambridge: Cambridge University Press, 1995), 229.

in the first rank of industry in the 21st Century it must act this way and this is the principle of European procurement. The defense ministries are the biggest customers, we are the only people who can lead it. It is in the long-term advantage of Europe that we should do so.²⁸

Here, the minister speaks not of Britain's status and well being; instead the stated justification for action is one of self-redefinition in which the status of the regional community transcends state interest. Heseltine's language epitomizes the constructivist perspective as to how Western Europe should function:

. . . [Decades] of cooperation [that] may have transformed positive interdependence of outcomes into a collective "European identity" in terms of which states increasingly define their "self" -interest. Even if egoistic reasons were its starting point, the process of cooperating tends to redefine those reasons by reconstituting identities and interests in terms of new intersubjective meanings and commitments.²⁹

One can find sentiments of this type echoed in every capital in NATO Europe. We must never assume, however, that proclamations of "visionary belief" and of a European worldview mean that the issue of European defense has become a sea of altruism and prosocial behavior in which states share empathetic bonds with each other.³⁰ What matters, as Regina Cowen in her study of German procurement policy notes, is not what states (and especially their publics) say, but rather what they do.³¹ Indeed, Minister Heseltine also noted in the same interview that in the area of military procurement:

. . . [W]ithin each country nationalist feelings are aroused and there emerges a fear of selling out national interests. . . the fact is that all Governments will pursue what they see as their legitimate state interest in the field of arms procurement. There are enormous pressures to per-

²⁸ Michael Heseltine, "I am fighting for Europe," Military Technology IX (1985): 74

²⁹ Wendt, "Anarchy," 417

³⁰ Jonathan Mercer, "Anarchy and Identity," International Organization 49 (Spring 1995): 234.

³¹ Regina Cowen, Defense Procurement in the Federal Republic of Germany (Boulder, CO: Westview Press, 1986), 290.

suade governments to buy the maximum amount of their defense equipment in their own countries.³²

State egoism remains strong in an environment where, as I shall soon show, most of the cooperation that does occur is very much self-regarding. Further, this is an environment in which even countries with limited defense industries, such as The Netherlands, continue to insist upon the domestic supply of a majority of its military requirements.³³

There is an instrumental quality to the notion of a European defense identity. It has been used either to propose or to justify action that is subsequently better explained as the pursuit of narrow, national self-interest. It is conceivable that a marginal social identity, such as a collective European one, would at best be more symbolic than practical—limited to statements of purpose and to the declared acceptance new *possibilities* in European collective action. Constructivists remind us, however, that identities are relational both to a given issue or activity, and to other actors.³⁴ The causal leverage of a relatively weak European collective identity might well be limited to an issue-area of comparably marginal importance.³⁵ In this perspective, arms production may seem a poor candidate for Europeanization, given its innate connection

³² Michael Heseltine, “I am Fighting for Europe,” 74.

³³ The larger and more capable national defense markets have been naturally more autarkic. In the 1990s, 90 percent of UK procurement contracts were awarded to UK firms. The comparable figure for Germany and Italy stood at 80 percent. At the extreme, 98 percent of French defense procurements since 1992 were supplied by French firms working either in national programs or in multinational collaborative schemes. United States General Accounting Office, Report to the Secretary of Defense, Defense Trade: European Initiatives to Integrate the Defense Market (GAO/NSIAD-98-6, October 1997), 13-14.

³⁴ Wendt, “Identity and Structural Change in International Relations,” 52.

³⁵ Indeed, *Eurobarometer* data indicate, for example, that support for deepening cooperation and expanded Union competences is greatest in those areas of social and political activity that are deemed relatively inconsequential to the security and well-being of individuals and their communities, for example, environmental protection, international humanitarian aid, and poverty alleviation. Höljelid, “European Integration,” 16.

“with the very essence of the sovereignty of the nation-state.”³⁶ As previously mentioned, however, it is the relationship between defense and state interest that makes the study of procurement collaboration an excellent test for the influence of a developing supranational identity. Further, as European states have at least claimed to differentiate between essential security interests and their general equipment needs, there has been a potentially widening window for countries to pursue denationalized procurement strategies. Thus, a study of European defense procurement promises to shed light on the broader question of whether European identity is now a reality.

The Technology-Identity Hypothesis

In this dissertation, I explore whether an identifiable European identity is manifest in arms procurement collaboration. Given the "internationalization" of military production globally, and the evolutionary *Europeanization* of procurement within the EU, we can no longer assume that the status quo of predominately national procurement punctuated by episodes of limited cross-border cooperation will endure.³⁷ We can ask, under what conditions will weapons production cooperation no longer serves narrow, national interests but perhaps reflects a transformation in identity that is indicative of the larger, European community?

³⁶ François Heisbourg, “Public Policy and the Creation of a European Arms Market,” in The European Armaments Market and Procurement Cooperation, eds. Pauline Creasey and Simon May (New York: St. Martin’s Press, 1988), 86.

³⁷ The history of collaborative procurement in Western Europe can be seen as both a part of and an impetus for defense industrial globalization that has been evolving since the 1950s. This globalization occurs as “mature” states, such as those in NATO, diffuse technology among themselves and to the Third World via direct sales and industrial cooperation in order to recoup (or share) development costs. As armaments have become more complex, and as export markets have declined as new competitors have emerged, even developed states may find themselves unable to continue “independent defense industrialization.” In the European context, this has been manifest in increasing pressures on states to increase North-North defense cooperation and to become aggressive in securing markets in the developing world. See Richard Bitzinger, Towards A Brave New Arms Industry, Adelphi Paper 356 (New York: Oxford University Press, 2003), 29. See also William Keller, Arm in Arm (New York: Basic Books, 1995).

I hypothesize that the nature of military procurement cooperation is changing and that orthodox conceptions of the links between national identity, national interest and military technology need to be reassessed. A focus on technology, and state attitudes toward it, allows us to conduct a nuanced test of the role of identity as I contend that military technology is an intervening variable between identity and state behavior. High-tech military hardware is bound to conceptions of self, and of self-interest, that limit collaboration. The manufacture of such goods historically holds both material and symbolic benefits for state actors for many reasons. Domestic weapons production provides states with autonomy in military supply and political independence; it offers potential economic spin-offs in research and development and national labor markets; it legitimates state-actors in a world-system where a prevailing "culture of modernity" equates greatness with the sophistication of one's economic and military industrial base;³⁸ and finally, an advanced national defense industrial base (DIB) produces culturally-valued artifacts that become components of national identity and vehicles for national prestige.³⁹

Not all weapons possess the same value on either economic or political-symbolic terms. An air-superiority fighter, for example, is a symbol of power and an instrument that both demands and supports a sophisticated industrial foundation. We can conceive of defense technology—tanks, ships, strategic bombers, etc.—as symbols of a corporate state identity. The possession of such devices and/or the means to produce them becomes "emblems of the nation." Robert O'Connell argues they may

³⁸Alexander Wendt and Michael Barnett, "Dependent state formation and Third World militarism," Review of International Studies Vol 19, (1993): 337; Dana Eyre and Mark C. Suchman, "Military Procurement as Rational Myth: Notes on the Social Construction of Weapons Proliferation," Sociological Forum vol. 7 (March 1992): 150-151.

³⁹ Robert O'Connell, "Putting Weapons in Perspective," Armed Forces and Society 9 (Spring 1983): 450; William Bloom, Personal Identity, National Identity, and International Relations (Cambridge, UK: Cambridge University Press, 1990), 52.

represent a cultural "fetishism" with technological progress as in the case of high-performance combat aircraft; or perhaps they may convey images of strength and "armor-plated" invulnerability of the kind embodied in tank manufacture. In any event, once these symbols have been internalized by members of the national community, we can expect state action either to preserve or enhance these emblems of the state.⁴⁰

The same cannot be said, however, for a broad range of military hardware based on older technologies, often mass-produced and regarded as near-commodities. Just as the ability to possess and produce an advanced aircraft provides tangible security and economic benefits, so to do low technology weapons. The crucial difference, however, is that high tech items also become part of state self-perception in the international system, and importantly, how that state wants to be regarded by others. As a symbol of modernity, this kind of "value-added" hardware *is* different from a mortar tube or of an artillery shell. This difference will shape how far states are willing to go to monopolize the "sophisticated" over the "commonplace."

I hypothesize that high-end technologies will invoke a self-centered, nationalist response and thus limit the potential for meaningful (i.e., economically and militarily efficient) procurement collaboration. States will attempt to accrue and maximize gains from procurement for themselves. Low-end technologies, on the other hand, are not crucial to national identity, and therefore we can expect countries not to engage in narrow, self-interested behavior. Collaboration at this level may reflect a reinterpretation of state interests in which the "self" embraces the larger community. Consequently, countries might surrender national competence and national capability in favor of a regional solution. This phenomenon could manifest itself in several ways: collaborating states may permit open competition between partners for certain items;

⁴⁰ O'Connell, "Putting Weapons in Perspective," 450.

states could embrace the true rationalization of production, allowing comparative advantage to determine the regional location of supply for their individual or group needs,⁴¹ or they could possibly allow for the creation of multinational corporations without "distinctive national affiliations"—"Eurocompanies"—and rely upon them for procurement.⁴² At the very least, collaboration in low-tech military goods should reflect market forces over parochial political concerns.

I do not claim that low-tech armaments cooperation represents the ultimate measure of identity shift. Given the symbolic and material importance of high technology weapons, the emergence of rational collaborative schemes in that area would be a considerably better indication of how much states see their identities (and interests) interlocking with each other. Nonetheless, meaningful cooperation in low technology manufactures is still important because the structural economic forces driving post-war cooperation are less prominent in that domain. Whereas cost and technological weakness may demand collaboration for high technology goods even when autarky is most desired, most nations still possess the ability to satisfy their low technology needs autonomously. Consequently, an identity/interest shift offers explanatory leverage for efficient de-politicized cooperation in low-tech procurement should it exist. A European identity will most shape behavior in areas that are rela-

⁴¹ I must apologize for the conceptual fuzziness here. By "source of supply" I mean a recognition that a single national producer within the community may be the most effective supplier for a given item (e.g. rifle ammunition, mortar tubes, widgets, etc.). Other members, therefore, either abandon or significantly reduce their own capability and supply their needs from this cross-border source. This relates to the previous point where procurement decisions are based on fair bidding and are awarded according to price and efficiency. Rationalized "collaborative production," on the other hand, refers to states pooling resources for a common project but then basing final production on "techno-economic" merits (e.g., single production lines or administrative center) instead of national political imperatives, such as the desire to protect domestic labor markets or national access to technology. On this point see, Andrew Latham, "Conflict and Competition over the NATO Defence Industrial Base: The Case of the European Fighter Aircraft," in The Defence Industrial Base and the West, ed. David G. Haglund (London: Routledge, 1989), 112.

⁴² William Walker and Philip Gummett, "Future Options for the European Defence Market," Seminar Paper, April 29-30, 1993, 28.

tively less critical to traditional conceptions of the self. Over time, this collective identity might spread across technological domains. Thus, low-tech weapons collaboration represents an excellent starting place to investigate this issue.

By problematizing both identity and technology we can create a deductive model of weapons collaboration from which we can predict state behavior. It permits us to hypothesize and explore possible shifts in interest and identity away from state-centrism and toward a more *Gemeinschaft*, or community, framework where distinctions between the self and the other (i.e., the group of potential partners) blur. I posit that identity shifts will produce transformations in state interest that emerge in new behaviors. Thus collaboration may not only change its intensity but also its type. Collaboration is thus the model's dependent variable, given that the goal is to explain changes in procurement cooperation through the end of the 1990s. Unfortunately, the test for this hypothesis—exploring both the degree and the means of rationalization in Western Europe's transnational defense industry—has not yet been done. This dissertation attempts to fill this gap.

Dissertation Structure

I will evaluate changes in European defense industrial cooperation by analyzing five discrete cases of intra-regional collaboration from the late 1960s to the mid-1990s: the *Tornado* Multi-role Aircraft, *Eurofighter*, the *Field Howitzer 70* (FH-70) program, the *Self-Propelled Howitzer 70* (SP-70) program, and the Anglo-French Reciprocal Purchasing Agreement. The aircraft and howitzer cases are technology dyads in which we can compare changes in state behavior over time within high- and low-technology domains, and moreover, do so in a way that controls the number and identity of participating states over a thirty-year period. I shall be particularly sensitive to shifts in state behavior and interaction that might signal an emergent, coalescing trans-

national identity that promotes interdependence, and significantly, the denationalization of the procurement process. In the following chapters, I shall look for the telltale signs of such a transformation. Chapter 2 is a discussion of the theoretical foundation of this dissertation in which I assess how a Social Constructivist analysis might provide a comprehensive picture of the possible shifts in collaborative activity than that attainable through more mainstream approaches. Chapter 3 provides a broad historical overview of the evolution of cooperative procurement in NATO Europe. Here, I also present a theoretical discussion of the forms that cooperation notionally could assume and the significance of these alternate “pathways” for an analysis of shifts in state interest. Chapter 4 introduces the case studies with an evaluation of Europe’s first major collaborative venture, the *Tornado* Multi-Role Aircraft. We then turn immediately to its successor, the *Eurofighter* in Chapter 5. Chapter 6 provides a short assessment of the so-called “Euro-howitzer” projects, the FH-70 and the SP-70. The analytical work concludes with the Anglo-French Reciprocal Purchasing Agreement in Chapter 7. Finally, Chapter 8 summarizes and revisits our principal findings.

CHAPTER TWO

The Foundations of a Constructivist Analysis

Armaments collaboration within NATO—whether the emphasis is North American, intra-European, or transatlantic—has been a key feature of Alliance relations for much of the last forty years. Within some policy-making circles, the goal of collaborative defense procurement has ranked a tight third next to the goals of collective defense and security policy harmonization. For these elites, cooperation in arms production represents the ultimate expression of economic and political reason over myopic nationalism—an act that if properly executed, would make the Alliance stronger, wealthier, and more cohesive. Advocates of European integration have perceived even grander ramifications, arguing that at a minimum, defense industrial cooperation provides the symbolic promotion of community solidarity through bi-, or multilateral schemes; and at a maximum, cooperative armaments production functions as a continuation, and indeed a completion, of the regional project toward economic and political union.

Whatever the proclaimed rationale, procurement collaboration has always involved much more than the joint production of discrete commodities or a multinational quest for economic efficiency. This cooperation touches upon core issues of international relations—subjects that animate international relations as a field of study and shape some of its most contentious debates: the value of institutions in promoting interstate cooperation; the limits of regional integration; the interplay between concerns for relative gains and the desire to enjoy the welfare-benefits of collaboration; the problems of anarchy and its varying effects within certain regional

environments; and finally, the role of state identity in shaping the potential for interstate cooperation.

This chapter addresses these issues and others through the filter of international relations (IR) theory and attempts to integrate them into an understanding of armaments cooperation. The purpose here is not to merely revisit and expand upon the deductive model of identity effects and multinational weapons procurement collaboration that I presented in the introductory chapter. Instead, I seek to justify how we should to study this activity and to demonstrate what this investigation contributes both to international relations research and to the more circumscribed area of regional integration theory.¹ Within IR, there are two theoretical paradigms that are relevant to any discussion of interstate cooperation—and particularly so when the area of interest includes the singular case of post-war defense industrial collaboration in the North Atlantic area: realism, which enjoys the oldest intellectual tradition in the field and is correspondingly the most widely applied; and social constructivism, which is one of the newer and less thoroughly developed IR paradigms, but which nonetheless shows potential in its ability to hypothesize beyond materialistic rationalist analyses and to explore the ideational foundations of state behavior. Each of these paradigms takes well-defined stands on the nature of and propensity for interstate cooperation. Each offers some insight as to the conduct of armament collaboration, both past and current, though arguably neither fully explains the process as it has evolved.

Multinational weapons procurement sits uncomfortably between the desire for national autonomy and the commonly proclaimed need for mediating international institutions; between the demands of political-economic integration and the lingering mistrust among partners and allies; and lastly, among North Atlantic states, between a

¹ I am grateful to David Leheny for this phrasing.

nascent, but often invoked, regional identity and established, deep-seated, national prejudices. In this environment, any single worldview would be hard-pressed to provide a comprehensive explanation of the sources and aspirations of defense industrial collaboration. Nonetheless, the task remains for scholars to discern which one might offer the best available theoretical “fit.”

This chapter has four sections. First, I begin with a discussion of the paradigmatic foundations of both realism and social constructivism, detailing their particular approaches to understanding states and state behavior, notably international cooperation. Second, I look at the role of armaments production in the interstate system. This section shows how defense technologies are both functionally and symbolically connected to the exercise of statehood. Their acquisition and possession is, in fact, indicative of varying conceptions of state identity. I argue that the ideational significance of armaments is too often underemphasized in mainstream security studies. The symbolic, intersubjective component of weapons procurement can have a determining impact on state behavior that is equal, or even greater, than any objective material criterion. Third, I offer a synthesis that applies realist and modernist constructivist logics to defense procurement, and detail the expectations of each toward the propensity and conduct of multinational arms collaboration. Given the dominance of realism in security studies and within international relations research, there is a vast literature of realist critiques of single- and multi-state arms production arrangements which I can draw upon. Unfortunately, there is no comparable body of constructivist texts. Nonetheless, a number of constructivist scholars have either addressed this issue directly, or discussed the problems inherent in complex cooperation of the type that now occurs in Western Europe, and their insights will allow for an “ideal” constructivist conceptualization.

Finally, this chapter describes the research plan of this dissertation. I employ a process-tracing methodology in which I analyze the discursive environments that both affected and were generated by defense procurement decision-makers in the five cases of armaments collaboration analyzed within this dissertation. The purpose here is to test the hypothetical expectations of European procurement collaboration that drive this study. If sentiment—defined here as shifting conceptions of identity and of changing norms of appropriate state behavior regarding certain classes of defense technology—has a determining impact on the conduct of cooperation, process-tracing should highlight shifting attitudes. This strategy should illuminate the possible validity of the key alternative explanation for collaborative behavior: namely that presented by realist interpretations, which hold that any behavioral changes in the conduct or scope of multinational defense industrial collaboration are limited, functional responses to structural economic forces and have no real connection to the ideational factors explored within this dissertation.

Theoretical “Fit”

Realism

Realism represents an obvious point of departure in any discussion of International Relations theory. As the theoretical tradition with the longest intellectual history, it is—rightly or wrongly—the benchmark to which all alternative approaches are compared.² The strength and longevity of the realist paradigm lies in its analytic parsimony and in an implicitly conservative worldview. To realists, specifically the dominant, “modified structural” variety of realists, abstraction is the cornerstone for

² Emanuel Adler, “Seizing the Middle Ground: Constructivism in World Politics,” European Journal of International Relations 3 (1997): 320.

successful predictive and generalizable theories.³ They regard states as the only salient political actors in an anarchic international environment. States are portrayed as rational, unitary actors possessing hierarchies of interests, which are assumed to be given and identical for all countries in all contexts. Countries seek to advance their material condition and ensure their physical security—this latter concern being viewed by realists as paramount, given the absence of any supranational power to either adjudicate or defend states in the international arena. Whatever the goal, however, states always strive to maximize their self-interest and will do so in a predictable manner using cost-benefit calculations that select the most appropriate strategy within assumed information limits.

The realist preoccupation with rationalism—behavior driven by the “logic of consequences” based upon ends-means reckoning—is complemented by a strong bias toward materialism. States are utility maximizers with clear, fixed preferences, whose conduct, however, is limited to the pursuit of material causes within an equally clear material reality shaped by the international distribution of relative capabilities.⁴ All countries covet the pursuit of power and wealth as being among their essential interests, and they are concerned with their status relative to others in the interstate system. Differences in capabilities among states create asymmetries in strength that in turn raise the possibility that a state may find its existence threatened in some indeterminate future. Consequently, material concerns drive state behavior to an extent that overshadows other possible motivators and reduces them to epiphenomenal influences.

³ Stephen G. Brooks, “Dueling Realisms,” *International Organization* 51 (Summer 1997): 455; Robert Keohane, “Theory of World Politics: Structural Realism and Beyond,” in *Neorealism and its Critics*, ed. Robert Keohane (New York: Columbia University Press, 1986), 193.

⁴ Adler, “Seizing the Middle Ground,” 324; Joseph Grieco, “Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism,” in *Neorealism and Neoliberalism: The Contemporary Debate*, ed. David Baldwin (New York: Columbia University Press, 1993), 127.

Within the realist worldview, as Jeffrey Checkel asserts, “perceptual, ideational, and cultural factors” are at best “parasitic upon [the] material base.”⁵ Emanuel Adler notes that within this paradigm “ideas do not construct and structure social reality, but only reflect the material world.”⁶ No realist would deny that culture, pride, belief, values and other non-material influences shape state decision-making or at times can appear to be quite salient. Nonetheless, all these can be reduced to questions over the aggregation and disaggregation of power.⁷ Atavistic state belief systems, for example, do not arise from evolving national discourses but rather from an absence of natural resources, possibly coupled to a lack of defensible natural borders, and the presence of strong predatory neighbors who might meet weakness with invasion and subjugation. States that subscribe to such values, as Germany arguably did before 1945, do so because of the constraints and opportunities present in their peculiar international environments.⁸ The exaggerated need for relative advantage vis-à-vis potential adversaries and victims creates a national political culture that both reflects perceived state interest and justifies its existence. In such a case, all that truly matters for understanding and prediction is an appreciation of the material bases of state behavior, measured in terms of resource profiles, military capabilities, technological competences, extractive potentials, and so on.

Issues of state identity are similarly circumscribed in realist analysis. The anarchic nature of the international system forces states into a zero-sum competition for security in which all aspire to enhance their security relative to others, and yet doing

⁵ Jeffrey Checkel, “The Constructivist Turn in International Relations Theory,” World Politics 50 (January 1998), 329.

⁶ Adler, “Seizing the Middle Ground: Constructivism in World Politics,” 324.

⁷ Henry Nau, “Identity and International Politics: An Alternative to Neorealism,” Paper presented at the Annual Meeting of the American Political Science Association, September 2-5, 1993, 29.

⁸ See John Mearsheimer, “Back to the Future: Instability in Europe After the Cold War,” International Security 15 (1990): 22-26.

so adds to the insecurity perceived by their neighbors. This is an environment that can be brutal and is always shaped by strife and the possibility of war. States not only operate within it, but they are also ultimately defined by it. As Ole Wæver writes, among Realists “the only purpose for *being* in the political system is to defend oneself, [to] claim one’s sovereignty [*italics in the original*].”⁹ The only identity of any importance to states, and specifically to understanding state behavior, is the identity that they all theoretically share as security-seeking, self-interest maximizers. Labels such as “revolutionary,” “liberal,” or “Egyptian” all have value as identity categories, and are important to historians and to comparativists. Nonetheless, the practical study of international relations requires only acknowledging the “irreducible minimum” of diplomacy, defined by Hans Morgenthau as the desire to protect one’s national institutions and integrity with “adequate power.”¹⁰

Simplifications and idealizations about the interstate system such as this deny realist analyses a great deal of their potential descriptive detail. The influences of real processes such as intragovernmental politics or interest change are dismissed in an effort to, as Kenneth Waltz asserts,

find the central tendency among a confusion of tendencies, to single out the propelling principle even though other principles operate, to seek the essential factors where innumerable factors are present.¹¹

The intellectual ideal of structural realism is not merely to rehash known histories that are invariably cluttered with confounding influences and unclear causal trajectories. Instead, it aspires to find that irreducible minimum that can create internally consistent

⁹ Ole Wæver, “European Security Identities,” *Journal of Common Market Studies* 34 (March 1996): 110.

¹⁰ Hans Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* 5th ed. (A. Knopf, New York, 1978), 553.

¹¹ Kenneth Waltz, “Laws and Theories,” in *Neorealism and its Critics*, ed. Robert Keohane (New York: Columbia University Press, 1986), 38.

theories that satisfactorily explain past and present conduct and predict future action. International anarchy, the relative distribution of interstate power resources, and the pursuit of national self-interest are those guiding principles; and although they constitute a somewhat opaque lens through which to observe reality, they nonetheless create a number of intellectually appealing and durable suppositions about state behavior, particularly those involving the propensity and nature of interstate cooperation. Multi-national weapons procurement is a subset of that behavior.

As noted, the nature of international anarchy presents countries with an ever-present security dilemma. Because the sincere intentions of either allies or adversaries are rarely known and could change, countries are forever vigilant against the possibility that others may physically attack them, or at the very least seek to undermine their political autonomy. The interstate system thus is a self-help system in which lasting trust is unattainable and countries can rely only upon their own resources to satisfy their interests. States, consequently, are self-regarding defensive positionalists for whom political sovereignty is an inviolable right and for whom military and economic autarky are desired goals.

In this environment, cooperation is possible but tenuous. Kenneth Waltz argues that “states do not willingly place themselves in situations of increased dependence.” Further, “no state” seeks to “participate in” or a create “a structure by which it and others will be constrained.”¹² Nonetheless, complete autarky and isolation have rarely been possible in the modern state system. At a minimum, countries disadvantaged by geography, economic capacity, or technological prowess and unable to ensure their security against stronger states must ally themselves with others and balance against

¹² Kenneth Waltz, Theory of International Politics (Reading, MA: Addison-Wesley, 1979), 107; Cited in Holly Wyatt-Walter, The European Community and the Security Dilemma, 1979-92 (New York : St. Martin's Press, 1997), 58.

the perceived threat. On a more banal level, interstate cooperation can be quite lucrative, capable of enhancing national welfare through trade and the creation of institutions that reduce transaction costs and protect property rights.¹³ The benefits that can arise from such collaboration can easily exceed anything possible through autarkic development or even through military conquest.

Cooperation poses a significant dilemma for states. On the one hand, it can be highly desirable, and in many cases unavoidable, if countries truly seek to expand their power and security. On the other hand, cooperation creates the potential for dependence and vulnerability, and thus can generate insecurity. Realists contend that states do not enjoy the luxury of probabilistic thinking. In a self-help system, the possibility that countries can transmute welfare gains into military power, or exploit a partnership as a means of imposing political and economic leverage on others will be always considered with the utmost care. States who fail to do so not only risk their autonomy but their existence as states. Cooperative relationships that enrich can also be used to enslave, since all cooperation between countries regardless of scope, content or purpose, implicitly undermines national independence.

Consequently, Realists posit that states will handle any and all of their collaborations with each other cautiously. First, because of the extensive security competition present in the international system, states will always privilege short-term security considerations over long-term welfare aspirations—even at the potential expense of non-security goals. While considerations of security “subordinate economic gain to political interest” and thus lead to a discounting of the future, the intensity of these concerns will be shaped by the nature of relations between the states involved in a given situation.¹⁴ Allies may enjoy longer time horizons in their collaborations than

¹³ Stephen G. Brooks, “Dueling Realisms,” *International Organization* 51 (Summer 1997): 462.

¹⁴ Brooks, “Dueling Realisms,” 450; Kenneth Waltz, *Theory of International Politics*, 107.

rivals. Nonetheless, even these partnerships will be tempered and temporary as states strive to prevent lasting and pronounced cooperation-induced security imbalances.

Second, countries fixate upon concerns for relative gains, and seek to prevent partners from accruing greater benefits through collaboration. Because states view their security in terms of the relative distribution of resources, any shift in balances poses a potential threat—even if that shift arises from consensual and mutually beneficial collaborative relationships. Consequently, states will structure their partnerships so as ensure maximum payoffs to themselves while simultaneously attempting to prevent others from gaining greater benefits. This will often assume a form in which the conduct and returns of cooperation mirror the existing distribution of power between partners.¹⁵ States with similar capabilities will strive for symmetry in their collaborations such that all gain equally. Relationships between states of disparate strength will reflect arrangements that mirror the bargaining power of the various parties, such that none gains disproportionate rewards from their collaboration.

Third, countries will avoid relationships that directly compromise their autonomy. Where international institutions are required to mediate and adjudicate between parties, their powers will be expressly circumscribed. Indeed, they will be tolerated only as far as they minimize losses in state power in relationships that otherwise necessitate some compromises in national autonomy.¹⁶ The conduct of such bodies will be intergovernmental, ad hoc and punctuated by a distinct absence of supranationalism that might undermine the ultimate sovereignty that states seek to protect. Institutions, much like the cooperative outcomes that they are created to oversee, will also reflect the distribution of power among states. Indeed, they are “arenas for acting out power

¹⁵ John Mersheimer, “The False Promise of International Institutions,” *International Security* 19 (Winter 1994/95): 13.

¹⁶ Andrew Moravcsik, “Preferences and Power in the European Community: A Liberal Intergovernmentalist Approach,” *Journal of Common Market Studies* 31 (December 1993): 507.

relationships.”¹⁷ The behavior of mediating institutions will reflect the preferences of strong states. In the worst case, countries may actually compete for control of these organizations in order to further their own parochial interests. Weaker states, for their part, will craft explicit rules within these regimes that preserve their influence and limit their domination by stronger actors.¹⁸

The unreconstructed Realist expects considerable state resistance to complex forms of international cooperation. The more that a cooperative relationship restricts a state’s freedom of action and affects those areas of essential state interest—beginning, of course, with military security and moving outwards into areas of economic security—the less likely that that state will enter such an association. No matter how firm the commitments between partners to allay fears over cheating and exploitation, states will not tolerate binding partnerships, meddlesome institutions, and the deliberate dilution of sovereignty. Indeed, the legacy of failed regional integration movements around the globe, including the European Union’s own history of cyclical stagnation and revival, are often highlighted as examples of the strength of these assumptions.

Nonetheless, there are islands of collaboration within the interstate system where realist precepts concerning the significance of sovereignty and self-interest in shaping the potential for international cooperation falter. In these regions—where despite even its troubled history the EU remains the example *par excellence*—sets of states have formed deepening relationships that can encompass nearly every area of political and economic activity, ranging from monetary union to the joint production of artillery shells. While we must not exaggerate the significance of phenomena such as these, the fact remains that these behaviors occur, and moreover, may become more

¹⁷ Cited in Mersheimer, “The False Promise,” 13.

¹⁸ Joseph Grieco, “Understanding the Problem of International Cooperation: The Limits of Neoliberal Institutionalism and the Future of Realist Theory,” in Neorealism and Neoliberalism: The Contemporary Debate, ed. David Baldwin (New York: Columbia University Press, 1993), 331.

complex and integrative over time. Indeed, within the North Atlantic area notions of sovereignty and self-interest are contested to a degree rarely found elsewhere. Realist scholars such as Stanley Hoffman grudgingly accept that in the case of the European Union, despite its many faults and often hollow promises, the integration project in Western Europe has produced a zone of peace and prosperity through pooled sovereignty and economic interdependence which will likely persist for the foreseeable future.¹⁹

The scope of cooperation that has occurred in the European case presents realism with a number of predictive and analytical challenges. Realism avoids theorizing upon the significance of state identity and interest shifts, regarding both as constants and thus theoretically exogenous. Yet cooperation among states, as we see in Europe and to a much lesser degree in North America, can move beyond transaction relationships, beyond behavioral cooperation. The varied collaborations that form the base of the European Union serve to protect the state as a viable political entity—to rescue it, to borrow the language of Alan Milward, from structural pressures that all advanced, post-war states face and that some cannot withstand without external coordination with others.²⁰ These same acts, however, have created a series of unintended consequences, both political and ideational, which have weakened state autonomy. As Paul Pierson notes, the “grand interstate bargains” that established complex European cooperation, ranging from the Treaties of Rome and Maastricht to the Brussels treaty, and the Single European Act, were all initially conducted in good realist fashion: launched by the member-states to deepen their cooperation while preserving their control over their domestic affairs. Nonetheless, as issue density has increased with ever larger

¹⁹ Stanley Hoffman, “Europe’s Identity Crisis Revisited,” *Daedalus* 123 (Spring 1994): 16.

²⁰ See Alan Milward, *The European Rescue of the Nation-State* (Berkeley: University of California Press, 1992)

ranges of decisions made at the European level and state decision-making limited by time-constraints and asymmetrical access to information between national and European bureaucrats, European institutions—specifically the European Commission—have not only achieved a level of independence from the states, but they also hold real power in policy formation in areas in which they have been empowered by the states.²¹ Moreover, as “Europe” has become a distinct and effectual actor, the affective attachments of both elites and mass publics are shifting and expanding to include Europe and its institutions alongside existing notions of state, nation, and province. The end result of both these processes has been a gradual “hollowing out” of national institutions such that many decisions of state are now conducted in coordination with others or by supranational actors.²²

In this environment, where power is willingly delegated away and conceptions of self are increasingly contested at the regional level, the notion of self-interest becomes quite slippery. One must ask who is the self and whose interests are being promoted: The State? A nascent community of states? The organizations that they have empowered? These questions become even pressing once one realizes that the discursive foundation of the European integration is one of self-redefinition in which the status and well being of “Europe” transcend parochial state interest. This discourse—this idea of Europe—could serve a “strictly instrumental function”²³ in order

²¹ Paul Pierson, “The Path to European Integration: A Historical-Institutionalist Analysis” in European Integration and Supranational Governance, ed. Wayne Sandholtz and Alec Stone Sweet (Oxford: Oxford University Press, 1998), 39-40; See also Andrew Moravcsik who argues, “it would be absurd to assume, for example, that supranational agents [in Western Europe] do not matter in daily decisions, since Member States often expressly delegate power to them and, moreover, do so under conditions of imperfect information and uncertainty.” Andrew Moravcsik, “Liberal Intergovernmentalism and Integration: A Rejoinder,” Journal of Common Market Studies Vol 33. (December 1995): 613.

²² Ben Rosamond, “Mapping the European Condition: The Theory of Integration and the Integration of Theory,” European Journal of International Relations 1 (1995): 403.

²³Alexander Wendt, “Collective Identity Formation and the International State,” American Political Science Review 88 (June 1994): 389.

to justify self-oriented cooperation, as some Realist observers contend; or it could have real meaning among collaborating countries, such that their very identities are transmuting from that of sovereign, self-regarding states to something grander than themselves and in which being “European” brings obligations and expectations unlike any other state in the international system. In either case, the question cannot be answered by models that view the self and self-interest as constants, and divorce the concept of identity from any ideational foundation outside the behavioral pursuits of sovereignty.²⁴

Even those realist approaches that explicitly address the politics of regional integration, such as liberal intergovernmentalism with its softened stance on anarchy and the centrality of state actors, do not speak to this issue.²⁵ While liberal intergovernmentalism acknowledges a larger universe of preferences and complex state decision-making processes that addresses the competing interests of subnational and supranational actors, it refuses to consider how preferences arise and how interests may change. Further, as with all realist analyses, its limited focus on transaction costs and power distribution avoids consideration of the ideational foundations of state behavior.

Yet all state behavior is ideationally laden, and in ways that cannot be mapped through a dogmatic focus upon “material existing observable objects,” as Realists otherwise insist.²⁶ Multinational cooperation, for example, is shaped both by the social relations between countries and by the social significance that they ascribe to those

²⁴Ibid.

²⁵ Liberal Intergovernmentalism, as it is applied to European integration, regards states as important actors existing “alongside” the institutions of the EU, and responsive to the parochial interests of subnational actors. Anarchy, and some of its more deleterious effects, are mitigated by the collective will of these states, which purposefully create and empower mediating institutions to that end.

²⁶ Michael C. Williams, “Identity and the Politics of Security,” European Journal of International Relations 4 (1998): 208.

objects and goods for which they collaborate. It is a process driven by self-understanding and the shared understandings “between selves and others,” such that even prominent Realists like Stephen Walt must confess that relative power is a subjective concept. In other words, fears about power imbalances between countries hold less sway over state action than the identity and disposition of others.²⁷ States do not solely pursue material objectives; they also work to achieve ideational goals, such as meeting certain norms of statehood, or perhaps even, in the case of West European states, the symbolic representation of a “collective Europeaness.”²⁸ That states can *possibly* do so and thus render obsolete orthodox conceptions of sovereignty and anarchy further necessitates a move beyond realist parsimony. To argue, as do all Realists, that ideas matter but simply not enough to warrant analysis, is to sacrifice both descriptive detail and explanatory power in the name of “good” social science. This is particularly true in environments such as Western Europe in which the conduct and aim of international relations is extraordinary; where, as Brigid Laffan notes, interstate cooperation has moved from issues of “instrumental problem-solving” to “fundamental questions” of identity convergence and Europe’s “nature as a part-formed polity.”²⁹

While enduring regional integration movements pose a challenge to Realist analyses generally, and certainly in the European case, the existence of complex cooperation within specific political or economic domains can be equally problematic. The acquisition of defense technologies is one area in which state conduct, either within single state or multinational settings, does not fall easily into realist conceptions of

²⁷Williams, “Identity,” 208; See Stephen Walt, The Origins of Alliances (Ithaca: Cornell University Press, 1987).

²⁸Thomas Risse, “Identity Politics in the European Union: The Case of Economic and Monetary Union (EMU),” in Petri Minkkinen und Heikki Patomäki (Hrsg.), The Politics of Economic and Monetary Union (Helsinki: Finnish Institute of International Affairs, 1997), 104-130.

²⁹ Brigid Laffan, “The Politics of Identity and Political Order in Europe,” Journal of Common Market Studies 31 (March 1996): 82.

“appropriate” behavior. As we shall see, the politics of armaments production and procurement collaboration highlight the non-material components of state behavior. These technologies touch upon those core issues that define states as states: their procurement creates security, and they establish the basis of sovereignty. Their importance, however, extends far beyond the provision of defense and autonomy. Defense technologies are symbols of power and of self in the international system whose value exceeds any functional need and whose acquisition cannot be understood in terms of a narrow utilitarianism. Instead, this process maybe better grasped through models that consider how ideas may shape reality.

Social Constructivism

Social Constructivism offers scholars an alternative toolkit through which to explore these questions. With roots in sociology, it has rarely been applied to the study of regional integration—and even less to issues of security and defense economics.³⁰ Nonetheless, it is well suited to addressing interstate collaboration in all its forms because it acknowledges the power of ideas in shaping state behavior. Like realism, modernist, constructivist logic as pioneered by Alexander Wendt, Emanuel Adler, Peter Katzenstein and others, recognizes the primacy of state actors in the international system and the anarchic nature of that system. Constructivism, however, offers a socialized view of the interstate system, one that posits that the state system is a social construct existing ontologically prior to the material realities that orthodox international relations theory regards as constituting the international system.³¹ Norms, cognition, and shared understandings arising from social interaction form the basis of

³⁰David Segal, Mady Segal, and Dana Eyre, "The Social Construction of Peacekeeping in America," Sociological Forum 7 (March 1992): 125.

³¹ Adler, "Seizing the Middle Ground," 332-334; Martha Finnemore, National Interests in International Society (Ithaca: Cornell University Press, 1996), Ch. 1, 5.

this system, endowing its constituent actors with meaning, shaping their perceptions of themselves and of others, defining their tastes, either legitimizing or proscribing their aspirations, and finally, bestowing significance on those material artifacts for which they compete. The material sources of power and wealth—for example, a technologically advanced economy or a blue-water navy—are only as important to states, as Adler argues, as is established by “human agreement and the collective assignment of meaning and function to physical objects.”³²

Unlike its post-modernist constitutivist variant, modernist constructivism does not reject the objective existence of the material world.³³ Modernists do not disavow materialism, but rather acknowledge that the ideational world coexists with material one; and both “affect and [are] affected by” each other.³⁴ It is a relationship that is dynamic, but is nonetheless biased in favor of conceptual factors.

The principal goal of modernist Constructivist scholars, as Wendt notes, is to move beyond the economism of materialist, and indeed rationalist, theories that seek to explain behavior only in terms of the constraints and costs that the actors face.³⁵ The international system, is a normative environment populated by social agents (i.e., states), who are interconnected and embedded within layers of symbol and convention. This ideational foundation, according to Peter Katzenstein

³² Adler, “Seizing the Middle Ground,” 337.

³³ As Adler notes, many post-modernists share a common “proposition” that “reality in its objective form (truth) cannot be known outside human language; thus inexorably, reality must be a constitutive effect of discourse.” Some post-modernists, such as J. Baudrillard, go so far as to regard the real world as a little more than a set of “linguistic conventions.” Modernists, on the other hand, hold that “‘a socially constructed reality presupposes a non-socially constructed reality’ and the ‘question of how the material world affects and is affected by the conceptual world is crucial for social science.’” Adler, “Seizing the Middle Ground,” 332; For a discussion of the epistemology and ontology of post-modernist constructivism, see Richard Ashley and R.B.J. Walker, eds. “Speaking the Language of Exile: Dissidence in International Studies,” Special Issue of *International Studies Quarterly* 34 (1990): 259-268.

³⁴ Adler, “Seizing the Middle Ground,” 332.

³⁵ Alexander Wendt, “Collective Identity Formation and the International State,” *American Political Science Review* 88 (June 1988): 384.

[does] not merely constrain actors by changing the incentives their behavior. [It does] not simply regulate behavior. [It] also help[s] to constitute [those] actors. . . .³⁶

Constructivists oppose rationalist biases toward the role and effect of structure in the interstate system. While they naturally see structure as being primarily social in nature, defined in terms of collective understandings and expectations, they do not dismiss it as an epiphenomenal artifact.³⁷ Among rationalist approaches, however, and certainly within realism, analysis is explicitly agent-centered. Actors are regarded as pre-given and as possessing pre-determined interests. Whatever environmental structures they confront—in this case, international anarchy—only affect behavior in that these structures “define opportunities and constraints” that states can either exploit or yield to according to cost-benefit calculations.³⁸ Anarchy may influence how states order their preferences and pursue their interests, but it does not create or change either. Interest- and preference-shift are exogenous to structural effects.

Constructivists, on the other hand, regard structure and agents as existing within a mutually reinforcing relationship. Structure not only shapes actor behavior, it also defines actors, endowing them identity and interest.³⁹ Conversely, actors can influence and change structure as their common understandings of appropriate behavior within the system changes as a result of social learning and attitudinal shift.

For example, a security community—of the type that exists in Western Europe and North America—is a social structure in which security competition among con-

³⁶ Peter Katzenstein, “Introduction,” in The Culture of National Security, ed. Peter Katzenstein (New York: Columbia University Press, 1996), 22.

³⁷See Alexander Wendt, “The Agent-Structure Problem in International Relations,” International Organization 41 (Summer 1987); Martha Finnemore, “Norms, Culture and World Politics: Insights from Sociology’s Institutionalism” International Organization 50 (Spring 1996): 333.

³⁸ Ronald L. Jepperson, Alexander Wendt, and Peter Katzenstein, “Norms, Identity, and Culture in National Security” in The Culture of National Security ed. Peter Katzenstein (New York: Columbia University Press, 1996), 41; Paul Kowert and Jeffery Legro, “Norms, Identity, and Their Limits: A Theoretical Reprise,” in The Culture of National Security, 455-457.

³⁹ Jepperson, et. al., “Norms, Identity and Culture,” 41.

stituent states has been effectively eliminated due to shared expectations of peaceful change and the renunciation of violence as a tool of statecraft. The norms that define these communities, however, often extend beyond shared ideas over the appropriate forms of conflict resolution among select states. These also include expectations of social and political partnership, coupled to high levels of trust and of mutual responsiveness. Through prolonged interaction within this cognitive environment, member states begin to identify with each other in so far as they recognize their common interests and values. Behaviorally, the effects can be striking: unfortified borders; military grand strategy that does not account for the possibility of betrayal by one's partners; and the creation of international institutions that reflect and codify the normative bonds between states with the establishment of consensual, multilateral decision-making and policy-enforcing mechanisms.⁴⁰

Life within a security community can do more than just change state security calculations or highlight similarities of interest among countries. This social structure—this dense network of norms and perception—can, in certain circumstances, change the interests of states, and possibly change their identities as social entities as well. Interstate transactions that support peaceful relations and cooperative behavior can also lead to increased cognition of one's partners, not of only their political dispositions, but also their “interpretations of society, economics, and culture.”⁴¹ As these interpretations become shared throughout the community, a collective identity can arise, born out of what Karl Deutsch noted as a sense of “we-feeling” based upon both practice and the convergence of symbols, sympathies, and self-images.⁴² Conse-

⁴⁰ Emanuel Adler and Michael Barnett, “Governing Anarchy: A Research Agenda for the Study of Security Communities,” *Ethics and International Affairs* 10 (1996): 92-93

⁴¹ Adler and Barnett, “Governing Anarchy,” 91.

⁴² Karl Deutsch, Political Community at the International Level: Problems of Measurement and Definition (New York: Doubleday, 1957), 36.

quently, conceptions of self may become blurred. The community may remain a transnational “region” of sovereign states; but their interests have become re-defined such that it may be extremely difficult to discern national interest from community interest. Emanuel Adler and Michael Barnett argue that in such cases, states may only be able to express agency “insofar as they meet and reproduce the epistemic and normative expectations of the community.”⁴³

States may continue to frame and act upon their own preferences, but only as these preferences reflect communal attitudes of appropriate behavior. Consequently, behavior can change so that states cease to simply be advocates of the “national good” as they conventionally aspire, but embrace a larger set of obligations as “agent[s] of the various wants of the community.”⁴⁴ Identity, or rather identity appropriation and convergence, is the driving force behind all these shifts—in preference, in interest, and in action. As states become enmeshed in the web of collective understandings that form the basis of communities, they identify with the group and are identified by others as belonging to it. It is this identity, defined by communal norms and shared by all its members that creates new conceptions of statehood, and consequently, new expectations, new obligations, and new ideas to appropriate state behavior.⁴⁵

The concept of community and its attendant effects upon state identity is critical in any constructivist analysis of defense procurement collaboration in the North Atlantic Area. For now, however, let us return to our overview. As I have asserted, a security community is a cognitive structure, and one that has a constitutive effect on those actors operating within it. Constructivists argue that all forms of interstate activity—whether cooperative or conflictual—are, in fact, ideational structures that contain

⁴³ Adler and Barnett, “Governing Anarchy,” 79.

⁴⁴ Ibid.

⁴⁵ Jepperson, et. al., “Norms, Identity and Culture,” 59.

and give meaning to material resources. These “social” structures comprise three central elements: shared, or intersubjective, understandings; identity; and social practice.

In my preceding example, I touched upon all of these factors without adequately defining their importance within constructivist ontology. Conceptually, they are all somewhat slippery and even harder to grasp empirically: What is state identity and how can one measure it? How does one know if knowledge is both shared and salient? Exactly how long should interaction occur before it sparks changes in the normative environment?⁴⁶ Finally, what is the relationship between these concepts? While it is beyond the scope of this dissertation to answer all of these questions in detail—and indeed, some are not adequately addressed even within constructivist scholarship—I shall nonetheless sketch the meaning and significance of these three pillars of modernist, social constructivism.

First, the notion of intersubjectivity is critical to constructivist analyses. Individuals, nations, firms, defense ministries, etc., all may exist physically; if so, they invariably have a matching social existence measured in “symbols, practices, institutions, and discourses.”⁴⁷ The degree to which these elements are shared will determine how actors relate to each other and toward objects. Applied within an international relations theory framework, constructivism stresses the “sociality” of the international system in which ideas have determinacy.⁴⁸ Ideas, however, are only social if they are shared.⁴⁹ Once they are collectively held, ideas become elements of social structure. More precisely, as they may also have prescriptive effect, they become norms. Norms come in two “flavors.” They are either regulative, in that they establish rules of behav-

⁴⁶ See Wendt, “Anarchy is What States Make of It,” 417 and Adler and Barnett, “Governing Anarchy,” 77 for constructivist views on the promise and analytical problem inherent in a study of social practice.

⁴⁷ Adler, “Seizing the Middle Ground,” 327.

⁴⁸ Alexander Wendt, “Constructing International Politics,” *International Security* 20 (Summer 1995): 73.

⁴⁹ Finnemore, *National Interests*, 22.

ior for an existing identity; or constitutive, defining identities. Norms “establish expectations about who the actors will be in a particular environment and how these actors will behave.”⁵⁰

Given that norms set standards of behavior and of identification within the interstate system, they form the basis of the structures that comprise that system. Some of these can be quite specific. To take a familiar example, the nuclear inventories of China and the United Kingdom possess similar destructive potentials, yet the United States regards only the Chinese weapons as threatening. This is so because these particular arms are part of a “structure of shared knowledge” in which both China and the United States perceive their relationship to be militarily confrontational. These states exist within a security dilemma in which they expect high levels of security competition. As antagonists, they both cling to shared ideals of enmity that generates a specific behavior set that generates mistrust and the anticipation of zero-sum relations.⁵¹ “Appropriate” state conduct in this situation will likely involve a certain defensive positionalism involving balancing behavior and a hostile appraisal of the material capabilities of the other.

The role of intersubjectivity in interstate affairs, however, extends far beyond dyadic relationships and security dilemmas. The institution of sovereignty, as Wendt writes, “exists only in virtue of intersubjective understandings and expectations.”⁵² The principles that define sovereignty as a norm— non-interference, territoriality, exclusive employment of violence and political autonomy—could not be advocated by a single state or clique of states and have any systemic value. The interstate system, as it has existed for nearly four centuries since the Peace of Westphalia, could not endure

⁵⁰ Jepperson et. al., “Norms, Identity, and Culture,” 54.

⁵¹ Wendt, “Constructing International Politics,” 73.

⁵² Wendt, “Anarchy,” 412.

without the mutual recognition of state actors that all of the agents within the system claiming statehood possessed those rights. Without these principles structuring state behavior and perception, the anarchical nature of the international system would assume a darker meaning. Despite the absence of any supranational authority and the persistent possibility of war, sovereign states rarely have been rendered extinct. Instead, new states have entered the system and have remained therein, no matter their size or their ability to effectively function. Wendt writes that the large and successful have only rarely destroyed the small and ineffectual because sovereignty norms have thoroughly diffused throughout the system and been internalized by its constituents. Indeed, this has occurred to the extent that:

. . . [R]estraint is not primarily because of the costs of violating sovereignty norms, although when violators do get punished (as in the Gulf War) it reminds everyone of what these costs can be, but because part of what it means to be a “sovereign” state is that one does not violate the territorial rights of others without “just cause.”⁵³

In one sense, sovereignty regulates agent behavior within the international system. It establishes standards of conduct and creates the basis of orderly coexistence. This regulative effect, however, functions only insofar as the sovereignty norm is regarded as given. It has existed for so long that the existence of sovereign states is perceived to be a natural component of political reality. Nonetheless, sovereignty is not an act of God. In order to be sovereign one must act sovereign. These norms do not simply shape state behavior but also define state identity, such that if countries stopped adhering to these shared ideals they would cease to be sovereign — even though they might still continue to exist as “states” measured by as organized fusion of territory and authority.⁵⁴ Sovereignty is thus a contingent identity that states can

⁵³ Wendt, “Anarchy,” 415.

⁵⁴ Wendt, “Anarchy,” 413.

possess. It is constituted by a web of collectively held beliefs concerning the appropriate internal functions of statehood and a minimalist standard of external relations.

Configurations of intersubjective knowledge, whether they are sovereignty norms or the mutual expectations underlying a security dilemma between countries, can create state identities. Identity is the second element of social structure envisioned by Constructivists as shaping international relations. Defined as “sets of meanings that an actor attributes to itself taking the perspectives of others,” the social identities of states can assume either a primary or intermediary effect on state behavior.⁵⁵ These categories are best understood in terms of the level of analysis at which one approaches the issue. Those identities that pose primary effects are in a sense primordial, arising from domestic, societal factors relating to nationhood: ethnicity, national culture, parochial national symbols. As such, these are largely exogenous to the international system.⁵⁶ State identities that create intermediary influences are of greater concern to Constructivists—particularly among the IR-minded—because they emerge from intersubjective conceptions of statehood and are thus systemically endogenous.

State identities of this type are important because they inform an actor as to who and what it is, and moreover, they allow others to categorize it. In fact, because they are founded upon shared understandings, like the attribute of sovereignty, they “are ontologically dependent on relations to others.”⁵⁷ Concepts such as European or hegemon only have meaning insofar as they are social categories, each with its own set of conventions and rules, and each acknowledged by others as legitimate within

⁵⁵ Alexander Wendt, “Identity and Structural Change in International Politics,” in *The Return of Culture and Identity in IR Theory*, eds. Yosef Lapid and Friedrich Kratochwil (Boulder: Lynne Rienner, 1995), 51.

⁵⁶ Alexander Wendt, “Collective Identity Formation and the International State,” *American Political Science Review* 88 (June 1994): 385.

⁵⁷ Wendt, “Identities and Structural Change,” 51.

the social and material structures of a given environment. Because identities are intersubjective, they provide a modicum of certainty and predictability in the interstate system. They do this by classifying and categorizing actors, and more significantly, because state identity is the most “proximate” generator of state interest. As Ted Hopf writes,

In telling you who you are, [state] identities strongly imply a particular set of interests or preferences with respect to choices of action in particular domains, and with respect to particular actors.⁵⁸

Every identity generates its own particular array of obligations and expectations that any country aspiring to possess it must enact, and once having done so, continuously pursue, since failure “to understand and act on identity needs will lead to a loss [of that identity].⁵⁹ This, in turn, provides both self- and external definition. States that are “modern,” for example, establish science ministries and create the infrastructure of knowledge production because of systemic cultural ideals as to how a “modern” state should behave and as to what attributes signify its existence. Similarly, a “civilized” state may disavow specific forms of warfare or weapons technologies because of prevailing norms within international society that defines such conduct as being incompatible with that identity.⁶⁰ Countries that possess more specific role identities such as that of Mercusor member, will have interests relating to in-group trade liberalization and dispute resolution that may generate certain expectations of behavior on the part of other states asserting that same identity.

⁵⁸ Ted Hopf, “The Promise of Constructivism,” *International Security* 23 (Summer 1998): 175, fn 10.

⁵⁹ Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999), 233.

⁶⁰ John Meyer, “The World Polity and the Authority of the Nation-State,” in *Studies of the World System*, ed. Albert Bergensen (New York: Academic Press, 1980); Richard Price and Nina Tannenwald, “Norms and Deterrence: The Nuclear and Chemical Weapons Taboos,” in *The Culture of National Security: Norms and Identity in World Politics* ed. Peter J. Katzenstein. (New York: Columbia University Press, 1996), ch. 4.

Like individuals, states can possess multiple identities, all of which may vary in prominence over time and in relation to each other. A country can be both sovereign and European, for example, or both civilized and Mercusor. The interests that these identities generate, however, may or may not be compatible with each other. To be both European and sovereign, for instance, can produce policy conflicts because the former may call for levels of authority transfer that are untenable by existing conceptions of sovereign statehood.⁶¹ While one can agree with Wendt that the resolution of such conflicts cannot be predicted a priori, I share his view that identities exist within hierarchies in which some may be critical to an actor's "self concept," and others may be considerably less significant.⁶² I contend that the more salient the identity among a group of identities, the greater the likelihood that a state will strive to satisfy the behavioral norms of that dominant identity. A state may become more "European," for example, as political and social conditions change over time. As this identity displaces existent identities, e.g., sovereign and Belgian, the country will more tightly embrace whatever actions and ideals are collectively defined as constituting Europeaness.

Ideational changes such as this can occur and, indeed, are occurring as states reappraise existing identities and embrace new ones.⁶³ Change, however, is not simply a function of time, or even of environmental shifts. Identities are not static phenomena, having been created, are then left to age. They are instead constantly produced and reproduced through social practice, the third and final core theoretical assumption

⁶¹ Anthony Smith, "National Identity and the Idea of European Unity," International Affairs 68 (1992): 56.

⁶² Alexander Wendt, Social Theory, 231.

⁶³ James Wyllie, for example, notes that there now exists within European Union member states vocal factions of decision-makers and opinion formers who argue that state identity as sovereigns is in decline and the "national" interest would be best served by advancing political and economic integration within the EU. James Wyllie, European Security in the New Political Environment : An Analysis of the Relationships between National Interests, International Institutions and the Great Powers in Post Cold War European Security Arrangements (London ; New York: Addison Wesley Longman, 1996), 4.

within modernist social constructivism.⁶⁴ The existence of enmity between states, for example, neither arises as a preordained condition nor does it endure from a one-time declaration or act. It emerges and persists through an expanding web of discourse and actions that signals hostility and the absence of trust. Adversarial relations are, in the words of Wendt, are “an ongoing accomplishment of practice.”⁶⁵ Iterated interaction between states reduces uncertainty within the international system, or in any sub-set social “community,” because it demonstrates conclusively that certain identities and beliefs are sincerely held, and thus increases “confidence that what actions one takes will be followed by certain consequences and responses from others.”⁶⁶

State identities are thus maintained and manifested by social behavior. States are sovereign, or civilized, or European because they adhere to the constitutive norms that define those identities. Compliance, however, is more than the internalization of rules and belief. It requires action and interaction: sovereigns defend their territories, Europeans pool sovereignty (or at the very least engage in discursive projects in which they talk about doing so). Practice, as Hopf writes, bounds interpretations of reality, delineating what is acceptable for a given structure of intersubjective knowledge, and cementing shared understandings.⁶⁷

While identity establishes the parameters of practice, and practice consolidates identity, state behavior may also redefine existent identities and possibly create new ones. This assumption is an important facet of constructivist thought and is key in its application to issues of interstate cooperation. Social practice creates learning through communication and conduct. As intentions are conveyed and “presentations of self” are broadcast, connections are established between actor and observer in the form of

⁶⁴ Wendt, *Social Theory*, 340.

⁶⁵ Wendt, “Anarchy,” 413.

⁶⁶ Hopf, “The Promise of Constructivism,” 178.

⁶⁷ *Ibid*, 179.

collective expectations.⁶⁸ Wendt suggests that the underlying behavior can, in turn, affect identity and interest, as actors reconstruct both in terms of "shared commitments to [newly created] socio-political norms."⁶⁹ Indeed, interaction leads states to appreciate how they are identified by others, and moreover, to alter their own beliefs as to who and what they are as an agent based on the dynamics of its relations, as both actor and observer may actually identify with each other as a "we" bound by certain norms" and situations.⁷⁰

Constructivists contend that the creation of such "positive identifications" are most likely to occur within cooperative relationships. Cooperation can create reinforcing interdependencies, both intersubjective and material, in which countries frame norms establishing partnership and also reap whatever welfare/security benefits that collaboration may provide. As these interdependencies increase, the scope of cooperation will change should expectations of cooperative behavior also grow. As norms of reciprocity, transparency, and consensual coordination develop, among others, identities can be redefined such that the "self" expands to embrace the others in the partnership.

Behavior may even become other-regarding once a collective identity emerges. The development of this kind of identity can lead to radical transformations in state conduct and perception. Countries may eschew instrumental cooperation, in which states act solely for self-gratification with expectations of immediate reciprocity, in favor of more communal relations. These would be characterized by diffuse reciprocity as the shared values of their members lead to a sense of intertwined interests, and of mutual "obligation and responsibility."⁷¹ Emanuel Adler and Michael Barnett note

⁶⁸ See Erving Goffman, *The Presentation of Self in Everyday Life* (New York: Anchor Books, 1959).

⁶⁹Wendt, "Anarchy" 417.

⁷⁰ Wendt, "Identities and Structural Change," 57.

⁷¹ Adler and Barnett, "Governing Anarchy," 74.

that this level of partnership would not necessarily preclude the continuance of some self-interested behavior and rivalry; it would, however, produce “collective definitions of interest,” which arise from shared sentiments of solidarity and intra-group loyalty.⁷²

The development of such collective identities may bring about more complex and altruistic forms of relations, but it is neither unproblematic nor irresistible. Constructivists posit that pre-existing role identities are not completely submerged by every episode of behavioral change, or even systemic changes. State actors possess vested interests in maintaining stable role identities. States derive interests from the “desire to minimize anxiety, manifested in efforts to confirm beliefs about the social world.”⁷³ Moreover, states also wish to avoid “breaking commitments” to others, notably domestic constituents. Some identities will thus produce considerable resistance to social change.⁷⁴ As Wendt writes,

Collective identity formation among states takes place against a cultural background in which egotistic identities and interests are initially dominant. . . . Collective identities are rarely perfect or total. In most situations, the best that can be expected is concentric circles of identification, where actors identify to varying degrees with others depending on who they are and what is at stake, while trying to meet their individual needs as well. On the other hand, the fact that states will resist collective identity formation does not mean it can never be created.⁷⁵

Indeed, while theoretically anticipated resistance to identity change suggests that any grand redefinition of state identity into some communal, transnational model is hardly a forgone conclusion from international cooperation, collaboration may nonetheless produce gradual reinterpretations of partnership that facilitate less self-regarding forms of cooperative behavior. This idea has clear implications for a study

⁷² Wendt, “Identity and Structural Change,” 53.

⁷³ Wendt, “Anarchy,” 411.

⁷⁴ Ibid.

⁷⁵ Wendt, *Social Theory*, 364.

of political and economic integration in the North Atlantic area, and it may also be relevant to our narrow focus on defense industrial cooperation. Particularly in Western Europe it is possible that:

. . .four decades of cooperation may have transformed positive interdependence of outcomes into a collective "European identity" in terms of which states increasingly define their "self" interest. Even if egoistic reasons were its starting point, the process of cooperating tends to redefine those reasons by reconstituting identities and interests in terms of new intersubjective meanings and commitments.⁷⁶

If this is true, one should expect not only more nuanced forms of cooperation over time, but that this cooperation will also reflect and drive an emergent transnational identity.

Realist analyses can offer nothing on this issue, for the reasons that I outlined earlier. Social constructivism, on the other hand, permits us to address the linkages between interstate collaboration and identity shift. Moreover, because this paradigm acknowledges the social character of material goods and of technology, it allows us to explore why defense procurement is a singular activity among states, one that can present considerable limitations to interstate cooperation, as well as important implications for IR theory when it does occur. Defense technology's special connection to traditional conceptions of state identity ensures that whatever process or forum used to procure it will be ideationally charged. In the political environments addressed within this dissertation—the European Union—this problem is possibly exacerbated by effects of diverging state and supranational identities. In order to better understand what these pressures are, or rather how they may be triggered by collaborative weapons procurement, I shall now discuss the relationship between arms production and the state.

⁷⁶Wendt, "Anarchy," 417.

Armaments and The State

The relationship between military technology and the modern state system is a complex one. Weapons provide the means of violence within an international system still largely characterized by anarchy and the ever-present potential for violence. Moreover, the national states that inhabit this system, are themselves the products of this brutality, as much as they are its perpetuators and its victims. Charles Tilly argues that the one simple and undeniable truth in international affairs, both today and throughout history, is that “coercion works.”⁷⁷ States exist as they now do principally because of their considerable success at bending restive publics and local elites to centralized rule, defending their territory, and plundering their neighbors.⁷⁸ They are the products of bloody, and in some respects still ongoing, processes of extraction, deterrence, concentration, and compellence that—while displaying considerable variation in intensity over time and between regions—have helped create the militarized global order that now exists.⁷⁹

The utility of violence in the pursuit of statecraft produces three system-wide effects that are readily recognizable by the astute observer. First, states give primacy to their physical security. For scholars such as Kant and Hobbes, the justification of state sovereignty arises from its function as a protector of national societies from in-

⁷⁷ Charles Tilly, *Coercion, Capital, and European States 990-1990* (Oxford: Basil Blackwell, 1990), 70.

⁷⁸ The nature of this “success” is, of course, relative to other forms of political authority that have existed in the past, such as empires and city-states. See Ernst Gellner, *Nations and Nationalism* (Oxford: Basil Blackwell, 1983); Karl Deutsch, *Nationalism and Its Alternatives* (New York: Alfred A. Knopf, Inc., 1969).

⁷⁹ R.B.J. Walker perhaps makes this point most succinctly when he asserts that: “We live in a world, a civilization, in which preparation for war has become embodied in everyday practice and institutionalized as bureaucratic routine.” R.B.J. Walker, “Culture, Discourse, Insecurity” *Alternatives* XI (1986): 495.

ternal and external sources of violence.⁸⁰ Even as the scope of security has expanded over the centuries to include micro-economic and socio-cultural concepts, the provision of an armed defense against “violent attack” remains, as Trevor Taylor argues, “the most established and widely accepted function of the state.”⁸¹

The second systemic effect arising from the propensity of violence in interstate relations is militarization, or the expansion and persistence of military institutions within national states and their ability to procure substantial resources from their respective societies.⁸² This phenomenon attains its logical extreme in the existence of praetorian states; but it is more commonly manifest in the ubiquitous nature of military structures within the international system. Every state, regardless of its strategic circumstance, possesses a territorial defense force in some form, e.g., army, air force, or gendarmerie. Typically, states carry this logic a step further and possess all these organizational features and others. Hence, even landlocked countries such as Ecuador and Switzerland possess “navies.” During the Cold War, there are 44 separate armed services among just 15-armed states in NATO.

The third feature of this international “order,” and one that is of primary concern to this dissertation, relates to the non-material drivers for weapons procurement.⁸³ In an interstate system without guarantees of protection or of adjudication, armaments are a nation’s “insurance policy,” providing the ultimate means for states to safeguard

⁸⁰ Trevor Taylor, Defense, Technology and International Integration (New York: St. Martin's Press, 1982), 2.

⁸¹ Ibid.; For a discussion of the expansion of state security into areas of political economy see Klaus Knorr and Frank N. Trager, eds. Economic Issues and National Security (Lawrence, KA: Allen Press, 1977); and Michael Borrus and John Zysman, "Industrial Competitiveness and American National Security," in The Highest Stakes: the Economic Foundations of the Next Security System, eds., Wanye Sandholtz, Michael Borrus, John Zysman, Ken Conca, Jay Stowsky, Steven Vogel, and Steve Weber (New York: Oxford University Press, 1992); into areas of culture and national identity, see Ole Wæver, Barry Buzan, Morten Kelstrup, and Pierre Lemaitre, eds. Identity, Migration and the New Security Agenda in Europe (London: Pinter Publishers, 1993).

⁸² Robin Luckham, “Armament Culture,” Alternatives X (Summer 1984): 1.

⁸³ Luckham, “Armaments Culture,” 4.

their political autonomy and to ensure their territorial integrity. Little wonder then, that organized arms production has been “coterminous” with the evolution of the national state.⁸⁴ Anthony Giddens writes that even before the emergence of nationalism and the nationalization of polity, “it was war, and preparations for war, that provided the most potent energizing stimulus for the concentration of administrative resources and fiscal reorganization” that consolidated state power and established its bureaucratic and territorial form that endures to this day.⁸⁵

The process began in Europe with the emergence of royal armies and navies commissioned to provide absolutist monarchs with internal control and external security. In time, the crowns of Europe bolstered their military prowess with state-funded armories that provided goods ranging in complexity from saltpeter to frigates. European states have engaged in a process of progressive control over arms production since the fifteenth century. This occurred through the extension of state supervision over the arms production process, gradually transforming defense technology manufacturers into state functionaries, and often bringing them under outright national control.⁸⁶ Edward Kolodziej writes that European states, consequently, have been in the “war-making, war implementing, and arms transfer business for centuries.”⁸⁷ As such, weapons production has become ingrained in both state institutions and practice

⁸⁴ Edward Kolodziej, “Europe as a Global Power: Implications of Making and Marketing Arms in France,” *Journal of International Affairs* (1987): 391.

⁸⁵ Anthony Giddens, *The Nation-State and Violence* (Berkeley: University of California Press, 1987), 112; For a discussion of nationalization, or the “fusion” of culture and polity, see Ernest Gellner, *Nations and Nationalism* (Oxford: Basil Blackwell, 1983), 55.

⁸⁶ Edward Kolodziej, *Making and Marketing Arms* (Princeton: Princeton University Press, 1987), 6. This level of state control is also pattern that continues into the present-day. Overt state control over arms production remains the norm throughout the international system, and is still quite common in Western Europe. Even in those cases where defense production is privately held, governments still retain final authority in questions of technology transfer or foreign acquisition.

⁸⁷ Kolodziej, “Europe as a Global Power,” 391.

as a normative good, seen as the basis of national independence and of advancing state interests.

Those national states more recently founded following European colonization and contact have continued this link between polity and armaments. Indeed, they are the products of a global culture of weapons production in which the politics of weapons production is often perceived as inseparable from the very existence of the state itself. Throughout the Developing World, for example, armaments are coveted with the same intensity as that found in the West.⁸⁸ At one level, it is arguably a “rational” response by the emergent and the weak to, as Ken Waltz writes, “imitate the military innovations contrived by the countr[ies] the greatest capability and ingenuity.”⁸⁹ It is also, however, a recognition that the benefits of weapons production are not limited to territorial defense or to any other perceived security effect.

Armaments procurement can and does, as Luckman notes, often “displace the proper goals of defense.”⁹⁰ States procure arms not simply because they must, but also because they can—that is to say, the acquisition of military technology in the international system is both a means to an end, and an end in itself. Defense industrial issues are the most visible expression of the non-security connection between weapons production and state power. Armament industries sit at the nexus between security and economics—between power and plenty.⁹¹ While the former attribute—military strength—is most readily appreciated, the latter is no less significant, as André Giraud, the former French Minister of Defense, affirmed in 1987 when he asserted:

⁸⁸ Alexander Wendt and Michael Barnett, “Dependent State Formation and Third World Militarization,” *Review of International Studies*, 19 (1993): 321 - 328.

⁸⁹ Waltz, *Theory of International Politics*, 127; quoted from Wendt and Barnett, “Dependent State Formation,” 328.

⁹⁰ Luckahm, “Armaments Culture,” 4.

⁹¹ Ethan B. Kapstein, “International Collaboration in Armaments Production: A Second-Best Solution” *Political Science Quarterly* 106 (1991-92): 658.

Armaments programs create employment. They irrigate most of modern industries, their laboratories, their proto-type workshops, their plants, feed research and innovation, intellectual competition with other countries. It is a true locomotive of economic development.⁹²

The potential material benefits from a domestic defense industrial base (DIB) and defense technology base (DTB) are enormous, not only for a country's force posture but for its economic well-being as well. A national production capacity offers secure, dependable access to the means of defense without reliance on foreign sources of supply, which may either deny the availability of war goods or perhaps use a dependence relationship as a source of political leverage. Defense industries also provide economic side-benefits: jobs for the civilian labor market through direct employment as well as the potential technological spin-off into the non-military sectors of national economies. Indeed, until the 1970s and 1980s, technology development in defense among developed weapons-producing states exceeded the rate of advance in civilian fields due to higher levels of military demand and military R&D financing.⁹³ Policy-makers in the West and elsewhere regarded military technological innovation as an engine for growth that could pull an entire national economy with it, particularly in high-return, "sun-rise" sectors based on emerging technologies.⁹⁴

Edward Kolodziej, for example, in his survey of French arms production notes that French attitudes during the initial years of the Fifth Republic reflected the widely accepted idea that technological progress was a vehicle for sustainable economic expansion.⁹⁵ Given defense imperatives for qualitative superiority, the perception

⁹² Cited in Mary Kaldor, "Introduction," The European Rupture: The Defense Sector in Transition eds. Mary Kaldor and Geneviève Schméder (Tokyo: United Nations University Press, 1997), fn. 10.

⁹³ This refers principally to those countries with technologically advanced defense industrial bases such as France, the United States, Germany, the United Kingdom, Sweden, etc. See European Parliament, European Armaments Industry: Research, Technological Development and Conversion (Luxembourg: Directorate General for Research, 1993), 54.

⁹⁴ See Kolodziej, Making and Marketing Arms, 138. See also Borrus and Zysman, "Industrial Competitiveness and American National Security," 29-31.

⁹⁵ Kolodziej, Making and Marketing Arms, 138.

quickly arose that the "modernization" of the military would bolster the "renovation" and growth of the overall national economy. The advanced electronics, metallurgical skills, chemical engineering and other products of the post-Second World War "military-technical revolution"⁹⁶ would be channeled toward civilian pursuits. The same processes and breakthroughs that created *Mirage* fighters and *AMX* tank fire control systems could, with considerable tweaking, lead to the development of *Airbus* commercial jets and *Bull* personal computers. State elites believed, with some justification, that the promotion of an indigenous and advanced DIB/DTB would thus insure success in an "increasingly competitive world economy" where winners are defined by their capacity for production and development.⁹⁷ These attitudes persist in France and throughout the international system, even as the balance of innovation has shifted from the military to civilian fields since the late 1980s.⁹⁸

Even for defense goods for which there is no credible "techno-nationalist"⁹⁹ rationale, such as trucks and light munitions, states can continue to reap some economic gains from their production: employment, tax revenue, foreign exchange from exports, and retention of traditional industry and industrial capacity in the face of post-industrial change. This rationale has been employed throughout NATO at various times to justify the maintenance of broad techno-military competencies. Indeed, throughout the post-War period, most of these states either created or attempted to cre-

⁹⁶ This concept refers to the marked advance in information- and related technologies following the Second World War that have "liberated" military commanders through force-multiplication and real-time command and control.

⁹⁷ Kolodziej, *Making and Marketing Arms*.

⁹⁸ As Beverly Crawford noted, the "best technologies" for military applications no longer emanate from defense research and production, but rather exist in "global commercial markets." Beverly Crawford, "The New Security Dilemma Under International Economic Interdependence," *Millennium* 23 (1994): 26.

⁹⁹ See David G. Haglund and Marc Busch, "'Techno-Nationalism' and the Contemporary Debate over the American Defense Industrial Base," in *The Defense Industrial Base and the West*, ed. David G. Haglund (London: Routledge, 1989).

ate diversified arms industries, dabbling in everything from side-arms to look-down radars. Moreover, policy makers purposely shielded the bulk, if not all, of their procurement effort from market forces so as to better shape and nurture them—and thus erect a whole industrial sector "jealously guarded and generously protected" through R&D subsidies, nationally discriminatory procurement policies and the transference of capital to contractors under terms relatively unfettered by concerns over cost-efficiency.¹⁰⁰

That states such as Canada or France explicitly shape their arms procurement policies to achieve economic goals is perhaps as unremarkable an observation as that others, such as Greece and Turkey, privilege their security requirements.¹⁰¹ The notion of defense procurement-as-industrial policy has found considerable support among defense decision-makers since Jean-Baptiste Colbert championed the idea in late seventeenth century France.¹⁰² In practice, most states follow mixed-motive strategies in arms procurement as they strive to balance tangible security and economic needs. It is rarely appreciated by either International Relations scholars or security analysts, however, that arms also have a discernible, yet *intangible* quality that cannot be readily linked to simple questions of force posture or macro-economic policy. States procure arms not simply to defend their territories or protect their labor markets: weapons also have socio-cultural value. In order to understand fully why states procure weap-

¹⁰⁰Kapstein, "International Collaboration," 663; Philip Taylor, "Weapons standardization in NATO: collective security or economic competition," *International Organization* 36 (Spring 1982): 100.

¹⁰¹ In truth, most states pursue mixed goals in their defense procurments.

¹⁰² Colbert was the Prime Minister under Louis XIV from 1670 to 1680. His defense economic policies set the intellectual foundation of what is now regarded as *Colbertism*: a mercantilist defense procurement strategy intent on creating an autarkic production base. While this policy could establish an ostensibly self-sufficient arms industry, its principal objective was economic: import substitution and export promotion. In this model, military needs, such as security of supply, were less important than the larger economic effort of expanding domestic industrial production and the creation of favorable trade balances. This was done within a closed defense market composed of state arsenals and state-subsidized privately-owned monopolies. Andrew Moravcsik, "Arms and Autarky in Modern European History," *Daedalus* (Fall 1991): 26.

ons—and thereby have a better grasp as to why they may seek to collaborate in their design and production—one must understand this non-material value no less than the omnipresent security and economic incentives that are constantly appealed to within rationalist ontologies.

States covet defense technologies because they can protect, enrich, and no less importantly, *define*—define what the state is, what its values are, and what its place is within the international system. Dana Eyre, Mark Suchmann, and Victoria Alexander assert that:

technology is never just technology. . . every machine has a socially constructed meaning and a socially oriented objective and the incidence and significance of technological developments can never be fully understood or predicted outside their social context.¹⁰³

Armaments resemble other artifacts in that their utility is socially determined. Taken as a whole, however, defense technology is indeed unlike any other, uniquely defined by its lethality and by an almost elemental tie to state identity as the "distinguishing emblem of the modern nation."¹⁰⁴ Armaments are positional goods: they convey status and prestige in an international system, in which a country's "membership in modernity" is outlined by the sophistication of its force posture.¹⁰⁵ All states are bound in a world "armaments culture" that defines national grandeur by the possession of objects that are themselves regarded as "the supreme achievements of modern science and technology."¹⁰⁶ This phenomenon is perhaps most evident among newly industrializ-

¹⁰³Cited in Dana Eyre and Mark Suchmann, "Status, Norms, and the Proliferation of Conventional Weapons: An Institutional Theory Approach," in *The Culture of National Security: Norms and Identity in World Politics*, ed. Peter Katzenstein (New York: Columbia University Press, 1996), 86.

¹⁰⁴ Cited in Heisbourg, "Public Policy and the Creation of a European Arms Market," 450; Mark Suchmann and Dana Eyre, "Military Procurement as Rational Myth: Notes on the Sociological Perspective on Weapons Proliferation," *Sociological Forum* Vol 7 (March 1992), 151.

¹⁰⁵Alexander Wendt and Michael Barnett, "Dependent State Formation and Third World militarization," *Review of International Studies* Vol. 19 (1993): 337.

¹⁰⁶Luckham, "Armament Culture," 1-5, 11.

ing states where procurement decisions often arise less from the functional needs of security or industrial policy, but rather as reflections of ideas about the nature of the state.¹⁰⁷ State legitimacy within the international system is bound to normative definitions of what constitutes appropriate state behavior: states *must* possess health ministries, postal services and well-rounded armed forces.

In the Third World, these objects and institutions provide a form of “symbolic self-completion.”¹⁰⁸ Alexander and Michael Barnett argue that developing countries often perceive their identities as sovereign states as being inadequate

[b]ecause their autonomy is not respected by the Great Powers, because they are unable to assert their control in all areas of the country, because their governments are corrupt or inefficient, or simply because of their relative youth.¹⁰⁹

Consequently, they embrace those attributes that have become standards of efficacy and of modernity.¹¹⁰ These are symbols of equality, denoting a functional sameness between the developing and the developed. Some symbols, however, are more potent than others. In the armaments field, the emphasis internationally is not just the possession of weapons, but also the ability to design and to locally produce them—and furthermore, not just any weapons, but sophisticated, high-technology goods.¹¹¹ For

¹⁰⁷See Suchmann and Eyre, “Status, norms and the proliferation of conventional weapons,” 92. They raise several persuasive examples of this worldview in which the social character of defense technology plays a determining role in its acquisition by Third World states. The commercial failure of the Grumman F-20 *Tigershark* interceptor is a case in point. Although the F-20 was an advanced version of the F-5 used by the United States and sold to a number of its allies, it was produced solely for export and not employed by the United States Air Force. This served to delegitimize it as an appropriate defense platform by potential buyers — despite the fact it offered a clear upgrade path to those states already equipped with F-5s. Interview. Dr. Henry Gaffney, Former Assistant Director of the Defense Security Assistance Agency, Washington DC, 9 February 2004.

¹⁰⁸ Wendt and Barnett, “Dependent State Formation,” 337.

¹⁰⁹ *Ibid.*

¹¹⁰ Meyer, “World Polity,” 123.

¹¹¹ Wendt and Barnett refer to this as “technologism” in where advanced defense technologies are regarded as preferred means of security regardless of objective need or capability. Wendt and Barnett, “Dependent State Formation,” 339.

states facing normative incentives to modernize their economies, a high tech weapons capacity denotes both great nation status and the achievement of a great national economy capable of considerable technological innovation. These weapons are consequently “loaded with meaning,” symbolizing sovereignty, technological advancement, strength, and political efficacy.

In the early 20th century, the battleship epitomized how technology of this type can become tightly embedded in a state’s self-perception, and importantly how that state wished to be regarded by others. Michael Howard writes:

The Battleship was indeed a symbol of national pride and power of a unique kind; one even more appropriate to the industrial age than armies. It embodied at once the technological achievement of that nation as a whole, its worldwide reach and, with its huge guns, immense destructive power. It was a status symbol of universal validity, one that no nation conscious of its destiny could afford to do without.¹¹²

Today, other technologies fill this role: the air-superiority fighter, the *chobham*-armored main battle tank, and the ballistic missile submarine among others. These platforms embody levels of sophistication and of lethality that separate those who can produce them from all others. Their symbolic status is such that they help constitute a state’s identity as a great power. The social value of these technologies is tightly intertwined with their material attributes. In many cases, however, symbolism can outweigh any objective criterion. For example, defense-seeking states that pursue power-projection strategies require both offensive weapons systems to conduct operations, and transport platforms needed to move personnel and materiel into a given theater. Battleships, to borrow Howard’s observation, are impressive tools of statecraft, but they are quite literally “dead in the water” without the freighters and the tankers that are necessary to replenish them at sea with fuel, spares, and munitions.

¹¹² Michael Howard, “War and the Nation-State,” *Daedalus* 108 (1979): 104.

Indeed, victorious campaigns are not so much a function of imposing one's will upon the enemy—to use Clausewitzian language—as they are the successful management of logistics: procuring and delivering the boots, the bullets, the spares, and the multitude of other items that militaries must possess if they are to function effectively.¹¹³ Nonetheless, it is not the freighter, or the tanker, or even the 16-inch naval shell that traditionally assumes an important place in the popular and elite imaginations; rather, it is the battleship that becomes a vehicle for national ambitions and a symbol of techno-industrial prowess.

This is not to say that states do not value mundane military technologies, but rather that they value them differently, as expressed in either statement or action. No sane defense decision-maker would contend that her armed forces should disavow artillery shells in favor of ground attack aircraft. An effective, modern military requires both. However, because the latter is a greater symbol of modernity than the former, states will tend to devote greater attention and energies toward its procurement—even though artillery is a far more effective means of killing or disrupting enemy forces, as seen through the historical record. The social incentives for weapons production can, and sometimes clearly do, outweigh the material incentives to procuring those items. This difference can have an impact upon the conduct of national procurement policy if states truly privilege certain technologies over others and divert limited resources to meet these goals.

That states can and often do invest considerable levels of treasure and of ministerial attention to certain weapons is uncontroversial. Gold-plating of already sophisticated weapons has been a feature of Western arms procurement since the late

¹¹³ A well-worn cliché among Western military circles asserts that: “Amateurs talk about strategy; Professionals talk about logistics.” In practice, however, the more banal aspects of the military art are rarely accorded the attention they deserve. Steven Rosen, Summer Workshop on Analysis of Military Operations and Strategy, Cornell University. 22 July, 1998.

19th century.¹¹⁴ The question that is critical to this dissertation, however, asks if the incentives to acquire certain defense technologies are different, then will the methods that states use to acquire those technologies also be different? Further, are some technologies more ‘suitable’ to collaborative procurement, and if so, what drives such collaboration in light of the ideational nature of armaments?

As we have seen, national arms procurement is a far more complex matter than simply kitting one’s own troops to guard the frontier or to take some distant hill. As Robin Luckham writes, “weapons themselves have become ideologies.”¹¹⁵ Their acquisition and possession form the basis of a kind of technologism in which certain technologies are regarded as constituting modern statehood. While all arms may in some way stand apart from other commodities, it is the advanced weapons technologies that are uniquely placed within the international system. They are not only perceived as the “preferred means” of achieving state security, but also as an appropriate representation of state-ness.¹¹⁶

This ideational function of arms procurement poses varying hurdles to International Relations theory and any effort to frame viable hypotheses of state behavior in this area. On the one hand, rationalist approaches such as realism are not concerned with the symbolic baggage coupled to defense technologies. It is enough that weapons are the source of security and wealth in an interstate system in which the only meaningful differences between states are their relative power capabilities. Sociological paradigms, on the other hand, place great importance on the social value of such technologies—especially because they so closely intersect with formulations of state

¹¹⁴ See Mary Kaldor, European Defence Industries -- National and International Implications ISIO Monograph Series 1, no. 8 (1972); Mary Kaldor, The Baroque Arsenal (New York: Hill and Wang, 1981).

¹¹⁵ Luckham, “Armament Culture,” 4.

¹¹⁶ Wendt and Barnett, “Dependent State Formation,” 340.

identity. Constructivists see procurement in just this way, as an identity project: either reflecting existing state identity demands, or denoting new identifications—particularly in situations where collective identity formation is both possible and salient, and generated through collaborative behavior.

Synthesis

So far, our discussion of theory has been confined to analytical foundations and to suppositions about the nature of international cooperation. I shall now apply our two paradigms to weapons procurement, specifically as it occurs through multinational collaboration. The purpose here is not to provide a detailed exploration of interstate defense industrial cooperation in any given region. I seek instead to highlight the theoretical expectations concerning the nature of this activity, its promises and its limitations as perceived through these disparate frameworks.

Realists regard defense technologies with a certain awe. They are the instruments that give form to international affairs, shaping and reshaping it with each new innovation. The possession of arms, particularly those that are superior to one's neighbors, lowers the cost of conquest and political manipulation, and thus heightens the incentives for the fortunate to exploit their advantage and revise the international system.¹¹⁷ Robert Gilpin notes that the development of iron metallurgy and siege engines aided in the development of the Assyrian Empire and made possible the havoc that it wrought; Constantinople endured as it did because of its relative advantage in fortification; and finally, the introduction of gunpowder and artillery in fourteenth century Europe produced a period of offense dominance in interstate military affairs that

¹¹⁷ Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981), 59-61.

“opened a new era of territorial consolidation and introduced a new form: the nation-state.”¹¹⁸

Given their role in ordering interstate relations, Realists contend that armaments are a commodity that no state can do without, and moreover, one that all states should ideally procure autonomously. Defense technologies provide the most benefit when they are held alone, providing the possessor with advantages not readily overcome by potential opponents. Sharing production with others hastens the diffusion of potentially sensitive technologies through collaboration; purchasing equipment outright from foreign sources imposes political and military vulnerabilities through dependence upon foreign designs that may be substandard or withheld under conditions of crisis.¹¹⁹

Armaments procurement security is only truly attainable under conditions of defense industrial autarky in which maximum state control and independence can be assured. Nonetheless, such conditions have been rarely achievable. For Realists such as Ethan Kapstein and Thomas Moran, defense industrial innovation is coupled to two dominant effects. First, even if technological superiority is attained, it is generally not preserved because existing technologies tend to diffuse faster than new ones are created.¹²⁰ Second, armament production is burdened by a constant and nearly inexorable rise in cost from one generation of weapon to the next. Indeed, Adam Smith once described this phenomenon as the “law of the increasing cost of war.”¹²¹ Because of military imperatives for inter-generation technological advancement, the cost of defense goods tends to increase at a rate higher than that found in civilian commodities.

¹¹⁸ Ibid, 62.

¹¹⁹ Raymond Vernon and Ethan Kapstein, “National Needs, Global Resources,” *Dædalus* 120 (Fall 1991): 5.

¹²⁰ Andrew Moravcsik, “Arms and Autarky in Modern European History,” *Dædalus* 120 (Fall 1991): 28.

¹²¹ cited in Gilpin, *War and Change*, 162.

Consequently, arms production imposes increasing burdens upon those states that possess the financial, technological and industrial capacities to engage in domestic manufacture. Many states lack the resources to produce even the most mundane defense technologies. All others face what Andrew Moravcsik labels the “autarky-efficiency dilemma.”¹²² While autarkic production may still be possible, the costs of some items are so excessive as to risk poor economies of scale, inefficiency-fuelled price rises, introduction delays, and inferior technological performance for all but the wealthiest countries.¹²³ The desire for defense autonomy can therefore undermine the security effect through the production of weapons of insufficient quality and number.

Realist analyses of weapons production thus regard multinational procurement as a necessary evil for a majority of countries. For these states, reliance upon foreign equipment and supply networks is the only practicable means of meeting their minimal security requirements. The contentious issue that countries face, therefore, is not whether to engage in defense industrial cooperation, but how to avoid the pernicious effects of collaboration while attaining maximum national advantage. Realists anticipate that states will favor those forms of collaboration that infringe least upon their military and political autonomy, ensure that national governments retain complete authority over the cooperative process, and enhance their options for autarkic production at a later date should that option be forced upon them.

Countries should not rely upon cross-border purchases. While imports may provide a cheaper alternative to local development and production, it also presents the

¹²² Moravcsik, “Arms and Autarky,” 23.

¹²³ Thomas Moran, “The Globalization of America’s Defense Industries,” *International Security* Vol. 15 No. 1 (Summer 1990): 67. “Inefficiency-fuelled price rises” refers to the feed-back dynamic associated with poor economies of scale. Insufficient production runs do not permit the level of learning needed to solve production problems and maximize efficiency. Consequently, unit costs tend to be substantially higher the smaller the production run. See Todd Sandler and Keith Hartley, *The Economics of Defense* (Cambridge: Cambridge University Press, 1996), ch. 9.

highest risk of foreign dependence. Any form of market allocation is a source of insecurity to states, as suppliers can manipulate trade to advance their interests, either through strategically withholding technologies and product support, or by entrapping buyers into exploitable, asymmetrical political relationships.¹²⁴ Moreover, foreign purchase does not contribute to either preserving or expanding national armaments development or production capabilities; on the contrary, it may hasten their atrophy should they exist. Countries only have two options to mitigate these risks, if there is no alternative to direct purchase. First, they can create a system of mutual dependence to restrain their “partners” from exerting undue pressure. Second, they can rely upon a diverse set of suppliers and thus prevent dependence upon any one party.¹²⁵

States ideally will structure their collaborations to ensure that some part of the production process occurs on their own soil, and moreover within their national industry. Co-development and co-production—methods that we will explore in greater detail in the next chapter—are preferred because they allow countries to share the financial and technical risks of weapons production while funneling work to their own defense firms. States can thus use multinational means to meet national ends in attaining welfare and security goals. Realist analyses also assume that no matter which method is chosen, states will dominate the process. Non-state actors, such as industry and international institutions can provide a coordinating role, or in the case of the former perform the actual development and production. Nonetheless, states will deny them any decision-making roles concerning technology transfer and work allocation. Arms collaboration, like that for any other commodity, will be a strictly intergovernmental affair. Partnerships will arise to meet immediate needs, and then dissolve once

¹²⁴ Ethan Kapstein, “International Collaboration in Armaments Production: A Second-Best Solution,” *Political Science Quarterly* 106 (1991-92): 660; Beverly Crawford, “The New Security Dilemma Under International Economic Independence,” *Millennium* 23 (1994): 27, 35.

¹²⁵ Moran, “America’s Defense Industries,” 82-83.

the objectives are achieved. Relations between states within these groupings will reflect their relative power, with rules established to prevent cheating.

Social Constructivist analysis, naturally, takes a different approach to state armaments procurement. Weapons production has become a defining act of statehood, and as such, it cannot be divorced from this identity function. Questions of methods and means are only important in that they may reflect this issue. Given the ideational significance of arms procurement, a constructivist approach would seek to determine how this act either reproduces an existent state identity or denotes a collective identity emerging within a collaborative partnership.

While states acquire defense equipment because of its social value, they nonetheless face the same economic and technical pressures favoring multinational cooperation that we outlined earlier. One must consider, however, the larger political context of this cooperation, as well as possible transformative effects of collaborative behavior. Defense industrial collaboration within security communities, for example, occurs in environments in which collective transnational identities are present. The question then becomes a matter of determining which identity, state or regional, is being satisfied through collaboration. Even when cooperation occurs outside this context, as we have noted, collaborative relationships can lead to a positive identification between self and other that can create changes in behavior.¹²⁶

A constructivist approach would attempt to map identity and action. If an orthodox conception of state identity exhibited the dominant influence on conduct, countries should structure their collaborative procurement to better serve that identity: eschewing any compromises on their autonomy, and engaging in practices that maximize national industrial and security interests. A salient collective identity, on the

¹²⁶ Wendt, "Identities and Structural Change," 57.

other hand, would reshape state interest so as to make it less distinct from the communal interest. States should embrace ever-deepening forms of cooperation in which concerns of dependence and of exploitation do not affect decision-making. Behavior should be characterized by diffuse reciprocity, a willingness to permit defense industrial interdependence, and possibly, even integration through a merging of home markets and the de-nationalization of domestic firms.¹²⁷ States might even accept an “internationalization of authority” in which coordinating international organizations are granted decision-making competences, or partner countries harmonize their domestic laws and regulations.¹²⁸

Constructivist analysis can offer an additional insight concerning the object of collaborative procurement. Whereas realism does not assume variance in state conduct pertaining to the types of technologies that countries seek to acquire, constructivism considers the ideational value of arms and how differing values may produce divergent preferences. Indeed, some technologies may be more closely associated with certain social identities. Given the links between high technology defense equipment and state identity, a constructivist approach would assume that other technologies at intermediary and low levels of sophistication might not impose the same imperatives of orthodox state interest. Instead, other identities may become manifest in any collaborative behavior in these technological domains — that is to say that a collective identity need not be dominant, but if present, it might have greater effect in those areas of state activity that are least tightly bonded with the ideas of state-hood.

¹²⁷ By ‘de-nationalization,’ I refer not to ownership status, but rather to the national identification of firms, e.g., a British tank manufacturer supplying to a national market versus a *European* tank manufacturer supplying a regional market.

¹²⁸ Adler and Barnett, “Governing Anarchy,” 94.

Methods

This dissertation employs a constructivist framework to analyze recent interstate collaborative behavior in Western Europe. By mapping changes in the nature of armament procurement collaboration in these regions over time, I intend to measure both the degree of de-nationalization in the regional defense industrial base and the extent to which the process is driven by a transnational collective identity. Given that such an identity is argued to exist in Western Europe, this dissertation problematizes both identity and technology in order to test their salience. I hypothesize that an emergent European identity will first induce economically rational weapons collaboration in low-end technology that can be detected through an absence of traditionally self-regarding state behavior.

To test this hypothesis, I shall employ a process-tracing approach that is both historical and interpretive in method. While this may risk an analysis that is “devoid of theoretical shape” and is uncomfortably resembles “a recitation of facts and historical developments,” it is nonetheless essential to our exploration.¹²⁹ It allows us not only to gauge changes in state conduct between specific episodes of armaments collaboration, but to also examine the ideational environment in which the behavior occurs. To this end, this study uses discursive analysis to operationalize the concept of identity and measure ideational shift, in this case the difference between a purely nationalized worldview with narrowly conceived state interests and a collective regional identity. I shall evaluate the policy context in which state decision-makers initiated and justified their collaborative ventures. It is impossible to quantify ideational changes by measuring minute transformations. Nonetheless, the thorough content analysis of archival data, e.g., government position papers and corporate reports, and interviews, should

¹²⁹ David Leheny, “Tours of duty: The Evolution of Japan's Outbound Tourism Policy,” Ph.D. Manuscript, May 1998, Cornell University.

reveal which sentiments received the greatest articulation within a given collaborative project.

This technique is fraught with its own particular set of problems. It assumes that official proclamations are strategically worded and runs the risk of descending into hermeneutic circles—the post-structuralist tendency to move beyond a search for ideational meaning within text and discourses toward an often futile anti-scientific quest to look for meanings within meanings. The risk of confusing proclamation for fact is particularly acute in any study of European procurement cooperation: as one U.S. military officer assign to NATO noted,

It is politically correct to say ‘Buy Europe,’ to say ‘support the [idea of European Union],’ but when it comes down to brass tacks. . .there is rampant nationalism and rampant inconsistency in official statements—and of course, an unending lack of trust.”¹³⁰

Discursive analysis, however, remains the only method of exploring something so elusive as self-conception. This study uses an added safeguard by correlating statement and deed, so that we should safely determine the salience of a proclaimed identity through simple observation of actual behavior.

This approach allows us to evaluate the most relevant counterhypothesis, namely that provided by rationalist models which contend that collaborative behavior ongoing in the European Union is merely a functional response to systemic economic forces such as rising equipment costs. A realist analysis would have us believe that arms procurement cooperation is inherently limited. State collaborate only because they are compelled to do so by financial and technological constraints. There are no grander visions at work, and no expectation that cooperation will evolve in any systemic way beyond the forms that it currently assumes, or will stop serving the

¹³⁰ Interview with U.S. Army officer representing the U.S. Joint Chiefs of Staff. 3 July, 1996.

parochial interests of the states involved. A detailed content analysis should show if material necessity has merely led to a transformation in state priorities, permitting heretofore unseen forms of procurement collaboration, or if self-interest has changed because the "self" is now perceived to be something larger than the national community.

The dissertation's focus is longitudinal, covering the range of intra-regional European procurement cooperation in the period from 1967 to 1997. I have selected four project-specific cases based primarily on the level of technology—either high or low—of a given program. I designate multinational collaborative projects as either: a) high-technology programs defined by high R&D costs, involving systems such as aerospace platforms, military electronics, or precision-guided munitions; b) low-technology initiatives encompassing shipbuilding, land vehicles,¹³¹ and small arms and ordnance production. My high-tech cases are the *Tornado* fighter-bomber (1969-1985) and the *European Fighter Aircraft* (1975-ongoing). The chosen low-tech cases are the *Field Howitzer 70* (1968-1981) and the *Self-Propelled Howitzer 70* (1973-1986). All these cases involve both co-development and co-production of weapons systems between West European partners. I have chosen these cases because they can be unambiguously coded as low or high technology and detailed, accessible information on them is available. Moreover, they also allow for a relatively rigorous analysis. Within each technology dyad, the more recent cases—here, the *European Fighter Aircraft* and the *Self-Propelled Howitzer 70*—are conventionally regarded as direct follow-ons to the earlier projects. One can thus observe the same core group of na-

¹³¹I make the distinction between tanks and light-to-medium sized ground vehicles. Tanks are regarded as symbolically important to national status as aircraft, and thus would induce the same collaboration-retarding effects as a high-technology platform. Elisabeth Sköns, "Western Europe: Internationalization," in *Arms Industry Limited*, ed. Herbert Wulf (Oxford: Oxford University Press, 1993), 189.

tional actors—in these instances Germany, the United Kingdom, and Italy—collaborating together over time, across projects of similar type, and involving the same industries and organizational models. Consequently, this study should permit examination of possibly shifting state interests and behaviors pertaining to successive episodes of procurement cooperation between established partners.

While my project-specific cases are extremely important to the execution of this dissertation, I complement them with the study of Europe's premier market-liberalization scheme: the 1986 Anglo-French Reciprocal Purchasing Agreement. This initiative is noteworthy because it is a globally rare example of an effort to integrate segments of national defense industrial bases. The Anglo-French accord was the first comprehensive effort in NATO Europe to liberalize the regional defense equipment market through competitive cross-border tendering.

Conclusion

This dissertation will provide exploration of the role of ideas in shaping state policy, and moreover, in a very sensitive area of state activity: defense procurement. Ideational analyses can always tell us something more about international relations vis-à-vis mainstream theory. In any given situation, there are countless variables that may have some causal significance. Constructivism reaches beyond orthodox parsimonies, employing “thickly described histories” and interpretive methods, to “uncover collective meaning, actors’ identities, and the substance of political interests.”¹³² This dissertation seeks to say something *new* about the conduct of interstate affairs, to explain phenomena that possibly cannot be adequately addressed by the rationalist and materialist paradigms that dominate the field. In the following chapter, I will provide a

¹³² Adler, “Seizing the Middle Ground,” 335.

historical background of the post-war defense industrial collaboration in Western Europe and show that cooperation is an evolving process. As such, it cannot be automatically assumed to fit within the narrow confines of mainstream theory and scholarship.

CHAPTER THREE

Historical Background

The late François Mitterrand once argued that "if one wishes to create Europe, care must be taken to define some unity of armament, otherwise the rest of the discussion will be pointless."¹ This remarkable insight reflects a little recognized and often forgotten feature of regional integration in Western Europe. In that region, international cooperation assumed an explicitly "defense-first" posture.² Before the advent of coal and steel communities, common agricultural policies, and free trade areas, defense was not only the glue that bound Western states together the political and economic integrations that now are taken for granted—the routinized inter-governmental discussions over questions of political economy and policy coordination, multinational industrial cooperation, and the de-nationalization of traditionally inviolable areas of state activity—either occurred first or in greater degrees in the defense realm.³ Organizations such as NATO, WEU and FINABEL⁴ in Western Europe provided the successful and enduring collective defense of their member states;

¹Cited in Lt. Col. J. J. G. Cox, "The Choice for France – European Defence of Arms Sales," The Army Quarterly and Defence Journal 117 (January 1987): 25

² Holly Wyatt-Walker, The European Community and the Security Dilemma, 1979-92 (New York : St. Martin's Press, 1997), 61.

³ Interview. Anonymous British Aerospace Official. April, 1997; One of the great ironies of North American integration, for example, is the artificial divide between regional civilian and defense markets, and bilateral efforts to liberalize them. Regional free trade did not become a reality until 1985, although it had been mooted since the 1950s. While civilian free trade was resisted on sovereignty and political entanglement grounds, the United States and Canada created a common defense market that has functioned without interruption since 1963, and whose roots actually extend back to 1943.

⁴ FINABEL is the French acronym for the military coordinating committee founded in 1953. It is chaired by the Army Chiefs of Staffs from its member states: France, Italy, Netherlands, Germany, Belgium, and Luxembourg (hence, FINABEL). The UK later acceded to the group in 1973. This body is informal and ad hoc, lacking a permanent secretariat, and works exclusively on land weapons development and logistics.

moreover, they vastly reduced the security dilemmas between these countries and established the norms of multilateralism and transparency that have made possible the notion of European union.

While interstate security cooperation set the foundation for the integration movements that now exists in the North Atlantic area, one must be careful not to overstate the situation. These partnerships succeeded admirably in organizing the common defense. Their record in providing for that defense is more spotty. Complex cooperation may have become the dominant trend in the West, but defense industrial integration amongst these same states may yet be a dream deferred. At the very least, multinational procurement cooperation for most of the last fifty years has been a “dream come untrue.”⁵

The same tensions between nationalism and internationalism in armaments procurement that we explored in the preceding chapter found expression in Western politics from the institutionalization of the alliance beginning in the late 1940s well into the present-day. These states sought to balance innate desires to preserve their sovereignty and techno-industrial vitality, while concurrently engaging themselves in a coalition in which there were legitimate political, economic, military arguments for rationalizing their collective defense industrial efforts. As state preferences and constraints have evolved over time, the interplay of these desires and demands have produced a dynamic situation. Indeed, when one looks at the situation in Western Europe, we see a pattern of shifting impulses between rationalization and nationalization in the regional defense equipment market: from the near-total commonality of arms immediately following the end of the Second World War, to the piecemeal re-nationalization of state military forces in 1960s, and finally, to the hybrid situation that

⁵ Panayiotis Ifestos, European Political Cooperation: Towards a Framework of Supranational Diplomacy (Avebury: Gower Publishing Company, 1987), 53.

exists today in which domestic production dominates but is nonetheless coupled to growing inventories of cooperatively procured weapons.⁶

Furthermore, in each of these periods, the options faced by states were not as simple a choice as either buying abroad or producing at home. Multinational weapons procurement could assume a number of forms, ranging from supranational governance, to free-trade, to project-specific defense industrial collaboration. Each model, and its sub-variants, evoked tradeoffs in procurement efficiency and national independence: i.e., the greater one's sovereignty was maintained, the less effective the process and outcome of the collaboration, and vice versa. Consequently, even as the pendulum may swing between nationalism and internationalism in defense procurement, states enjoy several alternative methods of cooperation such that part or all of their collaborations may reflect more subtle effects of identity-driven behavior. For example, it is conceivable that a group of states could be ostensibly very parochial in their defense procurements, privileging their national defense industries for the bulk of their equipment needs, and yet they may engage in periodic collaborations that are other-regarding in terms of their design and execution. States may institutionalize dependencies in their defense procurements that would denote an identity-shift from the national to the transnational. Conversely, states may create a broadly cooperative environment, but nonetheless in both discourse and action, behave as traditional self-interested, utility-maximizing actors.

This chapter has two objectives. First, we review the history of defense procurement collaboration within the North Atlantic Alliance, from its inception to

⁶United States General Accounting Office, Report to the Secretary of Defense, Defense Trade: European Initiatives to Integrate the Defense Market (GAO/NSIAD-98-6, October 1997), 13-14; Judith Reppy and Philip Gummert, "Economic and Technological Issues in the NATO Alliance," in Evolving European Defense Policies eds. Catherine McArdie Kelleher and Gale A. Mattox (Lexington, MA: D.C. Heath and Company, 1988), 19.

beginning of our window of analysis in 1968, with the initiation of the *Tornado* and *FH-70* projects. We will pay particular attention to institutional, discursive, and episodic trends in Western Europe. The second aim of this chapter is to define the concept of procurement multinationalization—to overview the basic models of armaments cooperation that states can employ. Until now, I have used the terms multinationalization, internationalization, transnationalization, and Europeanization synonymously and somewhat loosely. In the latter half of this chapter, I will discuss the modalities that cooperative behavior can assume, as well as the theoretical and historical significance of each.

History

Procurement cooperation in the West is not a new phenomenon. Contemporary collaborative projects, such as the *Eurofighter*, the *TRIGAT* anti-tank missile, and the *Apache* stand-off missile, which are presented as standard-bearers of the Alliance effort to rationalize its collective defense effort, are in fact the latest instances of process of cooperative procurement in the North Atlantic area that has been ongoing since World War II. Much of the war effort on the Western front was supported through the United States Lend-Lease initiative which supplied British, Canadian, and free allied forces with American military hardware.⁷ At the conflict's end, of all the countries that would later comprise the European Union as of 2004, only Britain and Sweden sur-

⁷ The level of support varied between states. American armor and military vehicles were abundant and universally employed by the end of the war. The United Kingdom and Canada supplied most of their other national needs, while the orphaned free allied forces from the occupied countries were completely dependent upon both American and British largesse.

vived with their defense industries intact.⁸ Ireland had no defense industrial base to speak of, while the continental states were completely disrupted due to war-time destruction. Moreover, West Germany was not only devastated, but much of its surviving defense industrial base had been dismantled following the Nazi capitulation in 1945. It would be another ten years before Germany would be permitted to engage in any domestic defense procurement.⁹

Consequently, Europeans were unable to provide for their own defense equipment needs in the first years following the war. Nonetheless, the desire existed both to restore state militaries so to meet their minimal defense needs as quickly as possible, and to begin the long-term process of reconstituting national defense industries. The United States moved to meet this demand, partially as a component of the larger post-war economic reconstruction effort and as a means to counter a perceived Soviet threat in Eastern and Central Europe.¹⁰ Military assistance continued after the war through the discounted sale of American weapons, or through gifts of surplus equipment and supplies. This relationship was institutionalized with the enactment in the Summer of 1949 of the United States' Military Assistance Program (MAP) which provided free military hardware to those western and other friendly, anti-communist states who applied. The \$14.4 billion in military aid initially approved under the MAP represented an enormous boost to European defense efforts. Through this program,

⁸ C.J.E. Harlow, The European Armaments Base: A Survey — Part 2: National Procurement Policies (London: Institute for Strategic Studies, 1967), 7-8, 68-69.

⁹ Harlow, 40.

¹⁰ For a discussion of United States' post-war military aid to Western Europe, see Timothy P. Ireland, Creating the Entangling Alliance. The Origins of the North Atlantic Treaty Organization (Westport, CT: Greenwood Press, 1981), ch. 3.

and the bilateral grant and trade agreements that preceded it and coexisted along side it, by 1958 over half of all heavy weapons in Western Europe were of American origin.¹¹

The MAP rearmed Europe but did not in itself create sufficient conditions for the re-establishment of national European defense industries. This process was supported by concurrent and subsequent initiatives in transatlantic and intra-European cooperation. First among these was the North Atlantic Treaty. Although the MAP was legally distinct from the Treaty, and the two were separately ratified by the United States' Senate just two days apart in July 1949, the United States and its allies justified the aid pact under treaty provisos calling for both military and economic cooperation among partner states so as to better provide for their collective defense.¹² Article 2 of the North Atlantic Treaty called upon the signatories to “eliminate conflict in their international economic policies” and to “encourage economic collaboration between any and all of them.” Similarly, Article 3 stressed that alliance members “separately and jointly, by means of continuous and effective self-help and mutual aid, . . . maintain and develop their individual and collective capacity to resist armed attack.”¹³

These clauses, as Francis Beer noted, only “vaguely implied” a role for armaments cooperation among allies; they certainly did not set any concrete objectives or procedures to that end.¹⁴ Moreover, because of its ambiguous language, the Treaty did

¹¹ Report of the Netherlands Advisory Council on Defense Affairs, European Co-operation on Defense Equipment (The Hague: Adviesraad Defensie Aangelegenheden, 1978), 19.

¹² Ireland, The Entangling Alliance, 146.

¹³ Francis Beer, Integration and Disintegration in NATO (Columbus: Ohio State University Press, 1969), 131.

¹⁴ Ibid.

not make any normative claims concerning the desirability of cooperative military-related economic activity vis-à-vis traditional patterns of state behavior. While this was arguably unavoidable in an alliance of sovereign states, all of whom were eager to maintain their freedom of action, the omission would later haunt NATO military planners as member states exercised their right to “self-help” without any supranational control or oversight. In any case, Alliance leaders from the 12 founding member states quickly moved to flesh-out the treaty recommendations.¹⁵ During the September 1949 inaugural meeting of NATO’s supreme political decision-making body, the North Atlantic Council, ministers created the Military Production and Supply Board (MPSB) and the Defense Financial Economic Committee (DFEC).

The MSPB and the DFEC were the first multilateral institutions in Europe or elsewhere founded to co-ordinate interstate defense industrial policies. Alliance governments recognized that their collective defense would necessarily require some level of collective and “comprehensive management” of their combined defense industrial effort.¹⁶ To this end, Rationalization, Standardization, and Interoperability (RSI)¹⁷ rap-

¹⁵ The United States, the United Kingdom, the Netherlands, Canada, Denmark, Belgium, Luxembourg, Italy, Iceland, Portugal, and France.

¹⁶ William Pettijohn and Jacob Stockfish, Methodology to Quantify the Potential Net Economic Consequences of Increased NATO Commonality, Standardization and Specialization (Rockville, MD: The Vertex Corporation, 1978), 20.

¹⁷ These concepts have evolved gradually over time within Alliance organizations. As originally conceived, standardization was defined as the procurement of “common, compatible, or interchangeable supplies or equipment.” Through the 1950s and 1960s, standardization was conceptually narrowed so to refer only to the “adoption of common equipment, doctrine and procedures.” Rationalization became the umbrella concept addressing any action that “makes more rational use of . . . defense resources both as individual nations and collectively. Interoperability refers those steps taken to make national weapons compatible with others through interchangeable parts and shared specifications on consumables such as fuel and ammunition. United States Congress, Congressional Research Service, NATO Standardization: Political, Economic, and Military Issues for Congress, Washington D.C., 29 March 1977,

idly became a mantra amongst NATO defense planners, and both the MSPB and the DFEC represented the institutional face of this stated desire. MSPB was empowered “to promote co-ordinated production” and standardization of defense equipment. The DFEC, on the other hand, sought to “develop” financial guidance for defense programs, “recommend financial arrangements” for common military plans, and to recommend the “interchange of military equipment.”¹⁸

These organizations with their impressive mandates represented a promising beginning to the Alliance and to its effort to rationalize defense procurement. Unfortunately, they quickly encountered structural barriers that marginalized their efficacy, as well as that of their successors right through to the present day—a number that now approaches 180 standing and ad hoc committees and groups within NATO alone.¹⁹ First, at no time has any Alliance body been given the political authority to make decisions concerning Alliance-level procurements: no common funding, no power to award industrial contracts, and no power to harmonize military requirements. These powers remained vested solely with the member governments. Further, even in an advisory role, NATO organizations were captive to national preferences, as their members served explicitly as national delegates. Consequently their allegiances were not to the common good, or even to the Alliance as an institution, but to the parochial whims of their state governments.²⁰

5; Robert Rhodes James, Standardization and Common Production of Weapons in NATO (London: Institute for Strategic Studies, 1967), 2.

¹⁸ Pettijohn and Stockfish, Methodology to Quantify, 20.

¹⁹ Rick Atkinson, “As Europe seeks wider NATO role, its armies shrink,” Washington Post July 29, 1996, A1.

²⁰ James, Standardization, 6.

Second, these NATO initiatives suffered from a diversity of national interests—a situation that worsened as financial and industrial conditions shifted in the post-war period. The United States tended to define standardization as the purchase of American defense equipment.²¹ While this attitude caused some discomfort among Europeans, particularly those with aspirations toward restoring and expanding their national defense industries, by the mid-1950s the European members of the Alliance no longer had to rely totally upon the largesse of the United States. This occurred, in part, due to American policy which sought to hasten the reconstruction of European industry so that the European countries could better share the burden of their defense. As early as 1949, the United States transferred machine tools under the Mutual Defense Assistance Act. By 1952, the United States complemented the Military Assistance Program with the Offshore Procurement Program.²² The effect of this latter initiative was to encourage European firms to produce components and sub-assemblies for the American weapons systems acquired by their national governments. In some cases, the American government took a more direct approach. In 1953, for example, the United States spent \$1 billion to rebuild and re-vitalize European munitions producers with the stated intention of making NATO Europe “self-sufficient in ammunition production.”²³ A year later, the United States purchased on behalf of the British government 450 Hawker Hunter fighter planes produced in the United King-

²¹Pettijohn and Stockfish, *Methodology to Quantify*, 21.

²² Trevor Taylor, *Defense, Technology and International Integration* (New York: St. Martin's Press, 1982), 20.

²³ Taylor, *Defense, Technology and International Integration*, 21.

dom for the exclusive use of the Royal Air Force.²⁴ Similar efforts were conducted in France and the Benelux states.

These United States defense industrial assistance policies, among others, helped reestablish armaments production capacities throughout the Alliance. John Calmann writes that, “after 1955, nearly all of the European members of the Alliance were producing some part of their defense equipment.”²⁵ The resumption of significant defense industrial activity throughout the region restored a measure of the political and military normalcy that these states had lost as a result of the war. Unfortunately, in doing so, it also made cooperation far more difficult, as these states acquired the industrial assets needed to support their parochial interests. As one NATO officer remarked at the time, “European governments are quite agreed on the need to cooperate, but they have no idea on what.”²⁶ The larger defense producers — France, the United Kingdom, and by 1955, West Germany—had divergent strategic and financial interests that were not easily reconciled. The Germans were obligated to purchase substantial levels of British and American arms to subsidize those countries’ military presence on German territory. Britain and France both had global military ambitions and the desire to expand well-rounded domestic defense industrial bases. The smaller states such as the Benelux and Italy were specialized niche producers and still dependent on cheap United States imports to provide the bulk of their defense needs. In

²⁴ Ibid.

²⁵ John Calman, European Co-operation in Defense Technology: The Political Aspect (London: Institute for Strategic Studies, 1967), 3.

²⁶ Ibid.

all of these states, large and small, there existed the impulse to “internalise the development and manufacture of defense equipment.”²⁷ Their defense industries not only became part of their larger political and economic infrastructures, as William Walker and Philip Gummett note, they also became “prized national assets” to be protected and nurtured.²⁸

In this environment, incentives for cooperation for cooperation’s sake were scarce. Indeed, as Calmann asserts, Europeans had

no broad basis of agreement about defense needs (nor about how to satisfy them) on which to build some common system of procurement. The question [remained] why, under these circumstances, they should bother with or want to have such a common system in the first place.²⁹

In the span of fifteen years, following the end of World War II, the countries of NATO Europe had progressed from substantial levels of equipment standardization based upon American equipment to a diversity of weapon systems based on incompatible national designs.

Institutionally, however, NATO remained committed to promoting RSI within the alliance. The emphasis, however, shifted from building upon existent rationalization amongst its members, to “closing the barn door,” in the words of a United States congressional report.³⁰ In 1959, the Alliance adopted the NATO Basic Military Requirement (NBMR) scheme. NBMR operated on the premise that standardization could be achieved if member states were aware of the military requirements at the alliance-level. As conceived, either national militaries or NATO committees would

²⁷ William Walker and Philip Gummett, "Nationalism, Internationalism and the Future of the European Defense Market," Chaillot Paper of the International Institute for Strategic Studies. Western European Union. 1993, 6.

²⁸ Ibid.

²⁹ Calmann, European Co-operation in Defense Technology, 3.

³⁰ United States Congress, NATO Standardization, 10.

submit proposals for NBMRs to a permanent Standing Group for evaluation. If approved, following consultation with NATO Command Officers, the Standing Group would shunt the proposals to the Alliance's central Military Committee, to formalize weapons specifications and to disseminate them to the member states. It was then incumbent upon the allies to frame suitable defense industrial partnerships to satisfy the demand.³¹

The NBMR initiative collapsed within seven years. Exclusive reliance upon military advisors led to the creation of requirements that did not consider state budgetary limitations. Moreover, as Trevor Taylor writes:

. . . A fundamental problem was that governments were very reluctant to arrange production of items which military representatives in NATO felt were needed.³²

Although forty-nine NBMRs had been written by 1966, none yielded a collaborative project that produced an actual weapons system. That year, the Council of National Armaments Directors (CNAD), an organizational descendent of the Defense Production and Supply Board, was created to ensure that NATO continued to place an institutional fingerprint on the defense industrial activities of the member states. By the mid 1960s, efforts to guide alliance-level defense procurement in a top-down fashion were abandoned in favor of an explicitly circumscribed oversight role. The initiative for interstate cooperation would remain with the national governments. CNAD continued the process of disseminating information on doctrine and national equipment requirements, except there was no longer the expectation that this activity would yield any "project. . . for a particular item of equipment."³³

³¹ James, Standardization, 9-11; Taylor, Defense, Technology and International Integration, 21.

³² Taylor, Defense, Technology and International Integration, 22.

³³ "Cooperation in Research, Development, and Production of Military Equipment: Study of NBMR Procedure," Report of the Explanatory Group, NATO Unclassified Document C-M (66) 33, 8 (January 1969), p. 8. Cited in Taylor, Defense, Technology and International Integration, 24.

While NATO efforts to promote collaboration during its first twenty years floundered at the multilateral level, wholly intra-European institutional efforts fared little better. In October 1950, French Defense Minister Rene Pleven proposed the creation of an European Defense Community (EDC) to contain German re-armament and to deter possible Soviet aggression. The EDC treaty allowed for the establishment of a unified regional military force that promised a level of defense cooperation not found in NATO: a common defense budget, a centralized procurement agency, and the integration of national military units at the division level.³⁴ Articles 107 through 109 of the treaty specified the procurement rules for the unified European Defense Force. A Board of Commissioners would be empowered to determine and execute integrated community-wide programs for arms production, logistics and infrastructure. The Board would strive to standardize defense equipment “as rapidly as possible,” and all decisions on defense industrial allocations would require a two-third majority for approval.³⁵

The EDC collapsed in 1954 when the French government refused to ratify the Treaty after the parliament rejected the establishment of a supranational agency that would might control the country’s military and defense industrial base. European efforts to retain the initiative and press forward with regional defense regime succeeded in establishing the Western European Union that year under the revised Brussels Treaty. The WEU largely overlapped with NATO in terms of its objectives, and it was rendered inactive soon after its formation and remained so until 1984.³⁶

³⁴Wyatt-Walker, The European Community and the Security Dilemma, 21

³⁵ Edward Furdson, The European Defense Community: A History (New York: St. Martin’s Press, 1980), 163.

³⁶ The WEU was vested with a central committee to promote defense industrial cooperation among its members, the Standing Armaments Committee. Elena Calandri argues that even had the WEU remained active, it is likely that the Standing Armaments Committee would have been as ineffectual as its comparable NATO organizations. This was because, “The Committee was to work in close contact with NATO and the national representatives on the Committee were the same who served on the NATO

The failure to institutionalize armaments in Western Europe before 1970, did not mean that cooperation was either scarce or uneventful during that period. European impulses toward sovereignty and autarky curtailed any desire to rationalize their defense efforts through international organizations. Regionally, Europeans emphasized state control over national defense industrial assets. Interstate arms cooperation, when it occurred, would be structured to serve national ends. Focused and unchallenged state involvement in the collaboration process would allow them to maximize potential gains to their defense bases through access to technology and production skills without the meddling of a long-standing, potentially efficiency-seeking institutional arrangement—organizations that, as Gummatt and Walker note, might

[compel] governments to submit to a form of arbitration which diminishes their individual command over industrial assets most tightly embedded in notions of sovereignty—a tall order in the best of times.³⁷

Consequently, most of the procurement cooperation that occurred in the 1950s and 1960s arose from states engaging in bilateral deals with other European countries, or from multilateral projects with the United States, in which the participant states alone defined the program and arrange its procedures and organization. Only once this was done, would it be given a post-hoc NATO seal of approval.

This sort of ad-hocery dominated the period, and was manifest in a host collaborative projects conducted on both a transatlantic and European basis. In fact, cooperation tended occur in sequence. The first programs were transatlantic — the *F-104G Starfighter*, the *Hawk*, *Sidewinder*, and *Bullpup* missiles, and the *M-109* howitzer — were all joint-production defense industrial collaborations. Europeans used

standardization group so any attempt to endow the WEU with effective powers in armaments production would have been condemned to fail.” Elena Calandri, “The Western European Union Armaments Pool: France’s Quest for Security and European Cooperation in Transition 1951-1955,” *Journal of European Integration History* 1 (1995): 62.

³⁷Gummatt and Walker, "Nationalism," 4.

access to American technology to further advance their own industries. In the case of the *F-104G*, for example, German participation bestowed it with leading edge United States' technology and design skills that allowed Germany to restore its aerospace industry.³⁸ Judith Reppy and Philip Gummert note that once Europeans re-established their national defense industries through American assistance, they turned inward, often to a mixed strategy of national procurement coupled to occasional episodes of interstate industrial consortia with other European partners.³⁹

By the end of the 1960s, intra-European collaboration had attained a significant share of all cooperative activity within the Alliance. *Tornado*, *Lynx*, *Alpha-jet*, and *ROLAND*, to name only a few projects of the period, represented the transition to a more ostensibly collaborative environment. Nonetheless, by the early 1970s, there was no conclusive evidence that the nationalization of defense production was waning to any significant extent. Indeed, the words of Paul-Henri Spaak seemed as apt in 1970 as they did when he first spoke them eleven years earlier:

We still have not managed to obtain any worthwhile standardization in our equipment in NATO. With one or two minor exceptions, we have not succeeded in properly apportioning armament production tasks among allies. We repeat experiments in one country, which have already been concluded in another; we insist on reinventing what has already been invented; and we refuse to trust our friends with secrets which have been known to the enemy for a long time.⁴⁰

The European defense industrial environment, however, was not fixed. The possibility existed for substantial changes to the status quo. Economic, military and ideational factors underlining defense cooperation were changing, and arguably in ways that would favor greater and more complex cooperation in the future.

³⁸ James, *Standardization*, 14.

³⁹ Reppy and Gummert, "Economic and Technological Issues," 19.

⁴⁰ James, *Standardization*, 2.

By 1970, cost escalation in defense equipment and the inability to address the problem through purely national initiatives had become a driving force behind international procurement collaboration. Among modern weapons technologies, commodity costs invariably increased over time, and significantly, at a rate faster than that of their civilian counterparts.⁴¹ In practical, post-World War II terms, this has translated into an average cost escalation in defense goods roughly 5 percent per year above the rate of inflation for civilian products since 1945.⁴²

Mary Kaldor has argued that:

what matters in the military market is not so much the ability to design a weapon that is cheap to develop and produce, as the ability to design a weapon that can claim an improved technical performance over its predecessors.⁴³

The military imperative for performance improvement insured that each successive generation of weapon system was more expensive than the one that preceded it. For low-value, low technology goods such as munitions, cost escalation was relatively minor. These systems did not require incessant technological innovation because of the absence of effective countermeasures, or as in the case of dual-use goods, they were not “explicitly engaged in combative environments.”⁴⁴ Sophisticated, technologically

⁴¹ cited in Robert Gilpin, War and Change in World Politics (London: Cambridge University Press, 1981).

⁴²James B. Steinberg, The Transformation of the European Defense Industry RAND R-4141-ACQ (1991), 40.

⁴³Mary Kaldor, European Defense Industries—National and International Implications ISIO Monograph Series 1, no. 8 (1972): 4.

⁴⁴ Jordi Molas-Gallart, “Missile Systems: ‘Flexible Modularity’ and Incremental Technological Change in Military Production” Defense and Peace Economics, 6 (1995): 145.

dynamic goods such as aircraft and tactical missiles, on the other hand, experienced inter-generational cost increases often in excess of 250 percent in real-terms.⁴⁵

Here, the same military-technical revolution that emancipated military commanders through force-multiplication and real-time command and control, also diminished state capacity to satisfy national defense needs through strictly native production schemes.⁴⁶ Cost escalation had become the price of a modern military, and it outpaced the capabilities of most national, industrial-technology defense bases (ITDBs). Thomas Callaghan suggested that at this rate, the advanced weapons-producing states would face “structural disarmament,” as the price of weapons exceeded the countries’ ability to acquire them through indigenous means.⁴⁷ As quality increased, limited resources restricted the potential for quantity. Successive generations of weapons faced ever-diminishing production runs theoretically yielding untenable force postures and the proclaimed specter of a one-ship navy or one-plane air force.⁴⁸ Increased cooperation offered a means to escape structural disarmament through pooling national resources for some common equipment goal.

While techno-economic concerns were the leading motivation for most past defense industrial collaboration in NATO Europe and elsewhere, they were certainly

⁴⁵ This figure is arguably rather conservative, even as average among high-technology, high value defense technologies. A United States government study noted that cost raises are often quite high for certain technology groups. Inter-generational cost escalation for naval systems, for example, averaged at 300 percent while aerospace systems reached as high as 650 percent. (Keith Hartley, NATO Arms Co-operation: A Study in Economics and Politics (London: George Allen & Unwin, 1984), 30-31.

⁴⁶ Martin Edmonds, "United Kingdom National Security and Defense Dependence: The Technological Dimension," Government and Opposition, vol. 26 (Autumn 1991): 428-429.

⁴⁷ Thomas Callaghan, US-European Economic Cooperation and Military and Civilian Technology, Center for Strategic and International Studies (Washington, 1975).

⁴⁸ European Parliament, European Armaments, 73; Norman Augustine, the former United States Under Secretary for the Army first postulated this effect, noting that the U.S. purchased 2000 high-performance military aircraft each year in the 1950s. This number fell to 600 planes per year in 1960s and 300 annually in the 1970s, due to intergenerational cost increases. Augustine argued that 300 level in 1980s occurred only because the Pentagon doubled its equipment budget in the first half of the decade. He calculated that at that rate of cost increase, the United States would only be able to procure one air superiority fighter or strategic bomber in the year 2054.

not the only ones. While many states placed great value on the economic well-being of their defense industrial complexes and used multinational cooperation to achieve that end, using collaboration to supply security needs was no less legitimate.

That NATO had become, by the 1970s, in the words of Thomas Callaghan, less of a *collective force* as envisioned by its architects in the early 1950s and more of a *collection of forces* that made a sham of the collective defense and the Integrated Military Command, had not been lost to pundits both within and without Alliance institutions.⁴⁹ Given that NATO national militaries pursued the ideal of fighting together seamlessly in integrated naval and air defense commands, and in multinational army groups on the ground, it seemed obvious to any reasonable observer that 16 separate defense ministries procuring different weapons to disparate standards did not represent the best possible use of allied resources, nor did it offer the best chance of operational success. Indeed, General Andrew Goodpaster, Supreme Allied Commander Europe in NATO during the beginning of the 1970s, remarked that NATO lost between 30 percent to 50 percent of its potential combat effectiveness due to nonstandardization.⁵⁰

While General Goodpaster may have overstated the case somewhat,⁵¹ it is clear that NATO's operational prospects as a disjointed alliance were less than optimal. In-

⁴⁹Alliance and Defense Capabilities in Europe. Hearings before the Special Committee on Conventional Forces and Alliance Defense of the Committee of the Armed Services, United States Senate, 100th Congress (HASC no. 100-504), 4 August; 7, 20 October; 3, 17 November 1987, 97.

⁵⁰ United States Congress, Congressional Research Service, NATO Standardization: Political, Economic, and Military Issues for Congress, Washington D.C., 29 March 1977, 28.

⁵¹ The 30-50 percent figure is widely presented as an established fact and is often cited to justify deepening arms collaboration between members. Goodpaster later asserted that his estimate centered around logistics. Given that national armies within the coalition had to maintain separate supply lines to support their different equipment portfolios, he argued that this represented a significant loss of war-fighting potential against a theoretical single logistics system. In any event, equipment standardization alone — while naturally entailing a proportionate rationalization of Alliance logistics — cannot provide improved combat effectiveness in the range given. Such an enhancement would require total tactical compatibility of forces and the outright integration of national logistics commands. Separate national armies may use the same equipment and consequently the same spares and consumables and accrue

deed, if victorious armies are those that win the battle of logistics, then the fact that NATO Europe continued to field 6 different national assault rifles, 4 national anti-tank missile types, 3 national variants of self-propelled artillery, to name only a few systems, seemed an open invitation to military disaster. Moreover, each “family” of weapons necessitated separate doctrines, training procedures, and support services, even though the platforms may have been functionally similar. For example, UK main battle tank ammunition, though of NATO “standard” caliber, could not be fired from any non-British NATO tank;⁵² a Bundeswehr soldier skilled in the use HK641 assault rifle had neither the training nor the specialized kit needed to maintain or competently fire a British SA80 without traversing a substantial learning curve; and finally, a French *Mirage* jet landing at a Dutch airfield could not be readily serviced for the simple fact that the tools needed to remove restraining bolts and side-panels were of a proprietary French design suitable only for French aircraft.⁵³ Such *dis*-commonality, on everything from tank-treads to tactical missiles, undermined the very purpose of collective defense through military integration because it ensured maximum friction in any and all joint operations.⁵⁴ Allies that could not talk to each other, provide mutual

some benefits from commonality, but in the end they remain separate organizations with sovereign control over both logistics and doctrine. United States Congress, NATO Standardization (1977), 1-2, 28.

⁵² The other principal MBT designs — French, German, and American — used a 120mm smoothbore gun and fin-stabilized ammunition. The Royal Army, however, insisted on rifled 120mm guns for its current generation Challenger tanks.

⁵³ An oft cited example of this level logistical incompatibility is the *Jaguar* strike/trainer airplane which was actually an Anglo-French cooperative development. As UK and French firms shared production and manufactured different sections of the fuselage for later final assembly, it was discovered sometime into the production run that each side used nationally specific rivets and binders to hold their sub-assemblies together. This produced the tragi-comic situation of British and French maintenance crews being unable to access whole sections of their respective aircraft without first acquiring two separate toolkits. John Simpson and Frank Gregory, “West European Collaboration in Weapons Procurement,” Orbis, 16 (Summer 1972): 452.

⁵⁴ A commander of the old Allied Mobile Force, a fully integrated multinational rapid reaction force within NATO, once remarked that weapons diversity among the AMF’s seven national representatives — with all the attendant diseconomies in doctrine and logistics — significantly degraded combat effectiveness, and particularly, increased unit deployment time by at least 50 percent. Frank T. Brodie and

fire support, maneuver together, rearm together, or even refuel together—just a few of the effects of nationalized procurement and equipment diversity—could not hope to effectively complement each other while fighting in the same battlespace, under the same command, and for the same objective. Indeed, under such conditions, the coalition would have to work just as hard not to kill each other through fratricide as they would to destroy the enemy.⁵⁵ Multinational production presented a practical, albeit partial, solution to these tactical problems. Instead of 16 sixteen states producing their own individual designs, collaboration permitted dyads, triads, and even multilateral groupings of states to procure the same weapons, with the same ammunition, the same spares, and the same support systems.

Further, common weapons brought with them a closer alignment of doctrine and of military requirements. For example, in a study of the Anglo-German-Italian *Tornado* Multiple Combat Role Aircraft:

British officials were frank to admit that they never really tried to understand German requirements until told that the next aircraft would either be developed cooperatively with the Germans, or it wouldn't be developed at all.⁵⁶

For a military alliance, all these factors were extremely important as they could determine its ultimate chances of success or failure in combat. Moreover, greater commonality offered the potential savings of billions of dollars of coalition resources—scarce monies that might be used to improve training or stocks but were nonetheless squandered through duplicated R&D and production.

Michael Moodie, *Defense Technology and the Atlantic Alliance: Competition or Collaboration* (Cambridge, MA: Institute for Foreign Policy Analysis, 1977), 9.

⁵⁵ In one readiness exercise conducted in the mid-1970s, the lack interoperable communication and identification friend-or-foe (IFF) system led to the virtual downing of over 50 percent of participating NATO aircraft by the Alliance's own air defense network. Gardiner Tucker, "Standardization and the Joint Defense," *NATO Review* (January 1975), 12.

⁵⁶ Thomas Callaghan, *U.S./European Economic Cooperation in Military and Civil Technology* (Washington D.C.: Center for Strategic and International Studies, 1976), 19-20.

Security and economic logics traditionally assumed prominent positions as justification for collaboration efforts within the Alliance. They held the immediate promise of saving money, of preserving or establishing valued techno-industrial capacities within participating states, and finally, the more hypothetical but no less coveted goal of saving lives in wartime. Consequently, these arguments were the first to be seized upon when justifying cooperation and the most vociferously pursued. A third rationale was also often present, though typically far more muted and arguably less understood by proponents and observers alike, though its relative emphasis and importance was regularly noted by the late 1960s: the promotion of political linkages between partner states. The act of collaboration—and thus standardization—even on an item-by-item basis, created significant interdependencies. As noted, armaments cooperation requires that states make operational compromises with their partners, concessions in which optimal military needs may be sacrificed in favor of a common requirements objective. Politically, however, the sublimation of “national priorities” to some greater good—be it simple alliance cohesion or the grander goals of West European economic and political union—denoted a potentially radical step beyond debates over calibers or preferred stand-off ranges. The act of collaboration could provide both practical and symbolic reaffirmation of the ties among states and the vision that the interests and identity of a given country could possibly mirror, if not wholly merge, with that of a larger community of states.

At a rather mundane level, this observation is unsurprising. After all, the two largest European collaborative aerospace projects during the post-war period, the *Tornado* and the *Alpha-jet*, were both called “political aircraft,” in which the value of displaying political commitment exceeded cost and operational calculations.⁵⁷ In the

⁵⁷ Stephen Schaffer, “Linking Arms: Weapons Cooperation in NATO,” in International Arms Procurement. New Directions, ed. Martin Edmonds (New York: Pergamon Press, 1981), 29.

former case, for example, the British desire to push the project forward, and thus demonstrate the United Kingdom's status as a "good" European worthy of EC membership, compelled decision-makers to set aside their military requirements. The political symbolism of *Tornado* was such that Britain readily invested billions of pounds for development, maintenance, and support in an aircraft that was known to be inferior in some air combat roles to the Royal Air Force plane that it was intended to replace, the *Lightning*—a technology that the United Kingdom had not only produced indigenously but that was nearly 20 years older than *Tornado*.⁵⁸ Moreover, Britain's partners, West Germany and Italy, also accepted operational compromises to maintain British involvement, both to pursue their own parochial state interests as well as retain British interest in the European integration movement.

European armaments collaboration in the late 1950s, 1960s, and early 1970s rested on the same political undercurrents. The early years of intra-European cooperative procurement occurred in a time of healthy defense equipment budgets and of healthier export markets, which lessened the primary material imperatives to collaborate. The incentives for military standardization were as pressing then as now, but the relatively few instances of early cooperative procurement in Western Europe also displayed a discernible political character. All of these collaborations occurred in technologies that were still within the technical and financial bounds of states to pursue autonomously. Wholly banal items such as ordnance remained nationalized, as did very high value-added systems, like variable-geometry aircraft, i.e., *Tornado*. The remaining range of "mid-level" technologies, while certainly high-tech, were not the items that state elites regarded as exemplifying the apex of techno-industrial development and thus were acceptable for collaboration. These collaborative efforts were not

⁵⁸ Interview, RAF Group Captain. Brussels. June 1996.

able to reverse, or even halt, the broad trends toward de-standardization ongoing since the mid-1950s. They were, however, fairly high-profile projects that provided significant techno-industrial benefits and an important demonstration effect: that Western Europeans—former enemies and active competitors—could indeed achieve rapprochement and work together to build the still young European Community and the common defense. Franco-German cooperation of the period best exemplified this trend. The joint production of hundreds of jet trainers (*Alpha-Jet*) and of hundreds of thousands of tactical missiles (*HOT, Milan, Roland*) were a result of the 1963 Élysee Treaty and consequently reflected the new found partnership between these two states at the defense-industrial level.

While the significance of past diplomatic maneuverings such as these should not be overstated—as we shall soon see—the potential implications of this pattern of arms collaboration-as-community-building are profound. Within NATO Europe, both conventional wisdom and governmental proclamations maintained that identity and interest were in flux: a discernible European identity coexisted along with fifteen separate national state identities and its salience only increased with time;⁵⁹ and official debates about the conduct and future of defense industrial policy were often “presented in an European rather than a national context.”⁶⁰ Over the last thirty years, this particular behavior has become commonplace, as the regional good is at least rhetorically emphasized over the welfare of any of its national components, e.g., the creation of an *European* aerospace industry through multinational collaboration, or the building of an advanced *European* defense industrial base. Cooperation is thus subor-

⁵⁹ For a focused review of popular attitudes concerning "European" solutions toward national security issues see Werner J. Feld, The Future of European Security and Defense Policy (Boulder, CO: Lynne Rienner, 1993), ch. 5, 11.

⁶⁰ Todd Sandler and Keith Hartley, The Economics of Defense (Cambridge: Cambridge University Press, 1995), 229.

minated to larger political ambitions expressed in the language of identity convergence which are not linked to any immediate security or parochial state economic concern.

While the true extent to which cooperative procurement was (and is) shaped by the lofty ideals of regional integration, or even simple Alliance fealty, is debatable, this discursive trend cannot be readily dismissed. When European defense decision-makers such as B. O. Heath, former chairman of the British Aircraft Corporation, assert that:

Without wishing to raise emotional issues, I think that there is a longer-term advantage in [collaboration] both nationally and collectively, industrially and politically. One does have the feeling that in working with, what seems now wrong to call foreigners, one is doing a little in the strange mode of military aircraft to unite Europe, if you want to put a name to it, and bring people together. It is a strange medium for it, but I certainly have that feeling on occasions.⁶¹

he has moved the collaboration debate beyond national self-interest, and even beyond the domain of a military alliance of sovereign states. If this were truly the case, and the chairman and his cohorts were sincere, then armaments collaboration could both reflect a transformation in state identity toward a new paradigm, as well as a mechanism for moving the process of ideational change forward.

Whatever the rationale for collaboration in NATO Europe, it is clear that, as one RAND study noted, these states did not engage in cooperative procurement solely because they “need[ed] a common piece of equipment on which they can profitably collaborate.”⁶² They held instead complicated sets of objectives that might not be mutually reinforcing and were possibly contradictory. Military, techno-economic, and political/ideational incentives to engage in cooperative procurement each followed a

⁶¹ B.O. Heath, “The MRCA Project,” The Aeronautical Journal of the Royal Aeronautical Society 74 (June 1970): 455.

⁶² Michael Rich et. al., Multinational Coproduction of Military Aerospace Systems The RAND Corporation R-2861-AF, October 1981, 41.

discrete logic. Each also prescribed implicit courses of action that, when combined, could lead to duplicitous rhetoric and ineffectual conduct. For example, the desire to maximize a state's own techno-industrial gain from cooperation could severely limit any concurrent appeal for community and regional integration. To promote the latter suggested building a political order in which the state interest was eclipsed. The pursuit of the former, by contrast, was a distinctly national endeavor seeking to protect one's own industry, employment, and technology base. In such circumstances, as Lawrence Hagen wrote:

Self-interest can be disguised as communal interest; hierarchies of values can be blurred or ignored; conflicting goals can be presented as complementary; and the interests of one party can be cloaked in the terms of another in order to induce a favorable response. . . Taken together, the result is a volatile situation [where] the public mode of policy expression is particularly prone to distortion and obfuscation.⁶³

Countries might exalt community-building and see themselves as partners in an evolving supranational political order; they might also value their duties and obligations as members of a troubled military alliance and desire to correct its flaws; and finally, they might regard weapons acquisition as a sovereign right, integral to both the physical and economic security of their national societies. It was the tension within this “hierarchy of values” held by states—the reasons why they coveted the production and possession of armaments, and the pressures that motivated them to procure these items collaboratively—that shaped how, when, for what, and with whom states would cooperate.

⁶³ Lawrence Hagen, Twisting Arms: Political, Military, and Economic Aspects of Arms Co-operation in the Atlantic Alliance (Kingston, Canada: Center for International Relations, Queen's University, 1980), 12-13.

Taxonomies

While all these issues will be addressed in greater detail in the subsequent case studies, for the moment let us turn to a less historical discussion and focus upon on the “how” aspect of collaboration—that is to say, the forms of cooperative arms procurement that countries might employ use. The modus operandi of collaboration for a given technology or technology domain has theoretical significance. Defense industrial cooperation is a complex business. For a single “multinational” weapons system to reach the field, partnerships must form, requirements fixed, developmental and production workshares decided upon, technology exchanged, and certain techno-industrial compromises agreed upon. Above all, potential political and economic interdependencies must be considered, and either embraced or minimized. Roger Facer asserts that there is always some “loss of national sovereignty. . . in creating a more coherent system of [multinational] defense procurement” and in which “important decisions need not go out the hands of individual governments.”⁶⁴ The transactional nature of arms cooperation explicitly makes national policy dependent on that of others simply because anything that is shared can be also be withheld.

One can best frame collaboration in terms of a continuum of interdependence and autarky. At one extreme, collaboration can consist of limited technology exchanges that do not threaten traditional notions of state sovereignty and may actually promote the expansion and diversification of distinctly national defense industrial capability; at the other, cooperation may in fact denote defense economic integration in which issues of state identity no longer determine procurement decision-making. Consequently, procedural choices not only reflect state preferences over material needs

⁶⁴ Roger Facer, “The Alliance and Europe: Part III. Weapons Procurement in Europe—Capabilities and Choices,” *Adelphi Paper* No. 108 (London: Institute for Strategic Studies, 1975), 39.

and acquisition methods, but also more fundamental ideas of self, other, and the relationship of each to defense technologies.

There are arguably as many nuanced methods of collaborating as there are potential weapons technologies. For our purposes, however, there are 5 broad structural models that are applicable to cooperative procurement and have been either seriously proposed or actively employed in the Transatlantic region. In order of decreasing national independence — and thus increasing political and economic integration — these are: *(i)* managed, full specialization; *(ii)* a single community-wide defense equipment market based on free-market principles; *(iii)* reciprocal trade; *(iv)* co-development; and *(v)* licensed production.

The first of these, managed specialization, represents the apex of supranational authority in procurement cooperation. Here, states sacrifice their procurement decision-making functions to a coordinating institution empowered to perform those tasks at the community level. Instead of a Dutch Ministry of Military Economic Affairs or a French Délégation Général pour l'Armement, a single regional procurement executive would determine what weapon systems were required for community security, and would support R&D and award production contracts to those firms that best fit desired cost, political, and technological criteria. Such a structure need not necessarily impose maximum economic efficiency, and arguably could not, just as such as similar structures do not exist at the national level. Taxpayer democracies—or even a community of taxpayer democracies—must always cater to the concerns of their electorates, and economic welfare issues typically receive the greatest interest. It is conceivable, therefore, that procurement decisions could continue to set aside cost-efficiency arguments in favor of political, second-best alternatives, and use procurement to achieve micro-economic goals, such as maintaining employment in Northern Wales or subsidizing regional heavy industry in Flanders or in Bavaria, as currently occurs. What is impor-

tant, of course, is who, or rather what, would make these determinations: a regional institution with the same centralized decision-making powers as national organizations but empowered to make critical decisions of resource allocation and industrial distribution across state lines.

This model creates a unified defense market from above through the renunciation of a major component of state sovereignty: provision for the national defense. Countries become less state-like and more akin to provinces whose security is addressed at higher levels of authority—an authority, that by definition, possesses the political legitimacy to make such decisions, as all states currently do in the international system. Specialization at this level has been attempted only once among NATO countries in the form of the proposed procurement agency of the aborted European Defense Community of the early 1950s. Subsequent, less encompassing attempts to coordinate regional/Alliance procurement, however, also failed precisely because of their potential to undermine the institution of state sovereignty.

The second means of structuring multinational procurement is less politically intrusive than managed specialization, but its potential to effectively denationalize defense industries is no less great. Free trade represents the procedural opposite of managed specialization. The latter functions through positive integration based on supranational control, through the creation of new institutions that impose rule from above on otherwise sovereign parties. Free trade, by contrast, relies on negative integration through marketization in which barriers to cooperation are removed and economic actors are allowed to operate relatively unfettered from petty political imperatives. In this model, defense technologies are commodified and traded in the same fashion as civilian goods. States act as consumers on open regional and/or international markets and solicit bids from all firms within these areas, irrespective of

national identity.⁶⁵ Defense companies are unencumbered by state meddling, but also fully exposed to market forces. Firms can restructure as they choose, both within and across state borders, and are free to form prime contractor-subcontractor partnerships, strategic alliances, and mergers. As inefficient companies falter and close with the end of discriminatory industrial policies and as successful firms exploit the new liberal environment, the effects of comparative advantage would emerge, with the most capable national producers becoming principal suppliers community-wide.

Marketization entails a redefinition of state sovereignty in which sovereignty's links with arms procurement are minimized. The ability to develop and produce defense technologies is no longer a cherished capacity for which autarky remains an ideal. Instead there is an explicit assumption that the market provides a stable set of suppliers, who can be counted upon to provide defense equipment as needed. Producers supply to the entire market and firm nationality and security of supply concerns no longer matter. Indeed, as defense firms enjoy freedoms long practiced in the civilian sector, such as cross-border equity exchanges and acquisitions, any questions of national affiliations may become superfluous.

This is the perhaps the most significant aspect of the free-market model, given that the name is something of a misnomer. Absolute free trade in arms for all classes of defense technology is impossible because the optimal production scale for certain weapons systems is so great that there is a tendency for competition to produce natural monopolies.⁶⁶ This pattern has become increasingly prevalent in NATO national markets in high technology fields, particularly aerospace; high costs have discouraged states from subsidizing multiple producers, and years of corporate insolvency and

⁶⁵ Andrew Moravcsik, "The European Armaments Industry at the Crossroads," *Survival* 33 (1992), 71.

⁶⁶ Moravcsik, "The European Armaments Industry," 73.

mergers have produced solitary national champions, such as Germany's DASA or British Aerospace in the United Kingdom.⁶⁷

Nonetheless, for either Germany or Britain to choose the other's national champion as its principal supplier for an entire class of defense equipment without any guarantees of industrial reciprocity would be a radical shift. For the British Ministry of Defense to regard a German firm as it would a British firm and vice-versa implies that the security of both is fundamentally indivisible. It is therefore telling that such relationships do not yet exist within the NATO Community. True, direct, or *off-the-shelf*, equipment purchases from foreign suppliers have been a feature of North Atlantic defense cooperation since the Second World War. This form of cooperative procurement has fallen, however, in relative importance over the last thirty years, as even the least developed defense industrial economies expanded basic techno-industrial capacities.⁶⁸ Moreover, defense markets throughout the Transatlantic area have remained largely illiberal and politicized. Policy makers continue to exclude the bulk, if not all, of their defense industries from market forces—a whole industrial sector “jealously guarded and generously protected” through R&D subsidies, nationally discriminatory pro-

⁶⁷ Additionally, it should be noted that defense industrial cost-efficiency is not solely the product of “comparative advantages in the factors or conditions of production,” but is also shaped by the extent of domestic production and resources available for R&D. Because the nature of the arm market limits new entrants, trade liberalization might well leave national champions in states with the strongest DIBs with an unfair, and possibly unchallengeable, advantage. The application of market principles to multinational procurement does not in itself provide a solution to this problem. One must also note that, in some cases, arms control regimes prevent technology transfer. *Loc. cit.*

⁶⁸ The larger and more capable national defense markets have been naturally more autarkic. In recent years, 90 percent of UK procurement contracts were awarded to UK firms. The comparable figure for Germany and Italy stands at 80 percent. At the extreme, 98 percent of French defense procurements since 1992 were supplied by French firms working either in national programs or in multinational collaborative schemes. United States General Accounting Office, Report to the Secretary of Defense, Defense Trade: European Initiatives to Integrate the Defense Market (GAO/NSIAD-98-6, October 1997), 13-14.

curement policies and the transference of capital to contractors under highly “favorable” terms.⁶⁹

The third method of multinational arms procurement is reciprocal trade. This form of managed free trade offers some the same benefits as the free trade model, but the application of market forces to state procurement structures is limited in scale and scope, and is thus more politically acceptable. Under reciprocal trade, states open their domestic defense bases to relatively unfettered, competitive cross-border tendering by firms in allied countries. Discriminatory defense industrial policies are rescinded, and within limits, the national identity of companies ceases to be a legitimate standard for awarding contracts. Unlike pure free trade, however, market entry is limited by more than cost and/or technological criteria. States continue to value the well-being of their national DITBs, but make explicit distinctions between certain classes of defense procurement—between those that are of strategic importance in a techno-nationalist sense, and those that do not serve as engines of techno-industrial development and are not symbols of national greatness. For the latter category, the absolute need for certain national production competencies is either de-emphasized or explicitly rejected. Countries may therefore embrace trade liberalization restricted to these areas, with the additional caveat of diffuse reciprocity: all participating states must share the same open procurement policy and trade should balance over the long-term.

In Western Europe, reciprocal trade is best exemplified by the 1987 Anglo-French Reciprocal Purchasing Agreement and the 1989 Independent European Programme Group European Defense Market Initiative. The North American equivalent is the United States-Canada Defense Production Sharing Agreement. All of these pacts share the attributes of diffuse reciprocity and non-discrimination regionally, with

⁶⁹Kapstein, "International Collaboration," p. 663; Philip Taylor, "Weapons standardization in NATO: collective security or economic competition," *International Organization* 36 (Spring 1982): 100.

the Europeans moving more cautiously, limiting their liberalization to production contracts of under \$100 million. Reciprocal trade offers these states the best of both worlds in the conflict between efficiency and autarky: they are assured that their advanced defense industrial bases will be safeguarded and preserved largely intact but they can also reap the cost-efficiency gains of marketized procurement policies applied uniformly throughout a bi-, or multilateral defense “community”, however restricted in scope.

Reciprocal trade allows for piecemeal integration, which—while not as aggressive as either the imposition of supranational control or full marketization—can in time produce the same effects. As firms enjoy larger “home” markets for their products and as national defense establishments become accustomed to employing each other’s equipment, interdependency becomes both entrenched and self-sustaining. In time, this process can advance to the point where national markets become so intertwined as to be indistinguishable from each other. This condition already exists in North America, albeit with certain important caveats. Progress in Western Europe, however, has been far more muted. What remains important, however, is the ideational component of managed trade: identity and/or interest convergence can reach the level in which one state regards another’s defense industrial base as being an integral part of its own, however partially.

Given the historic imperatives for sovereignty and autonomy in defense procurement, international marketization at any level must necessarily involve much more than the simple quest for greater budgetary and industrial efficiencies in procurement. States must make hard choices as to the exact nature of their defense industrial “portfolio.” They must distinguish among those technologies that are of strategic material importance, as well as those serving to define how the country perceives itself and how it is perceived by others, e.g., modern, advanced, independent,

German, etc. States must also identify those allies with whom they share not only mutual obligations, but also a web of intertwined interests and shared values so deep that concept of self blurs to embrace the other.

Little wonder then, that the vast bulk of cooperative procurement throughout the Alliance historically has avoided any form of marketization to the maximum extent possible. Within the NATO “community,” as throughout the international system, countries tend toward “non-market solutions” to meet their procurement objectives when faced with a pressing need for multinational collaboration.⁷⁰ The last two methods of cooperative procurement reflect the pervasive desire to both politicize procurement and to structure collaboration so that it maximizes national gain and preserves national defense industrial capabilities. The first of these, licensed production, is the most prevalent form of armaments collaboration globally. It was once the cornerstone of cooperation within NATO and is still commonly used throughout the Alliance. In this model, states procure the rights to manufacture in their home industries weapons developed abroad. That said, the process can be complex and nearly always involves much more than the transfer of technical diagrams and patent waivers. Buyers and sellers must exchange volumes of information in order to integrate the desired technology within the recipient’s defense industry. In some cases, complete factory-floor fabrication methods and skills have to be transferred.

The seller loses ultimate control over technology that it indigenously created, but uses the transaction to recoup its original R&D investment and to help subsidize inter-generational advancement. The buyer gains access to technologies that it lacks the financial wherewithal or technical competence to develop on its own. By procuring the design, and not the completed system, recipients can ensure significant gains

⁷⁰Kapstein, "International Arms Production," 660.

for their domestic DIBs. They can safeguard domestic employment levels and local production capacities; modify foreign designs to better suit national military requirements; minimize outflows of foreign exchange, and ensure access to spares and replacements; and finally, use the acquired productive skills to expand the national DIB and create a domestic capacity for the later development of similar technology.⁷¹

In some cases, licensed production created capabilities that did not exist prior to the initial series of projects. Judith Reppy and Philip Gummett note that the development of the postwar Italian aerospace industry progressed from licensed production of American technology, to the development of an indigenous military trainer aircraft, with Italy later becoming a major participant in regional armaments consortia.⁷² This pattern emerged elsewhere in the alliance when countries with either weak or specialized manufacturing capacities expanded their domestic industrial potential through collaboration to become significant producers in their own right.

The use of licensed production within NATO has not been sole preserve of the weak: both strong and medium-sized defense industrial states use it to acquire advanced, ready-made foreign systems that are so attractive that the expense of a parallel R&D effort is not justifiable. That Britain builds French *Exocet* missiles or that the Netherlands manufactures German *Leopard* tanks is, from a military alliance standpoint, a positive step. Every act of standardization, however small, improves the chances for allies to interact effectively. If the ultimate objective of cooperation, however, is to promote community-wide defense industrial integration or a transnational division of labor in armaments production, then licensed production is counterproductive. The practice does not bring national DIBs closer to together, but rather serves to

⁷¹ Simon Webb, NATO and 1992. Defense Acquisition and Free Markets, RAND R-3758-FF, July 1989, 14.

⁷²Reppy and Gummett, "Economic and Technological Issues in the NATO Alliance," 19.

maintain autonomous industrial infrastructures. States choose it precisely because it enhances the profile of their defense industries with the introduction of new technologies, acquired production skills, and new work orders, without the financial burden of autonomous development. Moreover, it does so without the potential disruption and redistribution of assets that would arise from a market-driven community-level industrial restructuring, or worse still, a meddling supranational authority.

Licensed production, however, is not a perfect tool for self-seeking states hoping to achieve maximum gains for their defense technology base. Licensed production provides clear industrial benefits, but its effect on national technology innovation is indirect at best. As recipients are involved only in replicating existing equipment designs, their home R&D networks are not fully tasked. While cooperation can expose them to new production technologies and management techniques, they do not necessarily share in advancements made during the process of development—discoveries in the applied sciences, e.g. metallurgy, chemical engineering, electronics, ballistics, etc., that can be “spun-off” into other areas of the defense industrial base, or even into the larger national economy. Compounding this situation, most supplier states have historically rarely provided the latest technology in licensing exchanges.⁷³ Few licensors wish to create ready-made competitors, and consequently sell specifications to systems with inferior propulsion systems, reduced firepower or protection profiles compared to the variants used in the home market. The use of modular subsystems means that some of choicest and most sensitive technologies, such the firmware for guidance computers, can be “blackboxed” and not transferred at all, except of course as unit sales.⁷⁴

⁷³ Hartley, *NATO*, 133.

⁷⁴ One executive for Northrop-Grumman, an American defense aerospace manufacturer, noted that in the case of the sale of E4C *Hawkeye* airborne early warning planes to Western Europe, both the company and the United States government were untroubled with transfer to NATO allies of nearly every

In co-development, the final general acquisition strategy for multinational co-operative procurement, states share in both the development and production of new technologies, and thus reap maximum benefit. Co-development allows states that are weak in certain areas to secure access and develop new competence, while allowing the strong to retain and expand those competencies that they already possess.⁷⁵ In co-development, states agree to a common military requirement and then jointly proceed through every stage of weapons development and production, beginning with feasibility studies and project definition, and later terminating with system engineering, prototype production, subassembly manufacturing, and final assembly. Partners either share equally in each phase, or more commonly adhere to a detailed calculus in which national work-shares are directly proportional to the amount of money that each state contributes to the collective R&D pool.

Co-development is thus a basis for market-sharing cartels in which countries seek an explicit and structured division of national responsibilities to allocate work to national producers and research centers. Through the principle of *le juste retour*, or fair-return, governments determine not only which of their military equipment firms participate in a given collaborative venture, but also in which aspects of technology development and production. States demand an immediate and exact workshare equal in value to their contribution to a given project's development cost. For example, in the Anglo-German-Italian *Tornado* fighter-bomber project, the participating states held a 42.5/42.5/15 percent respective cost-share/work-share. This meant that Italy

aspect of the plane's design. The two subsystems deliberately withheld were the radar control and imaging computers, or more specifically, the ROM firmware that contained their operating systems. These systems allowed the *Hawkeye* to perform its primary role as a surveillance platform. Northrop-Grumman hoped to monopolize control over the technology to the extent of denying buyers even basic maintenance knowledge. Interview, Official with Northrop Grumman Europe, Summer 1996.

⁷⁵ David Greenwood, "Collaborative Arms Acquisitions in Western Europe, Inhibitions and Constraints" in International Arms Procurement: New Directions, ed. Martin Edmonds (New York: Pergamon Press, 1981), 88.

provided 15 percent of the total R&D costs and, in return, was permitted to produce 15 percent of the value of the airframe, engine and avionics packages. Italy also received 15 percent of the total production run of planes. These figures were meticulously measured and were often changed to reflect currency fluctuations or revised national military requirements. In some cases, states calculated cost-share/work-share to the hundredth decimal point in order to extract some techno-industrial benefit from every last cent of expenditure.

This practice has shaped nearly every instance of co-development within the Alliance since it became the dominant form of multinational collaboration for major weapons systems in the mid-1960s. Even as the civilian sector of the North Atlantic economy began to transcend national barriers, particularly in Western Europe, through deliberate moves toward regional economic integration, arms procurement collaboration in major systems remained at best “second-best:” as Lawrence Hagen argues, a form of “integration without tears.”⁷⁶ Through *juste retour*, partners have emphasized relative gains, as the desire for equity overrode concerns with military or economic efficiency. Even when sub-assembly development has been competitively tendered, the “desire” for fair-return has undermined any potential gain, as no participating national firm is permitted to lose no matter who wins the contract. Because each state is allocated a seat at the design and production “table,” regardless of technical competence or cost, “winners” can be compelled to subcontract work to “losers,” or, as in cases like the *ECR90* tactical airborne radar for the *Eurofighter*, national firms may actually hold positions in each competing international consortium.⁷⁷

⁷⁶William Walker and Philip Gummett, "Nationalism, Internationalism and the Future of the European Defense Market," Chaillot Paper of the Institute for Strategic Studies. Western European Union. 1993, 8; Kapstein, "International Arms Production, p. 660; Hagen, *Twisting Arms*, 98-99.

⁷⁷Martyn Bittleston, "Co-operation or Competition? Defense Procurement Options for the 1990s," *Adelphi Papers*, no. 250 (London: Institute for Strategic Studies, Spring 1990), 77.

Co-development, like licensed production and direct offset trade, represents a form of collaborative protectionism in that competition is restricted and states employ foreign technology and capital to support their own domestic defense industrial assets. Unlike the other forms of state-led cooperation, co-development requires greater coordination to ensure that *juste retour* is fully implemented, often leading to the creation of a project-specific multinational procurement agency. Nonetheless, national self-interest remains paramount. States determine the allocation of production and research centers to satisfy purely national ends while imposing considerable diseconomies through higher transportation costs, communication problems, and duplicated administrative and assembly nodes. Collaboration does not occur to provide positive-sum gains in which partners coordinate their activities to rationalize alliance-wide surplus capacity and seek cost efficiencies that can lower defense financial burdens on national society. Instead, co-development, as Philip Gummett and William Walker rightly note, is just a complex method of initiating “reciprocal moves [to] maintain the status quo in terms of the broad distribution of defense capabilities.”⁷⁸ The collaboration that it structures, while intricate, is only a “*substitute* for integration (emphasis mine).”⁷⁹

Conclusion

These acquisition strategies differ in terms of how they either complement or degrade the pursuit of state sovereignty. Each requires that states make specific choices about the extent to which they are willing to compromise their autonomy in defense decision-making and defense industrial capacity. Countries must determine which segments of their national DIBs are critically important, both to their security

⁷⁸Walker and Gummett, "Future Options," 7.

⁷⁹Ibid.

and to their sense of self-definition. They must decide upon those areas where autarky is desired, those that can be shared between partners but nonetheless satisfy the parochial imperatives of self-interest, and those that can be sacrificed to partners whose interests and identity may be moving toward convergence with their own.

Yet as we have briefly seen, there has been no definite tendency among Western European states to make hard choices—to commit to radical restructuring of national defense industrial policies that would indicate a reconceptualization of state sovereignty, and correspondingly, denote significant shifts in the conceptualization of self. Cooperative strategies that would represent such a watershed are either theoretical, in the cases of supranationalization and full marketization, or in a handful of problematic and heavily qualified attempts at regulated trade out of forty-plus years of defense industrial cooperation. North Atlantic states have structured most of their procurement collaborations to present the least possible challenge to their sovereignty and national state identity. Through offsets, licensed production and co-development, states actually create procedures that minimize interdependence and preserve autonomy through cooperative means.

We must be careful, however, not to arrive at any conclusions from what has been a limited overview. If identity shifts are both present and salient within Western Europe, their influence may not appear in broad transformations, but rather manifest in nuanced behavior in collaborations for different classes of defense goods and over time. *Ab initio* co-development and licensed co-production in high technology goods, for example, can co-exist with reciprocal market arrangements in other areas. Even in industrial collaboration, market principals of competence and cost can still be employed in the allocation of sub-contracts. Today, one even sees the first stirrings of supranational control through the still debated European Armaments Agency.

Thirty years ago, the defense industrial environment in Europe began to shift. It is at this point that one sees in the history of the *Tornado* project cooperation more complex than had yet been attempted. Furthermore, European collaboration also became more diverse at this time with the low-technology howitzer co-development projects beginning with the *FH-70*. Both of these collaborative schemes began institutional and behavior trajectories that extend to the present day. If European cooperation has indeed become integrative over time, and its motivations more diverse and with a greater emphasis upon ideational transformations, an analysis of these two institutional histories should provide some indication. It is possible that state behavior within families of defense equipment may reflect changes in identity and interest, as the same countries cooperate to produce separate, yet similar, systems over a period of years. We shall address this possibility in the following chapters when we evaluate cooperative behavior in the *Tornado-Eurofighter* and the *FH-70 - SP-70* project dyads, respectively.

This latter set will allow us to also to consider the role that levels of technology may play in highlighting identity shifts—a point that we will address in chapter 7 on managed defense trade initiatives. Certain technologies may be embedded in national identity while others are more open to the influences of transnational identities. Low-technology arms production may still be as enshrined by states as are high-tech weapons. Nonetheless, in the North Atlantic area with its history of deepening cooperation and trust—and particularly in Western Europe with its assumption of state identity convergence—countries do not face the same ideational incentives to not differentiate between weapon types. The legacy of integration and the emergence of increasingly stable expectations about intra-group behavior have possibly allowed states to treat the least important domain of their high-politics interests—defense industrial production of unsophisticated armaments—as just another part of the common

market process. Here, the development of a transnational identity subsumes self-interest to a collective interest in which states may actually permit the creation of a regional DIB at cost to themselves, i.e., forging a transnational division of labor that reduces national capabilities and disadvantages both domestic constituents and national security. The task remains to ascertain whether this phenomenon has occurred and what exact role identity and identity-shift play in determining the behavior.

CHAPTER FOUR

The *Tornado* Multirole Combat Aircraft

Introduction and Overview

Among some students of European integration there is a questionable belief that national consciousness and that national allegiances are incompatible with their supranational manifestations.¹ Throughout the history of the European Union, however, nationalism and supranationalism have coexisted in an uneasy relationship, with the former always present and the latter visible most often in agonized half-steps or upon the fringes of national interest. That the desire to promote and protect some national “good”—however defined—has been the dominant feature of the integration project in Europe is incontrovertible. Though West Europeans succeeded in cobbling together a fairly successful customs union within ten years of founding the European Economic Community, interstate cooperation did not become a perfected art. Far from it, in fact. As Stanley Hoffman, Wayne Sandholtz, Andrew Moravcsik and others have noted, during the Community’s early years in the 1960s and 1970s, cooperation rarely came easily, and was often embraced only after autarkic national options had been exhausted, and even then, it was constrained by parochial state concerns such that any resulting collaborations were little more than half-way houses toward any meaningful integration.²

¹ Leon Lindberg and Stuart Scheingold, Europe’s Would-Be Polity: The Patterns of Change in the European Community (Englewood Cliffs, NJ: Prentice Hall, 1970), 262.

² Wayne Sandholtz, High-Tech Europe: The Politics of International Cooperation (Berkeley: University of California Press, 1992); Andrew Moravcsik, “The European Armaments Industry at the Crossroads,” Survival 33 (1992), 71; Stanley Hoffman, “Obstinate or Obsolete? The Fate of the Nation-State and the Case of Western Europe,” Daedalus (Summer 1996); Alan Milward, The European Rescue of the Nation-State (Berkeley: University of California Press, 1992); Andrew Moravcsik, “Negotiating the Single European Act: National Interests and Conventional Statecraft in the European Community,” International Organization 45 (Winter 1991).

While the imperatives of national interest typically colored cooperation and generally hindered any emergent supranationalism, the dominance of national identities and their effect on shaping state preferences and behavior have not been necessarily incompatible with deepening collaboration between states, or even with the development of regional loyalties or affections. The regional identity that we discussed in Chapter 1 did not emerge spontaneously and intact, but rather developed over time, and in the face of a reconsolidating and resurgent nationalism that challenged the Union's institutions and many of its loftier ideals. In the present case study, we shall explore an episode of European defense equipment collaboration that began at a time in which questions of a European identity were premature at best.³ The purpose here is to use this first case as a base-line to gauge changes in state behavior over time which would signal shifts in affective attachment to regional integration.

The *Tornado* Multirole Combat Aircraft (MRCA) was at the time of its inception in 1968 the largest and most technically complex collaborative undertaking in *ab initio* weapons development in Western Europe. It also ranks among the largest multinational cooperative industrial projects of any type. Helmut Schmidt, the West German Chancellor in the early 1970s, once asserted that the *Tornado* project was the "greatest undertaking since the birth of Christ."⁴

Hyperbole aside, *Tornado* embodied a number of milestones in European weapons cooperation. *Tornado* began as a German-inspired and German-led effort to

³ Lindberg and Scheingold noted that the affective attachments to Europe and toward European integration throughout the late 1960s were still somewhat poorly defined. While the existing data demonstrated that elite and mass attitudes were favorable to the ideal of integration and to its intergovernmental and supranational institutions, this support was rooted in actual and anticipated welfare benefits provided by the Economic Community. This provided a permissive consensus that pro-European elites used to justify and expand the Community's scope, but its reach did not extend into areas of security and foreign policy cooperation. Here, national appeals against cooperative behavior had the greatest likelihood of success. This was true even for economic and industrial issues that could be construed in the public mind or by counter-elites as having some tangible import to national security. Lindberg and Scheingold, *Europe's Would-Be Polity*, 62.

⁴ Cited in Egon W. Heine, "MRCA, EFA, und PAH 2: Lernprozeß im Management internationaler Großprojekte," *Europäische Wehrkunde* 38 (May 1989): 316 [My translation].

bring together in July 1968 the other three European members of the F-104 *Starfighter* consortium—Italy, Netherlands, and Belgium—plus the United Kingdom and Canada to explore the possibility of an *ab initio* collaborative program for a multinational, multi-function, tactical fighter-bomber. Within a year, German leadership had given way to a conflictual partnership of equals, with the United Kingdom and Italian membership wavering, and Belgium, Canada, and the Netherlands out of the program, having withdrawn under the common position that it was evolving in ways that did not and would not satisfy their interests. Nonetheless, the myriad negotiations and compromises that locked the remaining three countries together through development and production established early on that *Tornado* would indeed be something beyond normal European collaborative practice.

First, *Tornado* was the first non-bilateral co-development program enacted by Europeans, bringing together Italy, Germany, and the United Kingdom to design and build an airplane based upon a variable-geometry airframe and its own unique engine—technologies as yet not employed by any NATO Europe country. Second, it formed the basis of a reorientation of regional defense industrial cooperation, eroding both its historic French dominance, as well as the attendant model of politically motivated asymmetries in project leadership and technology control. Third, *Tornado* introduced a level of managerial organization and of partnership that was unique at its inception and more complex than anything attempted previously. Fourth, and significantly, the project marked the beginning of a collaborative relationship between Britain, Germany, and Italy that expanded across technologies to include the *FH70* and *SP70* howitzer programs of the 1970s and 1980s, and is forecast to endure at least until the mid 2030s, at which time the last of their respective *Eurofighter* fleets should retire from service.

The *Tornado* program introduced all these changes to the practice of defense industrial cooperation in Western Europe. As the first noteworthy episode of true European codevelopment, it was and remains a significant achievement on the preceding grounds alone.⁵ Nonetheless, for our purposes, *Tornado*'s value lies as much in what it has grown to represent over time as in what it accomplished in fact. *Tornado* at its start was not the manifestation some grand vision of European solidarity or of a new European sensibility. Indeed, as we shall see in the following section, if there was ever a time for a European breakthrough, the late 1960s were not the moment. *Tornado* was a nationalist response to nationalist excesses that tainted most European defense equipment collaborations of the time, as well as the larger processes of European integration of the period. As William Walker noted in one of the few detailed analyses written about the project, the participating governments pursued "national ends by international means."⁶ The imperatives of national interest were always close at hand within *Tornado*, manifest in both its organization and execution. Nonetheless, the project evolved to become the flagship of European cooperation and has over its 30 year life-span continued to evolve. It has come to exemplify a level of cooperation and interdependence that was unanticipated by its founders, and arguably unrecognized by many contemporary political decision-makers.

⁵ It is worth noting that as late as Summer 1969, there existed little consensus as to the viability of multinational cooperation through industrial consortia, à la *Tornado*. Given that past efforts in both the military and civilian spheres, such as the Franco-German *Transall* and the Anglo-French *Concorde*, had often led to unavoidable compromises in timeliness, national military requirements, and bureaucratic structure, some European critics considered the model dangerous to whatever regional industry it was applied. One unnamed Continental opponent argued that such cooperation "[was] a way to hide mistakes." Further, it might "[kill] the industry by introducing a socialistic, non-competitive, non-private enterprise system. To compete with America through consortiums is nonsense." The editors of Aviation Week and Space Technology at the time suggested that *Tornado* would indeed be a "critical proof" for Europe to determine whether such fears were justified or if meaningful and efficacious cooperation were possible. Cited in "Consortium Fate Linked to MRCA Project," Aviation Week and Space Technology, 2 June 1969, 114.

⁶ William Walker, "The Multi-role Combat Aircraft (MRCA): A Case Study in European Collaboration," Research Policy 2 (1974): 286

This chapter examines the influence of *Tornado* and traces its development. If cooperative behavior within the *Tornado* program ceased to be a mere “residual of national needs and interests” even to a minute degree, we must determine how this could occur, given our theoretical expectations concerning the relationship between defense high technologies and identity-driven behavior, as well as what significance it might have had in reshaping the trajectory of European defense equipment collaboration.⁷ In the following sections, I shall detail the history of the *Tornado* program and highlight the military, industrial, and political motivations held by the participating states. For all of them, *Tornado* was more than just a fighter-bomber: it was a program that allowed them to meet a number of international and domestic goals concurrently. While its military value must not be understated, the grander strategic and techno-industrial aims of the member states established the environment in which *Tornado* emerged, and arguably determined how they ultimately constructed the program.

Second, I examine the execution of the decisions that the participating states made concerning issues of industrial and political equity, organizational structure, and the harmonization of military requirements. I contend that these actions not only established what *Tornado* has become; they also allow us to match actual state behavior against a sample of official state rhetorics used to justify participation in the program. Third, I sketch the execution of the *Tornado* project to show how national myopias have either advanced or retarded the weapon’s performance on both technological and industrial grounds. Finally, I discuss how the pursuit of national interest within the program has been subverted through a process of unintended consequences that has led to a situation best described as integration through the backdoor, as *Tornado* member states have begun piecemeal techno-industrial specialization.

⁷ Edward Kolodziej, *Making and Marketing Arms. The French Experience and Its Implications for the French System* (Princeton: Princeton University Press, 1987), 151

Breaking with Tradition: 1963 – 1968

The history of the *Tornado* is a convoluted one. It did not begin with the first NATO multinational feasibility study, which was conducted in 1968 for a multirole military aircraft that would replace the fleets of American-designed fighter and strike planes that had been either purchased or produced under license in the 1950s and 1960s throughout Western Europe and Canada. The *Tornado*'s history did not even begin in any of the states that later developed the project and carried it to completion. Rather it began in France—a country that at no time had a formal connection with the system's development. While this is not the place to explore the fine details of European Union history, one cannot separate European defense equipment collaboration from the larger influences of the integration movement, even though, as noted in the last chapter, the Union has never been permitted a direct institutional impact upon the defense procurement policies of its member states. While our focus is on ideational changes over time rooted in the evolution of the integration project the multi-level politics of intra-European diplomacy have played a no less significant role. As a technical editor of *Flight International* wrote of *Tornado*, collaborative programs were “like royal marriages; largely the pawns of international politics.”⁸ In Western Europe in the mid- and late-1960s, the weight of politics was particularly heavy.

A lasting irony in the evolution of the Union has been the role of France in its development. On the one hand, European integration found its first voice in the insights of French intellectuals and politicians, such as David Mitrany and Robert Suchmann, who advocated the eventual reformation and sublimation of national states into a grander European order. On the other hand, however, successive French governments have worked quite hard to subvert the ideal of integration in order to serve

⁸ “European Fighter on the Road,” *Flight International* 8 April 1972, 484a.

the national political and techno-industrial ambitions of the French state. Charles De Gaulle, first president of the Fifth Republic, stated clearly his image of Europe and of France's place in it when he said:

I intended to assure French primacy in Western Europe by preventing the rise of a new Reich. . .to cooperate with East and West and, if need be, contract the necessary alliances on side or another without accepting any kind of dependency. . .to persuade the states along the Rhein, the Alps, and the Pyrennes to form a political, economic and strategic bloc; [and] to establish this organization as one of the three world powers, and should it be necessary, as the arbiter between the Soviet and Anglo-Saxon camps.⁹

De Gaulle's vision of Europe—and to a considerable degree, that of his successors—was that of a Community of sovereign states that was more than an alliance but considerably less than a union.¹⁰ France would hold a special role in such an association, being at least a first among equals and at most the definitive leader in its political and military fields.

Throughout the 1960s, this French vision of Europe assumed five principal forms: First, the aborted Fouchet Plan in 1960-62, which would have denied any kind of supranational European Community involvement in shaping a common foreign policy, and well coupled the collective power of the Community states to the pursuit of French diplomatic objectives;¹¹ Second, France undertook a six-month boycott of the

⁹ Charles DeGaulle, War Memoirs: Salvation, 1944-1946 (New York: Simon and Schuster, 1960) cited in Leon Lindberg, "Integration as a Source of Stress on the European Community System," International Organization 20 (Spring 1966): 233.

¹⁰ De Gaulle was particularly opposed to any institutional transformation that would make the European Communities more effective and Community institutions independent of the member states, and thus capable of winning the loyalties of mass publics away from the nation-states. Leon Lindberg and Stuart Scheingold, Europe's Would-be Polity: Patterns of Change in the European Community (Englewood Cliffs: Prentice-Hall, 1970), ch.1.

¹¹ Christopher Hill and William Wallace, "Introduction: actors and actions," in The Actors in Europe's Foreign Policy, ed. Christopher Hill (London: Routledge, 1996), 11; See also Alfred Pipers, "Putting Fouchet Back in the Bottle," in National Foreign Policies and European Political Cooperation, ed. Christopher Hill (London: RIIA/Urwin and Allen, 1984); and Panos Tsakaloyannis, The European Union as a security community: problems and prospects. 1. Aufl. ed. Baden-Baden: Nomos Verlagsgesellschaft, 1996, 48-50.

European Commission in late 1965 in order to prevent the planned adoption of majority voting within the Community's intergovernmental "executive" body, the European Council. France insisted upon and retained the policy of unanimity in Community decision-making and the right of national veto over Community decisions that might impact national interests. Third, the French withdrew from NATO's integrated military command in 1966, and subsequently tried to persuade the other Community members to reduce their dependence upon the United States and to embrace French leadership—or at the very least support official French policies—in matters of collective defense.

Fourth, France embraced what has been called the "French Model" of defense industrial collaboration with its European allies.¹² Following the end of World War II, France moved quickly to re-establish its defense industrial base and to attain the broadest level of technological competence that it could sustain. The creation of the French Fifth Republic in the early 1960s established the ideals of defense industrial modernization and expansion as a state religion that would support France's pretensions of global power status on technological, industrial, and military grounds.¹³ While France emphasized defense industrial independence from the United States, it nonetheless valued intra-regional procurement collaboration as a vehicle for its national grand strategy. Cooperation was viewed as a means of compelling France's European allies to subsidize the French defense industry while concurrently weakening the military bonds between its partners and the United States.¹⁴ France hoped to hasten the de-standardization of European militaries around American equipment and

¹² Robert Gessert, et. al., "The Impact on the Rationalization of European Defense Industry of Alternative US Approaches to Transatlantic Defense Cooperation," Vol. 1 (Washington D.C.: General Research Corporation, April 1979), 16.

¹³ See Kolodziej, *Making and Marketing Arms*, ch. 2 for a detailed discussion of French procurement objectives during the early years of the Fifth Republic.

¹⁴ *Ibid.*, 151.

while concurrently pressing its neighbors to exchange their dependence upon the United States for greater reliance upon France.

The essence of the so-called “French model lay in its organizational and procedural characteristics. France valued cooperation only so far as it expanded French political and industrial interests to the maximum extent possible. To these ends, the French preferred bilateral relationships that would minimize the need for any complex international management structures while also, according to Edward Kolodziej, being more “responsive to French control or direction.”¹⁵ French leadership was invariably emphasized within these collaborations. France pressed for quasi- prime contractor - sub-contractor relationships with potential partners by insisting upon lead firm status for its defense producers within joint ventures whenever possible, e.g., with weaker allies. At the very least, France often reserved for itself responsibility for the highest value-added subsystem in a given weapons platform, or symbolic leadership through an inconsequential, albeit, de jure greater French share within a given joint venture.¹⁶

The fifth and final factor of French influence upon European politics in the 1960s, was France’s initial refusal to permit the United Kingdom’s accession into the European Economic Community. Between 1963 and 1969, France alone vetoed successive British overtures. Pietro Quaroni, the former Italian ambassador to Paris, noted that while the French government argued British economic incompatibility with Community membership and the United Kingdom’s traditional extra-continentalism as justifications for its exclusion, the real reason lay in French desires to dominate European politics. He asserted “the French [had] never given up the hope of transforming

¹⁵ Ibid, 150.

¹⁶ Such practices at times have bordered on the comical. UK - French negotiations over the *Apache* stand-off missile in 1997 were premised upon France attaining a favorable cost-share/work-share of 50.1 percent, which would make it the dominant partner on paper, but would not in practice offer it any de jure advantage over Britain. One UK MoD official noted that such sophistries were par for the course in partnering with the French. Interview, 28 November 1996.

the Common Market into a French political sphere of influence.”¹⁷ The entry of Western Europe’s third strongest state into the Community would upset its internal balance of power and thus render unattainable any dream of unchallenged French regional leadership.¹⁸

The first French veto against British entry in 1963 set in motion events that would lead 5 years later to the *Tornado* program. While it would ultimately require the collapse of the De Gaulle administration in 1969 to end unmitigated French resistance and permit UK accession to the European Economic Community, the British government accelerated a multifaceted policy begun in 1961 of reaching out to the French leadership to demonstrate United Kingdom’s worth as a partner and as a potentially dutiful member of the Community. While Britain pursued a diplomatic solution with France to negotiate entry, it also took more practical steps to present itself as a good “European.” British efforts centered upon those areas of economic and political activity that lay outside the institutional mandate of the European Communities, specifically civil and defense high technology collaboration. In these fields, the United Kingdom could forge partnerships that would stress regional solidarity and cooperation, while also offering its allies significant technological and industrial payoffs in coveted fields that might complement British accession bids.¹⁹

Given France’s dominant position within the European Community, and its desire to promote its national industrial and technology base into a position of regional preeminence and global strength—to say nothing of its opposition to the United Kingdom’s accession—France was the principal target of British techno-diplomacy. Moreover, given specific French views of aerospace as a provider of national grandeur

¹⁷ Pietro Quaroni, “European Integration: An Italian View,” *Survival* XX (December 1970): 402.

¹⁸ *Ibid.*, 403.

¹⁹ Alistair Edgar, “The MRCA/Tornado: The Politics and Economics of Collaborative Procurement,” in *The Defence Industrial Base and the West*, ed. David C. Haglund (London: Routledge, 1989), 51.

and as a motor for industrial modernization, Britain regarded cooperation in that sector as a lever to change French attitudes. The United Kingdom's aerospace industry, unlike that of France, survived the Second World War intact. It possessed comprehensive capabilities in most areas, and was the regional leader in propulsion and avionics. Consequently, Britain could offer substantial technology transfer benefits to any potential European partner intent upon expanding its own aerospace industries through collaborative development—a fact recognized by most NATO Europe governments. In 1965, a British parliamentary report—the Plowden Report—codified not only the need to appeal to France and rest of Europe technologically, but explicitly to use Britain's aerospace strengths as the enticement. The report's authors proclaimed:

The aircraft industry is one in which governments can readily promote cooperative international ventures, because they take the major share of industry's products. At the present stage of United Kingdom foreign policy the aircraft industry has a role to play for which few other industries are so well fitted.²⁰

France agreed with this basic British position in that that collaboration could offer French industry a great deal of technological assistance, as well as extending the possibility that Britain could buy its way into the Community at some future time once French desires had been satisfied. As one Gaullist national deputy put it: "Britain should show a certain goodwill in technology towards the [Community]."²¹ To this end, the United Kingdom collaborated with France in no less than eight major aerospace projects between 1962 and 1967: the *Concorde* supersonic airliner, the *Martel* air-to-ground missile, the *Airbus A-300* airliner, the *Puma*, *Lynx*, and *Gazelle* family of

²⁰ Committee appointed by the Minister of Aviation under the Chairmanship of Lord Plowden, Report of the Committee of Inquiry into the Aircraft Industry (London: HMSO, 1965) cited in Mark Lorell, Multinational Development of Large Aircraft: The European Experience R-2596-DR&E (Santa Monica, RAND, July 1980), 6.

²¹ "A Certain Goodwill," Flight International, 7 December 1967, 927.

tactical helicopters, the *Jaguar* military trainer/ground attack aircraft, and lastly, the *Anglo-French Variable Geometry aircraft (AFVG)*.

British “goodwill,” however, went beyond embracing France as its partner of choice in intermediate and leading-edge aerospace collaboration. British elites quickly realized that despite the United Kingdom’s strong technological and industrial standing, wooing France would require the sublimation of British industrial interests—or as was often reported in the British defense press of the 1960s, the outright surrender of those interests—to French whims.²² No matter what proclamations of fidelity and of solidarity emanated from London during this time, as Chris Layton noted, Paris reciprocated only in so far as the “tricolor [was] hosted over the result” so as to satisfy French pride.²³ In all Anglo-French collaborations pursued through 1968, France made every effort to impose its aspirations on the collaborative process. For example, all cooperative ventures were subject solely to French industrial law and the managerial committees or holding companies erected to facilitate cross-channel industrial ties were located on French territory. France insisted upon maximum control over developmental and production processes to an extent that blurred the line between co-development and co-production. For example, the airframes for *Concorde*, *Jaguar*, *Airbus*, *Martel*, and *Puma* were not collaboratively designed *ab initio* but rather were derived from existing French prototypes. In these particular projects, British involvement lay principally in financial contributions and in cost-share/work-share arrangements in subsystems in which France stood to gain from United Kingdom participation, namely engine development. Of all of the instances of Anglo-French

²² See various issues of *Flight International* 1967 and 1968, notably “Cost of Collaboration,” *Flight International* (19 September 1968), 427.

²³ For example, Paris often insisted that France enjoy the “honor” of the first prototype roll-out and test flight. Chris Layton, “The High-Tech Triangle,” in *Partners and Rivals in Western Europe: Britain, France and Germany*, eds. Roger Morgan and Caroline Bray (Gower: London, 1986), 190.

cooperation during this time, France promised to grant British project leadership in only two: the *Lynx* and the AFVG.

Despite these pledges, and notwithstanding the 55 million pounds per annum that Britain spent after 1961 to feed French ambitions in bilateral aerospace collaboration, it had become clear by the late 1960s that France would not yield, either to enlarging the Community or to embracing fully its industrial partnership with the United Kingdom.²⁴ By 1968, France had yet again denied British accession; and it had rendered a sham its agreement on the *Lynx*, rejecting joint procurement in favor of the higher French-content *Puma* and *Gazelle* systems.²⁵ More critical, France also unilaterally withdrew from the AFVG while it was still in the development phase, but nonetheless employed its newly acquired British technology and data to produce an all-French variable-geometry design, the *Mirage 3G*.²⁶ These events led British commentators at the time to assert that the United Kingdom possessed a stronger grasp of European ideals than its partner-cum-rival across the Channel. Sir George Edwards, chairman of Britain's premiere fixed-wing aerospace manufacturer, British Aircraft Corporation, put the matter bluntly when he wrote:

I regard this kind of thing as being a complete negation of the basic concept of what we are trying to do in Europe. I want to see, as much as anyone, a strong, united European aircraft industry. I have spent enough years trying to bring it about and I rate this as not the way to do it. This is said in sadness rather than in anger, but it needs to be said.²⁷

Britain, however, stood to either lose or win much more than a battle for symbols and distant dreams. Its failed embrace of France posed real challenges to its

²⁴ "Europe," *Flight International*, 15 July 1971, i.

²⁵ And this despite the fact that British engineers had explicitly incorporated design requirements of the French Navy. D.C. Collins "The World of Helicopters," Aerospace Survey *Financial Times* 4 September 1972, p. 15.

²⁶ See B.O. Heath, "The MRCA Project," *The Aeronautical Journal of the Royal Aeronautical Society* 74 (June 1970).

²⁷ "European Aerospace Cooperation: Sir George has other Ideas," *Interavia*, January 1974, 35.

tangible diplomatic, military, and ideational interests. First, entry into the Community remained a core policy goal. Successive British governments regarded “Europe” as the country’s last best hope of reversing its twenty-plus years of post-War economic stagnation and decline.²⁸ French duplicity did not dampen this desire; it merely convinced decision-makers in London that the United Kingdom’s road to Brussels, to paraphrase the British defense analyst William Walker, could not travel through Paris.²⁹ New partners would be required to share in the collaborative process, and more importantly, advocate Britain’s role in Europe.

Second, the cancellation of the AFVG left Britain’s Royal Air Force in the unenviable position of entering a new decade without a conventional high-performance fighter, bomber, or interceptor meant to enter service. AFVG was more than a political aircraft or instrument of European diplomacy. It was also set to fulfill operational requirements established by the British Ministry of Defense into the 1980s, and moreover, to reverse what has been regarded as the greatest act of British strategic myopia in the 20th century.³⁰ The defense White Paper of 1957, the Sandys’ Review, sent the United Kingdom down a defense cul-de-sac as it shifted policy away from war-fighting to deterrence and to a reliance upon yet-undeveloped technologies. Nuclear weapons carried upon precision-guided strategic and tactical missiles would prevent war, and should this fail, defensive missiles would cleanse British skies of any and all threats. Manned, fixed-wing aircraft were to have little utility in the new age. The authors of the defense review concluded that the current generation of British

²⁸ The 1971 White Paper, The United Kingdom and European Communities, summarized British thinking and the extent of Britain’s need as it noted “the development and exploitation of modern industrial technology, upon which so much of our employment and income depends, requires greater resources for research and development and wider markets than any one Western European nation can provide.” Cited in Flight International, 15 July 1971, i.

²⁹ William Walker, “The Multi-Role Combat Aircraft,” 286.

³⁰ Interview. RAF officer. 5 July, 1996.

military aircraft would be the last: the *Lightning* interceptor, the *Canberra* and *Buccaneer* tactical bombers, and finally, the *Vulcan* strategic bomber.³¹

This strategic vision—which was at best a half-century ahead its time, and at worst fanciful—would have meant that, with the exception of a few test platforms, 1959 would be the last year that an all-British, mass-produced airplane would enter the field. Less than five years after the White Paper, however, vision gave way to the reality of two failed advanced missile programs (*Skybolt* and *Blue Streak*), successive currency devaluations, stop-go economic growth, and a growing recognition that Britain remained involved in interstate conflicts that were not solvable with nuclear weapons or uninvented technologies.³² By 1962, the British government acknowledged that in the absence of a viable missile program, the United Kingdom would require at least some fixed-wing air capability for both deterrence and defense.³³ Unfortunately, however, a half-decade of technological and industrial divestment was enough to ensure that any return to the *status quo ante* would be extremely difficult.

Years later, during the parliamentary censure debate in the House of Commons following the AFVG debacle, Defense Minister Denis Healey admitted: “We faced the problem of reconstructing an aircraft programme from scratch.”³⁴ Healey noted that

³¹Defence Minister Duncan Sandys, for whom the White Paper was named, put the matter bluntly when he said:

. . . [w]hen the Russians are in a position to bombard this country accurately and on a massive scale with rockets, we shall have to consider whether it is worthwhile retaining fighter aircraft at all. It is clear that ultimately the threat to these islands will come not from manned bombers but from nuclear ballistic projectiles. It is also clear that the effectiveness of our deterrent power will also depend on the possession by us of these weapons.

Cited in Geoffrey Williams, “The Strategy of the TSR-2,” *International Journal* XXV (Autumn 1970): 731; Mary Kaldor, *European Defence Industries – National and International Implications* ISIO Monograph (Institute for the Study of International Organization: Sussex, 1972), 21.

³² Nuclear weapons quickly proved to be less than a panacea that decision-makers envisioned in the late 1950s. A deterrence posture and strategic delivery systems did little to prevent Britain from engaging in 85 separate military operations between 1957 and 1967. Williams, “The Strategy of the TSR-2,” 728.

³³ Williams, “The Strategy of the TSR-2,” 728.

³⁴ “Mr. Healey Under Fire,” *Flight International*, 20 July 1969, 89.

Britain's best option then was to "fill the gap with British aircraft where possible, buying the minimum of American aircraft to complete the need."³⁵ Soon, however, even this alternative proved to be beyond the means of the state. By 1964, Britain cancelled the last of its domestic programs—the Tactical-Strike-Reconnaissance plane (TSR2)—after hemorrhaging \$720 million in R&D costs into a program seen as the most technologically ambitious in Europe, and one that it could not afford to produce.³⁶

AFVG would have provided for nearly all of Britain's operational needs, replacing not one, but five separate aircraft types, due to the potential benefits inherent in its variable geometry design.³⁷ Its cancellation threatened to leave Britain with only two non-American designs set to enter its armed forces: the Anglo-French *Jaguar*—a tactical strike aircraft crafted from a French subsonic trainer, and the *Harrier*—a short-range, vertical take-off and landing naval fighter. One British parliamentarian, Sir Ian Orr-Ewing, argued that this would be disastrous for British defense. Barring necessary procurements, by 1975 the RAF would not only not possess the 1000 aircraft needed to fulfill its requirements, most of the 460 systems that it could field would be primarily 1950s technologies already entering obsolescence.³⁸ Both quantitatively and qualitatively, the United Kingdom would be unexceptional in the military aerospace arena relative to its principal European allies, and possibly even inferior to France and Germany.³⁹

This last point had not escaped notice within British decision-making circles, and certainly not among the parliamentary opposition parties, who moved quickly to

³⁵ Ibid.

³⁶ "British Study Development Cost Rise," *Aviation Week & Space Technology*, 2 June 1969, 125.

³⁷ Variable geometry airframes offer the promise of multi-role functionality based upon their ability to vary the position of their wings. When the wings are swept back relative to the fuselage, the aircraft offers minimum drag at high speed – a configuration potentially suitable for high-altitude interception and dog-fighting. When the wings are held forward, the airframe enjoys maximum lift at slow speeds—a necessary feature in close air support and low-level bombing operations.

³⁸ "British Aerospace: Still an Industry to be Reckoned With," *NATO's Fifteen Nations*, June-July 1968, 76.

³⁹ Ibid.

bring down the government. That the United Kingdom might find itself technologically and militarily inadequate vis-à-vis NATO allies—to say nothing of neutrals such as Sweden and adversaries like Poland—was seen as a “discredit to the Administration, a discredit to the Air Staff, and a discredit to industry.”⁴⁰ AFVG was to be both a means to an end and an end in itself. The British government of the day hoped that it would not only be the key to the European Community and the salvation of the Royal Air Force, but a high-tech jewel that would further Britain’s status as a modern and potent world power. Any replacement for the AFVG would have to satisfy all of these divergent goals: it would have to present a façade of Europeanism in which national priorities determined the extent of international collaboration;⁴¹ it would have to be multi-functional so as replace entire fleets of military aircraft; and finally, it would need to be gold-plated, a worthy rival of any military aircraft found anywhere else in the developed world.

Indeed, by 1967, some form of cooperative procurement for this platform was regarded as unavoidable. Britain’s economy continued to suffer from slow growth and periodic currency devaluation. The country could no longer afford to maintain its forward military presence outside the Europe and the North Atlantic area. UK service inventories were slated for across-the board reductions, which included decommissioning the entire fleet of Royal Navy conventional-take-off-and-landing aircraft carriers and the Royal Air Force’s inventory of strategic bombers. In this environment, the British Ministry of Defence simply lacked the resources to pursue so technologically ambitious a project as an advanced military aircraft through indigenous means. That said, the perceived political, industrial, and military benefits arising from the de-

⁴⁰ A. F. Atkin, Lightning Project Manager. British Aircraft Corporation. Quoted in “Britain’s VG Team,” *Flight International*, 5 October 1967, 557

⁴¹ “Defence White Paper: An Interim Statement,” *Flight International*, 29 February 1968, 288-289.

velopment and production of this system were regarded as too substantial to abandon. The 1968 interim report to the UK Defence Statement stated the variable geometry aircraft studies would “continue as the basis for a possible collaborative project.” Reportedly, the British government would not move to execute any notional planning until it could at least secure guarantees of foreign sales, or more preferably attract a development collaborator into the program. The government gave first preference to Bonn, though the Benelux and Italy were also seen as potential partners. Even a renewed relationship with France was not out of the question in the longer term, if it might assure that the Royal Air Force secure the technology.⁴²

That said, a successor would require a convergence of national interest that had been sorely lacking in the Anglo-French partnerships of the mid-1960s. That relationship had proved positive for Britain only in so far as it had produced a number of missiles and aircraft that would shape UK military inventories for more than 30 years. The association had, however, failed to satisfy basic British political, and indeed, industrial goals.⁴³ What was desired were partners whose ambitions were more national than imperial.

Continental opportunities

When one considers the interests and desires of Britain’s prospective partners elsewhere in the Community, national interests dominated their decision-making. For all of these states—Germany, Belgium, Italy, and the Netherlands—the “idea of

⁴² Ibid.

⁴³ British industry chafed at the extent that London was willing to accept subordinate status in its political collaborations. George Edwards, managing director of Britain’s principal aerospace firm, British Aerospace Corporation, argued that the history of industrial subordination in European collaboration threatened to undermine both Britain’s technological competence and its autonomy. “UK stressing collaborative efforts,” *Aviation Week and Space Technology*, 7 September 1970, 14.

Europe” was remarkably thin.⁴⁴ These countries began their negotiations in October 1967, less than ten years after the founding Treaty of Rome, when the “community” was more an economic alliance, and “Europe,” in the minds of most decision-makers, represented little more than a rhetorical flourish. State interests, and importantly state behavior, remained rooted in traditional notions of sovereignty and relative advantage. Their pursuit of a collaborative venture to procure a new, common frontline aircraft for the 1970s had more to do with their own discrete political, military, and techno-industrial interests than any expressed fealty to the idea of European integration.

In 1967, the Community’s “others” were keen for high-technology defense cooperation. This collaboration, however, would be an expression of realpolitik by other means, and this was arguably nowhere more clear than in their shared motivation to embrace Britain after the collapse of AFVG. London was not alone in its disenchantment with the French model of defense collaboration. Throughout NATO Europe, governments became increasingly skeptical of France’s commitment to the European ideals championed by its intellectuals and given early institutional form by its more visionary politicians in the early 1950s. Ambassador Pietro Quaroni argued in 1968 that French arrogance had reached its tolerable extreme:

Two wars have been fought. . .not to allow France or any other country to become the recognized paramount power in a United Europe. The only possible Europe is a Europe of consent, in which all countries participate as equals, at least so far as equality is attainable among nations. Any attempt to establish a hegemony, whether by France or by any other country, could only lead to the disruption of Europe.⁴⁵

Decision-makers in Italy, Germany and the Benelux had no desire to become the Community’s sub-contractors, both literally and figuratively, to France’s techno-

⁴⁴ These were the same countries who ultimately invited Britain to join them in the German-led acquisition discussion groups that presaged *Tornado*.

⁴⁵ Quaroni, 403.

political and regional ambitions.⁴⁶ Indeed, a year later, one German official was no less adamant on the need for British entry into the Community:

The Common Market will dry out unless the British come in. We are now forced to work with the British in fields not covered by the Common Market, and advanced technology is one of them. We must explore and exploit any areas to keep Britain in Europe.⁴⁷

His government and others hoped to build upon two decades of post-war prosperity and to re-assert their national interests, as well as their separate visions of a European community. This desire was manifest in growing support for British accession following 1964. British admission, Quaroni argued, would expand the European project by giving it a critical mass and a “better balance of power” internally, one that would prevent any single state from imposing its will on the others.⁴⁸

Reaching out to the United Kingdom in aerospace would nurture continued British interest in accession despite French obstructionism, and allow London to demonstrate its fealty to the Community and to its members. Moreover, embracing Britain would satisfy a larger range of petty national interests. The collapse of the AFVG presented these countries with a unique opportunity. Ten years earlier, all of them had been members of the F-104 *Starfighter* consortium: a cooperative procurement initiative led by the United States to promote NATO standardization through the licensed production of its air superiority fighter-interceptor. The

⁴⁶ Indeed, if French exceptionalism tainted Anglo-French endeavors, it was doubly present in French dealings with the “lesser” allies. The French commonly claimed through 1950s and 1960s that collaborative leadership should fall naturally to them given: a) that the technical competences of Germany and the others were inferior by default, and b) the belief that French procurement and financing methods were unrivalled. John Calmann, “European Co-operation in Defense Technology: The Political Aspect,” *Defence, Technology, and The Western Alliance*, No. 1 (London: IISS, April 1967), 12.

⁴⁷ “Multi-role Fighter Design Accord Reached,” *Aviation Week and Space Technology*, 7 April 1969, 23.

⁴⁸ Quaroni puts the issue plainly:

Politically, Britain’s accession is absolutely necessary: at least this is the opinion of most Italians. . . It is necessary to ensure a democratic development of the Community. . . It is necessary in order to ensure a better balance of power inside the Community, without which there cannot be any real development of European union. (Quaroni, “European Integration: An Italian View,” 406).

production of its air superiority fighter-interceptor. The *Starfighter* was 1952 technology designed to satisfy American requirements for a high-altitude interceptor, but later embraced by the Allies as a multi-mission, front-line aircraft with varying degrees of success.⁴⁹ That said, the indigenization of a foreign military platform was arguably a tertiary concern relative to the political and technology benefits derived from their partnership. *Starfighter* did not simply transfer licenses and systems, but whole productive capacities where none existed or were emergent. Indeed, as Bjorn Hagelin has argued, this single program advanced airframe production competences 15 years among the participants.⁵⁰

While these states had participated in other cooperative ventures with France on platforms such as *Transall* and *Mirage*, *Starfighter* had given them an unparalleled boost in their aerospace capability. Franz-Josef Strauss, for example, the West German defense minister in the late 1950s, described German gains from this American largess glowingly:

. . .The aerospace industry has received through [the government] ready-made know-how in the shape of a US license purchased by the state; it has therefore. . .[gained access to]. . .the most advanced technology of all other countries, especially that of the United States. . .If we have to spend the taxpayer's money, then we should in this particular area make a virtue out of necessity, in order to catch the leading

⁴⁹ The United States designed and employed the F-104 *Starfighter* as a high-altitude inceptor to shoot down Soviet bombers. Within the United States Air Force, *Starfighter* represented a system within a system: it coexisted with other platforms designed to fulfill other mission-types within a diverse service inventory. Nonetheless, the United States licensed the F-104 to Canada, Denmark, Norway, Italy, West Germany, the Netherlands, and Belgium as multi-role aircraft suitable for missions as divergent as air-superiority, maritime reconnaissance, interdiction/strike, and close air support. The desire to access American high technology led these seven states to attempt to force a mature system into discrete national roles for which it was never designed and with horrific effect: by 1971, Germany alone had lost 135 aircraft out of a fleet of nearly 700.

⁵⁰ Haeglin, Björn. "International Cooperation in Conventional Weapons Acquisition." Paper presented at the RISA Conference, Durham, UK, 15-17 December 1977, 11.

technologies after [the 12-years of Post-war occupation and forced disarmament].⁵¹

Other states held a similar perspective. While none had sought to translate this collaboration into wholly autonomous national defense aerospace industrial bases – for reasons we shall detail shortly—all them regarded *Starfighter* and their other cooperative programs as stepping stones toward greater independent production and closing what was perceived as a technology gap with the established aerospace states.

Nonetheless, the licensed production of foreign technology, albeit American, was less than a panacea. First, and foremost, the licensees did not share in the process of innovation: they either assembled or re-created technologies created elsewhere. While they did achieve tangible political, technological and military benefits from the procurement efforts, ultimately the technology did not belong to them. Production under license rarely conveyed intellectual property ownership, and licensees had no guarantees that they could readily redirect their efforts toward other goals: third-party sales, follow-on military projects, and critically, input into the civilian technology base.⁵² Most damning, however, was the fact that these states found themselves in the unenviable positions of supporting other countries' industries by granting their partners economies of scale and allowing them to recoup research and development costs through licensed- and co-production. Consequently, by the late 1960s, there was a growing desire to move cooperation as far back along the innovation chain as possible: to stop simply assembling or buying items designed elsewhere, and to actually acquire proprietary rights to new technologies.

⁵¹ Cited in Regina Cowen Karp, Defense Procurement in the Federal Republic of Germany: Politics and Organization (Boulder, CO: Westview Press, 1986), 17.

⁵² The United States' government and defense firms, for example, routinely deny platform and license purchasers access to the most technologically advanced sub-systems within a given a weapons system. Software, firmware, and select avionics and engine components are often "black-boxed:" provide as-is to the recipient state with contractual injunctions against any attempt to reverse-engineer the technology in question. Interviews with Northrop Grumman Europe managers, Brussels, Summer 1996.

While Germany, Italy, and the Benelux states were not capable of autonomy and were not uniform in their desire to press for true *ab initio* collaboration, they were at least willing to explore the art of the possible. As a consequence, Britain's new availability as potential partner was both timely and critical. *Starfighter*, which had entered national inventories across the 1950s, and continued to be produced by the consortium members, was rapidly reaching obsolescence in the face of Soviet aerospace advances. Indeed, Dutch assessments held that the national F-104 fleets would no longer be sustainable by 1980 and were rapidly becoming inadequate for the close air support and interceptor missions for which they and their partners employed the aircraft. Further, the effort to transform a single-mission American fighter-interceptor into a multi-mission platform suitable to serve the nations' disparate military requirements had never been particularly smooth: for the Germans, specifically, the situation had become untenable as they experienced the attrition through operational accidents of nearly a seventh of their total inventory by the early 1970s.⁵³

Securing a replacement that would meet projected military needs well into the 1970s and 1980s either alone or through collaboration amongst the consortium members, whose number also included Canada, was impossible. As an Italian officer noted, "at that time, we in Italy had no experience in designing a modern combat aircraft. Nor did the Belgians, or the Dutch, or the Germans," and all of them could only wildly speculate as to what requirements such a platform should meet and how to proceed.⁵⁴ The United Kingdom, on the other hand, was a technology leader possessing an undisputed lead in jet powerplants—courtesy of Rolls Royce—and a proven competence in airframes and avionics. As a German official noted at the time, whereas the conti-

⁵³ "Multi-role Fighter Design Accord Reached," *Aviation Week and Space Technology*, 7 April 1969, 23.

⁵⁴ Quoted in Alfred Price, *Panavia Tornado: Spearhead of NATO* (London: Ian Allen, Ltd., 1988), 15.

mentals could only offer “opinions,” “the [Royal Air Force] pressed hard for the night and all-weather attack aircraft and they backed their arguments with actual data.”⁵⁵

The appeal of partnership with Britain, of course, extended beyond the technological gains that it could offer potential partners: in addition to the political “balancing” argument to which decision-makers remained sensitive, these states were not above manipulating Britain’s supplicant status to serve their own interest. Just as France had manipulated the United Kingdom to gain technologies and expertise, so too could the others exploit Britain’s weak bargaining position regarding Community accession to maximize British concessions in program organization and management and thus mitigate against the kind of techno-political posturing for which Paris was infamous.

That said, the continentals faced their own unique constraints that shaped how they would ultimately embrace Britain as a collaborative partner. The Belgians and the Dutch were not in a position to impose a particular, “nationalist” vision, given their relatively small defense budgets and the related fact that whatever program ultimately took shape, their cost-share/work-share inputs would be considerably less than the larger states. Indeed, the initial assessments for production of the *Starfighter* replacement assumed that both states would each purchase 240 aircraft, compared to 600 aircraft notionally desired by Germany and the British requirement of 385.

The projected Italian buy was even less at 200 planes. Rome never concealed that Italy’s position was further complicated by its perennially weak governments that produced what Italian aviation industrialists of the period condemned as a “general insensibility and negligence unequalled by any other country in the European Economic Community.”⁵⁶ The constant rotation of national governments, caused by

⁵⁵ Ibid.

⁵⁶ “. . . While industry sounds a warning,” Flight International 5 June 1976, 1478.

recurring fiscal mismanagement and social unrest throughout the period, ensured that Rome's support of, and participation in, any notional program milestone could not be taken for granted. Indeed, Italy effectively sat out the initial systems definitions phase of *Tornado*, and lagged in both prototype fabrication and final production, as the Italian Air Force and aerospace industry lobbied successive administrations to remain committed to the project and to redirect monies from elsewhere in the national budget to retain an Italian role in it.⁵⁷ When project development formally began in 1970, Rome's ability to fund its relatively minor contribution to *Tornado* development was so much in doubt that both Germany and Britain extended the Italians a long-term, low-interest loan so as to prevent an obligatory national opt-out from what was then a two year-old program.⁵⁸

Whereas the freedom of action for these minor players in the consortium was limited by default, Germany's intersecting interests and constraints notionally left it considerably more room for mischief. Ultimately, however, it was no less restrained. Whereas Britain found itself compelled to collaborate partially for the sins of its past—its refusal to embrace fully the European integration movement in the 1950s—so too were German elites compelled to cooperate because of the burdens of their history: the Nazi conquest and devastation of all of their new continental partners.⁵⁹ On the one hand, for the British, cooperation was a necessary evil: Sir Richard Smeeton of the Society of British Aerospace Companies, for example, complained that the coupling of European politics and national financial weakness were driving the United Kingdom “more and more into collaboration whether we like it or not.”⁶⁰ On the other

⁵⁷ “MRCA Moves into Design Phase,” *Aviation Week and Space Technology*, 7 September 1970: 39.

⁵⁸ “MRCA Moves to Prototype Phase,” *Aviation Week and Space Technology* 20 July 1970.

⁵⁹ This is not to say, of course, that the German political leadership of the late 1960s had any direct culpability to the Nazi war-time terror.

⁶⁰ Herbert Coleman, “U.K. Stressing Collaborative Efforts,” *Aviation Week and Space Technology*, 7 September 1970, 14. It is worth noting that the procurement cooperation was widely resisted in the UK, despite the war-time legacy of lend-lease and allied weapons transfers that were critical to the British

hand, for Germany, cooperation was much more than a necessary evil: it was a *necessity*.

Germany's readmission into the Western community of nations in the 1950s was accompanied not only by formal prohibitions on the types of defense technologies that the country could possess and produce, it also necessitated a fairly complex calculus in which decision-makers had to carefully balance latent German ideas of modernity and "normality" against a new set of state identities. Germany was now defined as an *abnormal* state, a sanctioned and divided country committed (or rather, condemned) to securing legitimacy and rehabilitation through first NATO, and later the European Economic Community.⁶¹

German elites were as enamored as their European counter-parts with the idea that an advanced, national aerospace capacity would have positive spillover effects to the civilian economy—one report from the Economics Ministry went so far as to claim that such technology was not only synergistic with other sunrise sectors, but was also environmentally "friendly."⁶² But, the Germany defense industry was ten years behind its peers as a result of the post-war occupation and obligatory disarmament. When the Western Allies finally allowed West Germany to rearm at the end of 1954 under NATO auspices, the Adenauer and Erhard administrations successively were able to square the circle: resurrect the German defense industrial base as a partial step toward reasserting German sovereignty and oblige the Allies to treat Germany as a full

war effort during the war. Indeed, Britain emerged from the Second World War, with the strongest defense industrial base in Western Europe; and its war-time dependence on the United States and the Commonwealth for materials and platforms, was rightly regarded as a brief interregnum in what had been a increasingly autonomous national armaments capacity since the 19th century.

⁶¹ The 1954 London Treaty that established the Western European Union (WEU) provided for an expansive list of weapons that the Bonn Republic could not indigenously produce: nuclear/biological/chemical weapons, influence ocean mines, long-range missiles, strategic bombers, and initially, submarines and surface warships. C.J.E. Harlow, "The European Armaments Base: A Survey. Part 2: National Procurement Policies," in *Defence, Technology, and the Western Alliance*, No. 2, Part 2 (London, The Institute for Strategic Studies, July 1967), 38.

⁶² Mark Lambert, "Germany stays in Aerospace," *Flight International*, 14 February 1976, 368.

partner; and to use cooperative procurement both to regain lost technological ground and to promote European rapprochement.⁶³

The German leadership did not regard defense industrial autonomy as a legitimate path. Franz-Josef Strauss—West Germany’s second post-occupation defense minister—summed up Bonn’s position when he noted that:

. . .[W]e are not building up capacities for a specific procurement project for which other countries already maintain productive capacities . . . We have always tried to follow a ‘middle of the road’ strategy . . . [to] avoid even the beginning of an armament’s autarky.⁶⁴

Nonetheless, Strauss and the government were quite keen to build defense production capabilities that would complement those found in the civilian economy. Moreover, cooperative procurement would not only provide the engine for this industrialization, it would also create a certain feed-back: cooperation would launch and sustain the productive capacity whose breadth and depth would be later presented as justifications for future collaborations. Strauss described this German vision plainly, noting:

If you want to have a share of in a system based on work-share, you have to have something to offer to be admitted into the system. Between a beggar and a producer there is neither a community of interest nor one of production.⁶⁵

German interest did not simply arise from concerns of high politics or industrial policy. The trauma of the war and subsequent dislocations had left little popular support for indigenous aircraft production. The Bonn Republic emerged from World

⁶³ An examination of early German cooperation quickly reveals a tendency in multi-national co-production schemes such as *Starfighter* where Germany offered industrial benefits, i.e., production work share rights, to its European partners in that Bonn to extents that did not reflect Germany’s often larger program cost-share. This “missing” work-share was subsequently doled out to the allies. In the *Starfighter* case, Germany essentially paid for approximately 300 F-104s that were assembled in Italy, Belgium, and the Netherlands, but nonetheless employed by the German Air Force. Harlow, The European Armaments Base, 43.

⁶⁴ Cowan Karp, Defense Procurement in the Federal Republic, 16.

⁶⁵ *Ibid*, 17.

War II with a mandate to disavow practically all of the Nazi regime's excesses, and this included the singular Nazi idea of "airmindedness:" the partial identification of modernity and state grandeur with the development of a fully competent aerospace industrial base.⁶⁶ The Nazis used this concept to camouflage what became their unchecked militarism in the 1930s, and their legacy ensured that successive post-occupation administrations through the late 1960s enjoyed little political room to support national aviation. Indeed, German decision-makers refused to support the development of civil aviation until 1963, and even then, did not codify an aerospace industrial plan until 1970.

The aerospace industry that developed through the 1950s did so because German accession into NATO not only demanded German rearmament, it also rested upon a system of foreign guidance and dependence that were more politically acceptable to the postwar public. As a result, after 13 years of NATO membership and the assumption of a central role of the alliance's territorial defense, German defense expenditures in 1968 were second only to the United Kingdom within NATO Europe. Further, the country possessed the third largest aerospace industry in Western Europe—one that had attained nearly all of its mass through the building of foreign military platforms either, under license or in more nuanced collaboration. Unlike nearly all other national armaments producers for whom defense was only a fraction of their overall industrial activity, the aerospace industry in Germany at the time was almost exclusively military in its orientation, with defense orders accounting for between 80 to 90 percent of total production.⁶⁷ German aviation industry thus was paradoxically "oversized," "one-sided," and largely non-indigenous.⁶⁸

⁶⁶ Stefan Geisenheyner, "A Giant Finding its Purpose," *Flight International*, 5 August 1971, 213.

⁶⁷ This "over-sized and one-sided" feature of the early West German arms industry emerged because of conflicting pressures arising from German post-war reconstruction and the country's entry into the North Atlantic Alliance. Accession to the Washington Treaty obligated the Bonn Republic to reconstitute it military and rearm as quickly as possible. While Germany often resorted to off-the-shelf

The issue besetting decision-makers of the period was not how they might end their dependence on foreign ties and largess: procurement collaboration was politically unavoidable for reasons rooted in both domestic and international politics. Instead, the issue before them was how might they transform the conduct of cooperation to give Germany a more prominent role and to better satisfy German national aims. The early post-occupation collaborative “compromise” had allowed for the speedy reconstruction the defense industrial base, but it failed to fully satisfy state political and techno-industrial desires. First, while German elites were keen to use membership in both NATO and the Community to advance national rehabilitation and Germany’s status as both an equal and a partner, Bonn’s defense industrial relationships in Europe never kept pace with evolving German ambitions. Given that the first post-occupation German governments had defined Franco-German ties as Bonn’s paramount relationship within Europe—codified in the 1963 Elysee Treaty that also established Franco-German defense industrial collaboration—it is unsurprising that Bonn would become as dissatisfied with the prospect of the French vision of intra-European collaboration as London ultimately did. French procurement policy ensured that Germany remained in a subordinate role no matter how long the relationship endured or the nature of the technologies produced. Indeed, from the reconstitution of the German defense industry until *Tornado*, Germany had never received equal status—much less project leadership—in any European collaborative venture.⁶⁹ While

purchases of systems and platform, this was never regarded as an appropriate strategy, given the risks that high-cost procurements would upset the country’s much-envied trade balance with its partners. Bonn quickly reestablished its aerospace industry for home production.” Stefan Geisenheyner, “A Giant Finding its Purpose,” 213.

⁶⁸ Ibid.

⁶⁹ The United States was the first country to offer a true collaborative partnership to Germany in their aborted STOVL tactical fighter program: a program that gave German industry its first taste of postwar, high technology aerospace R&D. This project placed joint venture organization physically in Germany and promised both states an equal share in all innovations. It collapsed within a year of its inception in 1966 due to US military hostility to the concept of multiple-purpose aircraft and its projected costs. The Bonn Regime explored the national procurement of an indigenous system, labeled the Neue Kampfflugzeug (NKF), derived largely from the technology acquired from the failed transatlantic pro-

coproducing extant French technology did advance industrial competences, it was a slow road toward indigenizing aerospace production, and by 1967 a more balanced procurement policy was coveted. As one German industrialist noted during the period:

We in Germany had been frustrated in our attempts to design and build an aircraft with [our partners]. And the desire to create a German capability to design and build advanced combat aircraft was also a major consideration. We had experience of repairing foreign combat aircraft and building them under license, now we saw the need for a capability to design such aircraft.⁷⁰

No less than Britain, Germany required collaborative partners whom, as John Calmann wrote: “[would] seek to promote not merely [their] own industries at German expense,” but German industry as well as their own.⁷¹ Reaching out to first the other members of the *Starfighter* consortium, and later to the United Kingdom, to initiate a collaborative program and subsequently secure a prominent role in its development would—it was hoped—satisfy the myriad of German political, industrial, military, and strategic goals:

- Replace the rapidly obsolescing *Starfighter* fleet with a platform designed to satisfy German military requirements,
- Nurture continued British interest in Community membership and provide vehicle to strengthen British accession appeals,
- Strengthen and indigenize Germany’s aerospace capabilities using politically acceptable, i.e., collaborative, means.

gram. The NKF was unsustainable, however, due to the inability of the Germans to meet all of the technological requirements for national R&D and production, its high cost, and the lack of domestic political support. The initial invitation to the *Starfighter* group was to internationalize the NKF under the framework of the European Multi-Role Aircraft—the conceptual predecessor to the *Tornado*. The NKF platform was remarkably similar to the later *Tornado* in both form and function and its partial development arguably strengthened Germany’s bargaining position during the *Tornado* negotiations. See “The US-German V/STOL Tactical Fighter Programme,” *Interavia* 5 (1967): 778-780.

⁷⁰ Quoted in Alfred Price, *Panavia Tornado: Spearhead of NATO* (London: Ian Allen, Ltd., 1988), 17.

⁷¹ John Calmann, “European Co-operation in Defence Technology: The Political Aspect,” in *Defence, Technology, and the Western Alliance*, No. 1 (Institute for Strategic Studies: London, April 1967), 13.

Given Britain's position on the pursuit of greater – and deeper – defense technology cooperation in Europe, one could argue that, in the year leading to the initiation of *Tornado* that both the United Kingdom and Germany were propelled by converging interests—or more accurately, converging needs—toward their peculiar embrace in July 1968. Their disparate ambitions not only made their cooperation more likely, it also bounded their behavior, limiting their ability either to commit mischief against each other or to part and pursue other options. As a requirements officer in the British MoD noted:

On precedent the United Kingdom would have built its own aeroplane, but the Government had stated publicly that Britain was not going to build the aircraft alone. That made it very difficult for us to negotiate terms. . . . The other nations had never developed a modern combat aircraft. . . . The [*Starfighter* consortium] wanted to develop an aircraft on their own but they knew that their industries lacked the capability to do it. They knew that they would have to collaborate with somebody, the British, or the French, or the Americans. So there was pressure for a collaborative development on their part, and there was political pressure on our part to do it. Those pressures forced us together.⁷²

While this assessment is arguably too limited in its appraisal of the interests at stake, it does reflect the British perspective that no other practical alternative existed: cooperation, whether desired or desirable, was unavoidable and the universe of appropriate partners quite limited.

Given that Britain and its prospective partners may have been keen to cooperate, one must not overstate the significance of their shared interests. While these interests favored the pursuit of some form of cooperation, the means and tone that cooperation remained significantly undefined and contestable. Recall that these states were set to pursue national objectives—their parochial military requirements, indus-

⁷² Price, *Panavia Tornado*, 13.

trial objectives, and nationally defined strategic goals—through international means. Even though they were not in a position to dominate the collaborative process, they were also not restrained from striving to maximize their material returns from their collaboration, or from remaining sensitive to the relative gains of their partners. A myriad of national parochialisms shaped *Tornado*—manifest in both its organization and execution—and led to a series of inter-state bargains that saw the prospective production consortium drop by half and the creation of a weapons system widely regarded as a second-best solution by the industries that assembled it and the militaries that employed it. Indeed, as late as 1972, the commander of the German Luftwaffe, Lt. General Gunther Rall, commented that his service was “not totally married to the” system despite the investment of millions of deutschmarks, the commitment of the German state, and a procurement plan that was set to consume upwards to 20 to 30 percent of the entire German defense budget yearly by the end of the decade.⁷³ That said, desperate national self-interests combined to form a program that, however flawed, went further to minimize nationalist excesses and inefficiencies than any project before or since.

Tornado takes shape: 1969 - 1976

As discussed in the preceding chapter, countries traditionally have been reluctant to cooperate in armaments procurement because of dependency and equity concerns. National defense industries have often compounded this resistance, driven by their unease with the prospect of either enriching potential competitors or under-

⁷³ “Luftwaffe Emphasizing Flexible Response During 1970s,” *Aviation Week & Space Technology*, 24 April 1972, 45; See also “Political, Economic Shifts Hamper NATO,” *Aviation Week & Space Technology*, 19 March 1973, 21

mining their often privileged position within their home polities: monopsony markets that have been characterized by emerging monopoly producers over time.

The depth of any collaborative venture—that is to say, its intimacy and intensity—is a reflection of those compromises in program control and relative advantage that states may make (or not) in order to pursue their prospective partnerships. In the context of an industrial joint venture relationship, in which states underwrite cooperation between their respective national champions—the type that ultimately characterized *Tornado* and nearly every other episode of co-development/co-production within Europe before and through the mid-1990s—such compromises follow consistent paths. One can identify three, not necessarily mutually exclusive, key issue areas, or decision points, that national government must invariably address in their collaborations:⁷⁴

- Requirements harmonization. While most episodes of armaments procurement cooperation in Western Europe have reflected a clear prioritization in state goals toward political and techno-industrial gains from collaboration, these countries are nonetheless procuring weapons systems to satisfy some tangible military objectives. Partners will likely have dissimilar military objectives based on national concepts of operations that require some compromise in order to proceed into development and production. State motivations to make concessions (or not) highlight the nature of their overall preferences underlying their cooperative endeavor and suggest the extent of interdependence that they are willing to embrace.

⁷⁴ The following list is inspired by a catalog of problem areas bedeviling collaborative procurement presented in: Rae Angus, “The Tornado Project,” *International Arms Procurement: New Directions*, ed., Martin Edmonds (New York: Pergamon Press, 1981), 169-170.

- Equity. At a minimum, popularly accountable, tax-payer democracies seek returns from their international industrial collaborations that are equal to their investments. As noted in the preceding chapter, the institution of *le juste retour* has been the defining characteristic of intra-European armaments cooperation since the early years of the Atlantic alliance. Indeed, the idea of a comprehensive equity regime in which collaborating states make long-term, multiproject commitments in order to minimize politically-driven economic distortions within any given program only took shape—albeit, limited to discussion only—in the mid- to late-1990s.⁷⁵ That said, governments enjoy considerable latitude to achieve some desired cost-share/work-share balance. Their options range from multiple lines of production, national work-share requirements for all major and minor systems, etc., to single source production for subsystems and fixed national responsibilities for final assembly and lifetime support and maintenance.
- Institutionalization. Procurement cooperation is an innately difficult process. Governments must bridge differences in language, law, technical standards, and state-industry relations. Relations among national purchasing authorities must be harmonized to some desired degree to minimize strife, as well the ties between national producers who—as was often the case in the 1960s, 1970s, and 1980s—were typically cajoled into a non-market relationships with cross-border competitors.⁷⁶ A “unified administrative structure” can mitigate these divides, but also

⁷⁵ European Defence Industries Group, “The European Defence Industry: An Agenda Item for the 1996 Intergovernmental Conference,” European Defence Industries Group Memorandum, 30 May 1995, 5.

⁷⁶ Angus, “The Tornado Project,” 174; Paul Martin Johnson, “Burden-sharing and Defence Cooperation: West German Security Policy in the Seventies,” PhD Thesis, University of Virginia, May 1976, 296.

notionally insulate the program management process from the worst excesses of national interference—thus ensuring a rough balance between national and collective interests.⁷⁷ Moreover, it can also provide program oversight to guarantee that the venture remains within cost and timeline restrictions.

States rarely engage these decision “points” – what to build, how to build, how to control and coordinate—in any kind of priority. Indeed, there has been in Europe a wide spectrum, from cases in which these issues were addressed early on (and often concurrently) to others where they persisted across the life of the program until either final production was reached or the collaboration collapsed into failure. Furthermore, these junctures are not mutually exclusive. For example, international program management agencies are often established to enforce the equity goals laid out in the founding memoranda of understanding. Similarly, equity decisions can assume many forms, such as trading national requirements for work-share, or exchanging work-share for the non-material gain of establishing an official program language or centralizing the program management on one’s own territory.⁷⁸

As all of these decisions involve some compromise among the participants, they provide insight into the kind of relationship that these states are willing to construct and under most circumstances, why they do so.⁷⁹ We will now discuss state approaches to each of these issues.

⁷⁷ Angus, “The Tornado Project,” 177.

⁷⁸ As an aside, the benefits of this latter tradeoff cannot be easily overstated. The emplacement of an administrative agency on one’s home soil conveys a number of advantages, notably, in the “distribution of key posts—which include secretarial and interpreting/translating posts and the priceless asset of transacting business under the laws of that country.” Alan Draper, European Defence Equipment Collaboration: Britain's Involvement, 1957-1987 (New York: St. Martin’s Press), 88.

⁷⁹ Again, recall the “French Model” of procurement collaboration, which played a role in bringing together the *Tornado* states. Throughout most of the post-war period, Paris held a very dim view on the need and an appropriate role for any kind of international organization that might diminish its leadership role in the collaborative process. Throughout the early years of the *Tornado*, French military and political routinely attacked the program as a misallocation of “European” resources. In 1969, one French defense analyst proclaimed that:

Requirements Harmonization: What to build

It is sometimes easy to forget that before the *Tornado* was so named, its would-be designers and producers initially called it simply the Multi-Role Aircraft. By the time Britain had entered the consortium in 1968, the platform's design had ripened somewhat, and the title had expanded to the Multi-role Combat Aircraft. This uninspired title was not a product of a collective lack of vision, but rather a reflection of the disparate—and somewhat incompatible—national visions in military doctrine and concept-of-operations. The allies sought a single platform that could execute short-take-offs-and-landings, provide good performance at both high-speed/high-altitude and low-speed/low-altitude operations, loiter for extended periods, carry a wide range of external stores, and finally, be both reasonably cheap and lightweight. Britain called for an aircraft that could serve both as tactical bomber and a bomber-killer—an air interdiction capability to locate and strike ingressing enemy aircraft at long distances. The German Luftwaffe regarded its primary responsibilities as tactical close air support over the Warsaw Pact's likely invasion routes and the provision of air-superiority and battlefield reconnaissance, while the Bundesmarine wanted a coastal interdiction capability. The Italians and the other consortium countries, however, were less de-

It is stupid to put two or three countries together during the development stage of an aircraft. A successful aircraft is the product of one [national] team – [the US companies] McDonnell Douglas with the F-4, Boeing with its transports, Grumman with the F-14, and [France's] Dassault with its fighters. It [cooperation] is a way to hide mistakes. What is worse, it could be killing the [European aerospace] industry by introducing a socialistic, non-private, enterprise system. To compete with America through consortiums is nonsense. "Consortium Fate Linked to MRCA Project," Aviation Week and Space Technology, 2 June 1969.

Another French official proclaimed that once the "fallacy" of the "consortium philosophy" became incontestable, arising from its myriad inefficiencies and compromises, "West Germany" would regain its senses and within seven years buy the Mirage G-2[France's indigenous successor to the AFVG]—an aircraft that would better satisfy the Luftwaffe's requirements than any notional multinational venture. See Jean-Mari de Septmontagne, "In Favor of Cooperation but Development of Engine Begun Unilaterally," NATO's Fifteen Nations, Vol. 2 (1979), 96.

manding: calling simply for an air-superiority platform that could rival the Soviet's best fighters, while also providing some limited interdiction capability.⁸⁰

Reconciling these varied national objectives proved to be immediately contentious and nearly fatal to the project. The problems confronting the consortium states as they wrestled with this were not simply confined to fuel capacity or the number of hard points on the fuselage. The issues involved high-order military, financial, and political concerns and, as it happened, were serious enough to lead to considerable tension among the member governments.

The desire to build an aircraft that was all things to all air forces—prior to British membership—led the consortium initially to design an aircraft that was three-times the final empty weight of *Tornado*: a plane with the size and mass of a small bomber. Luftwaffe officers labeled this morphing set of alternate requirements the *eirelegende Wollmilchsau* – the “egg-laying, wool-milk pig.”⁸¹ British membership brought greater conceptual focus, but only just: instead of one type of *Tornado*, the consortium would build two. The “100” variant was to be a nimble, single-engine, single-seater suitable for the air-superiority role. The “200” was slated to provide the other requirements. It was conceived as a two-engine, two-seater, notionally optimized for interdiction and reconnaissance, with roughly 60% percents commonality in avionics with its smaller sibling, and 80-85% commonality in other systems, including same engines, wings, center and rear fuselage, empennage, and undercarriage.⁸² The United Kingdom was to assemble and employ the 200 variant alone. Germany planned to take a mix of aircraft and take the production lead on the 100 variant, which it and Italy alone would employ. That rationalization, however, proved to be insufficient. Canada

⁸⁰ These states specifically desired a peer to the MIG 23 and 21, as well as the Sukhoi 27. Johnson, *Burden-Sharing*, 302-303.

⁸¹ *Ibid.*, 303.

⁸²“European Aircraft,” in *Flight*, 29 May 1969, 851.

and Belgium departed the program in early 1969, claiming that either system was beyond their industrial and budgetary means. Holland left a few months later, once the United Kingdom lobbied the remaining members of consortium to build the 200 variant alone.

While neither Germany nor Italy wanted to abandon their air superiority concerns, both regarded yielding to the British desire for the program to more closely approximate British interests as a necessary price to pay to safeguard the larger effort, and thus their political and techno-industrial objectives. Indeed, to the dismay of German critics in the Bundeswehr and elsewhere, the civilian leadership's approach seemed set on sacrificing German military aims—among others—to the goal of “sustaining a political symbol.”⁸³ German defense minister Georg Leber put the matter most succinctly when he said: “When I consider all of the arguments surrounding the MRCA, I have the impression that what is at issue here is not a weapons system but a religious belief.”⁸⁴

The Dutch, however, were not willing to accommodate. Despite remaining in through the initial conceptualization phase and receiving defined work-share allocations in both the airframe and engine, The Hague declared that *Tornado* had evolved too far away from Dutch specifications—“too big, too heavy, too expensive, and too complicated”—to justify its continued participation.⁸⁵ The Dutch case suggests of the differences among the consortium members in the degree to which they were willing to submerge their national interests to some larger regional goal, however defined. Moreover, their actions exemplify the chasm that can exist between state rhetoric and the actual execution of national interest. The Hague's support for European armaments

⁸³ Johnson, *Burden Sharing*, 310.

⁸⁴ *Ibid.*, 310-311.

⁸⁵ “MRCA: Now There Are Three,” in *Flight International*, 7 August 1969, 221.

collaboration in general and *Tornado* in particular had been quite politically correct and extended from the monarchy down. Prince Bernhard appealed to a British audience of industrialists in late 1968:

There is little of the aircraft industries in any of the four countries [the remaining members of the consortium] surviving in their present form if the project should be abandoned. . . [Governments and industry have to forgo] the still prevalent tendency to believe that co-operation can be achieved without giving up a measure of independence.⁸⁶

Nevertheless, the Dutch turned away from the demands of European collaboration the following May. Moreover, Holland has never looked back—after a short-lived effort to persuade first the remaining consortium, and later the other members of F-104 group to build a lighter plane more suitable to Dutch aims, Holland effectively abandoned cooperation in fixed-wing aerospace in Europe. It opted instead for dependence on the United States, first with co-production of the F-16 to replace its aging fleet of F-104s in 1976, and later through planned licensed production of the F-35 Joint Strike Fighter, a platform that will form the backbone of the Dutch air force well into the mid-21st century.

While the loss of Dutch participation in *Tornado*—in addition to the other minor players—was decried as a “blow to the morale” of the proponents of advancing European aerospace cooperation, it would be wrong to see the immediate cause of the Dutch decision—the readiness of both Germany and Italy to embrace the British position—as a victory for British national egotism.⁸⁷ The vision that advanced the design and production of the 200 variant, only later called *Tornado* GR1/Interdiction and Strike (IDS) variant, may have been somewhat closer to Britain’s ideal, but it ultimately remained a compromise choice. The IDS overlapped with the operational

⁸⁶ “Future of European Collaboration,” in *Flight International*, 26 September 1968, 474.

⁸⁷ “MRCA: Now There are Three,” in *Flight International*, 7 August 1969, 221

abilities of the UK's existing *Jaguar* units. The British, like their allies, were willing to pay the price of redundancy for the continuation and success of the program — here defined as an overly complicated and thus unnecessarily expensive aircraft.⁸⁸

The IDS satisfied some, but not all, of the remaining members' military requirements, as became immediately apparent once the first prototypes took to the skies in 1973. The same pressure that compelled them to collaborate did not disappear with the introduction of the “strike and interdiction” variant of the *Tornado*. With the IDS, all were now compelled to make procurement decisions they would have otherwise avoided, as capability “gaps”—the so-called “fighter gap” and “reconnaissance gap”—began to define the limits of their aerospace abilities. For example, both Rome and Bonn opted to retain their F-104 fleets past their desired retirement dates. Italy even continued to produce its own national variant of the F-104, the F-104S, well into 1970s and continued to support it into the mid-1990s—despite rapidly inflating operations and maintenance costs—for lack of a better option until the introduction of the *Eurofighter* neared.

The United Kingdom and Germany also faced immediate air-superiority and reconnaissance needs. By 1970, both procured American F-4 *Phantoms* to satisfy these needs. Ultimately, Germany purchased a special tranche of 35 *Tornados* in 1990 to satisfy its electronics counter-measures and reconnaissance needs, dubbed the ECR variant.⁸⁹ Britain went a step further and within months of the first production batch of *Tornado* in 1976, it abandoned efforts to mold the IDS into an interceptor platform and instead set forth to construct 165 UK-only air defense variants (ADV) of the *Tornado*,

⁸⁸ Alistair Edgar, “The MRCA/Tornado: The Politics and Economics of Collaborative Procurement,” 51.

⁸⁹ The ECR variant differed slightly from the GR-1, primarily through the removal of the Mauser cannon and the introduction of special Forward-looking infra-red, data control, and line-scanner avionics systems. Germany purchased 35 of these planes while Italy converted 16 of its GR-1s to the new standard.

or F-2/F-3 ADV.⁹⁰ Whereas the ECR embodied only minor tweaks from the IDS standard, the ADV was as different to the IDS as the “MRCA 100” was from the “MRCA 200”. Unlike the IDS, which was designed to strike enemy airfields, troop concentrations, and shipping in all environmental conditions and in single-pass attacks, the ADV was an interceptor built around a high performance radar and specially placed airframe hard points to accommodate a mix of short-range and long-range anti-aircraft missiles. The ADV, consequently, was not only longer than the IDS, 20 percent of its primary subsystems and component were unique to it. These differences yielded an aircraft that was nearly £2 million more expensive than its predecessor (£10.7 million vice £9 million), and most significant, one that was non-interchangeable in terms of roles and missions.⁹¹

The development of these follow-on variants to the IDS, as well as the interim procurement of the American aircraft, occurred because the remaining members of the *Tornado* consortium all made political decisions to devalue their requirements while accepting some uncertainty as to how they might yet satisfy those needs. The United Kingdom could use its greater experience to persuade its allies that the MRCA 200 concept would be more economical and militarily useful than the air-superiority alternative. That said, as a supplicant to the group, it could not dictate a non-MRCA solution—or rather, one that did not reflect the same level of allied input and conceptual “ownership.” On the other hand, given their inability to procure a system on their own, Germany and Italy were willing to set aside some of their requirements, however momentarily. Ultimately, the consortium states moved to right the program’s shortcomings as they pertained to their national needs only after the project had progressed

⁹⁰ Indeed, the ADV was once suggestively called the “UK ADV”

⁹¹ Gordon Lee and Jim Meacham, “On a swing-wing and prayer,” in *The Economist*, 17 December 1977, 31.

through development and initial production. Moreover, they did so using the collaborative tools that they had created and safeguarded via the IDS—although the other variants were national specific, their production continued to adhere to the same workshare divisions that applied to the IDS.⁹²

The state solutions to requirements problem, as they manifested in the *Tornado* program, reflected some of the necessary compromises need to advance the program forward: imperfect fixes to an imperfect system. Only after they secured the project—and presumably its attendant political goals—did they advance their military requirements. Even so, *Tornado* proved to be an inadequate vessel to expand beyond the interdiction and strike mission. For example, British commentators and parliamentarians routinely criticized the *Tornado* for being unable to match the aerial combat capabilities of the American F-15, and as I noted in the last chapter, some Royal Air Force officers even regarded the platform’s dog-fighting capability as inferior to the *Lightning*, Britain’s 1950s air superiority system.⁹³ These inherent limitations in the technology—while limiting the states’ ability to successfully craft national solutions from their “European” compromises—did have one positive “European” effect, however: they added incentives to the participants to reconvene years later and attempt to build a follow-on platform—the *Eurofighter*—that would satisfy those capabilities that they abandoned to advance the MRCA.

Institutionalization – How to control and coordinate

Whereas requirements could be amortized into the future, the business of allocating workshare and determining leadership were issues that required the immediate

⁹² I use the term “national-specific” because only Rome embraced the ECR, after delays to the *Eurofighter* and the aging of its F-104 fleet led the Italians also to lease ADVs from the UK, albeit modified to carry Italian missiles.

⁹³ “Air Defence MRCA Goes Ahead,” *Flight International*, 13 March 1976, 632; Interview, UK RAF Group Captain, June 1996.

attention of the consortium states. Although none of the member governments were in a position to impose de jure program leadership and industrial dominance over the project, that did not keep them or their national industries from trying. The problem confronting the consortium arose from the special character of *Tornado's* genesis: the program explicitly began as a German-led venture in October 1967. Bonn not only advanced the initial negotiations, it also declared its intention to procure upwards to 56 percent of the total airframe production run, roughly 600 planes out of 1100. Although that number would fall to an even split with the United Kingdom at 42.5 percent apiece, as the pre-development MoU neared in April 1970 and Germany revised its requirements in keeping with the abandonment of the proposed MRCA 100, Germany continued to press for outright program control. After all, leadership designation traditionally emerged from national division of funding and the anticipated aircraft production.⁹⁴

Only the United Kingdom possessed the actual wherewithal to bring the program into existence, however, even though its original 1969 workshare allocation was only 24 percent. For some British industrial and governmental commentators, the idea of ceding program control to any European partner was a non-starter: even trading airframe leadership for British control over the propulsion systems based on Rolls Royce's unrivaled economic position in Europe, as had been the case with the Anglo-French collaborations, was unacceptable. As one British Aerospace Corporation official noted, "we fell for that one with the French, and we aren't going to fall for it again."⁹⁵ Another senior official, speaking on behalf of the national industry, was equally critical:

⁹⁴ Kenneth Cross, "MRCA – The Future System of Military Procurement," *RUSI Journal*, 117 (September 1974): 9

⁹⁵ "ACA Memo no Great Advance," *Flight International*, 25 July 1969, 151.

“[the British aerospace industry] has the ability to tackle any of these [systems design and production issues] alone because [British] strength goes across the board—airframes, engines, equipments, and electronics. . . We cannot go on [to retain technological strength] if we go on accepting a subordinate role.”⁹⁶

The British could, and did, support their position with hard facts: Britain had both the industrial base and technology base to engage in leading edge aerospace design and production—a capacity, as we have shown, Germany did not possess by their own admission. The German engine manufacturer, Motoren and Turbinen Union (MTU), had been assigned initially 52 percent of the design responsibility for engine (again, traditionally distinct from airframe cost-share/work-share considerations), but this figure proved to be wildly optimistic: MTU possessed the industrial plant and technical skill set to provide, at best, 15 percent support to the engine design.⁹⁷ Rolls Royce was obliged to provide 75 percent of the development effort for the first engine proto-type just to facilitate the technology transfer to permit both MTU and its Italian counterpart Fiat to perform their 40 percent and 20 percent respective shares of production that were established in early 1970.

Despite this unpleasant reality, both German industry and its British counterpart, engaged in a guerilla lobbying campaign from June 1968 into early 1969 to persuade their governments of the rightness of their leadership claims—an effort that culminated in British Aircraft Corporation placing full-page ads in German newspapers touting that firm’s preeminent position in European aerospace.⁹⁸ Ultimately, the governments intervened with overriding political objectives and brought their industries to heel. They did so by crafting a leadership model which one member of the

⁹⁶ Herbert Coleman, “UK Stressing Collaborative Efforts,” *Aviation Week and Space Technology*, 7 September 1970, 14.

⁹⁷ Edward Kolcum, “Specialization Marks Engine Consortiums,” *Aviation Week and Space Technology*, 7 September 1970, 69.

⁹⁸ “ACA Memo,” 152.

British House of Lords coined as “wholly cooperative” and wholly satisfactory too: instead of a single national company dictating the will of a particular government to its collaborators, the member states settled upon an international management authority of interlocking governmental and industrial agencies.⁹⁹

The idea behind this move was to prevent the program from stalling in its first two years of conceptualization and development following British accession to the consortium in 1968.¹⁰⁰ Given that neither of the two principal members of the group would openly submit to the other, either politically or industrially, the only practical option that was to create two legal “fictions:”

- The first was a trinational directorate embodied by a directorate of senior military and national defense ministry personnel meeting biannually to provide overall program direction and policy guidance, as well as to resolve any political disputes that might arise. As the early *Tornado* negotiations received an official NATO blessing, this body was called the NATO Management Organization (NAMMO) and was established in September 1969.¹⁰¹ Beneath it, sat the semi-autonomous executive agency, the NATO MRCA Development and Production Management Agency (NAMMA). This agency functioned as a conduit between the nations and industry. It provided routine, real-time oversight of program execution and acted as a unified procurement agency for all Tornado acquisitions.
- Second, in March 1969, the principal airframe producers – the British Aircraft Corporation, Germany’s Messerschmitt-Boelkow Blohm, and Italy’s Fiat—formed a joint venture company named Panavia Aircraft GmbH. On the en-

⁹⁹ Lord Shackleton cited in “MRCA: Project Definition,” *Flight International*, 27 May 1969, 848,

¹⁰⁰ The German aircraft prime, Messerschmitt-Boelkow Blohm, has claimed credit for inspiring this particular organizational innovation as means of maintaining the interest of its partner firms and governments. Price, *Panavia Tornado*, 21.

¹⁰¹ As such, the NATO Secretary General was allow to send a representative to NAMMO session.

gine-side, Rolls Royce, MTU, and Fiat, established Turbo Union Limited later that year in September. Both of these organizations functioned as permanently-staffed, international companies responsible for all marketing, contracting, and development and production of the airframe, engine, and principal subsystems. In both arrangements, the national constituents operate as both shareholders and principal sub-contractors.

At both the political and industrial levels, the governments moved in directions that were unique at the time. First and foremost, they established that neither weighted voting—based on work-share allocation—or majority voting would form the basis of decision-making. As B.O Heath noted, “all partners would have to be persuaded of a common course of action by discussion and exploration on a joint basis.”¹⁰² This mandate did not completely eliminate the equity/competence arguments, but it definitely diminished them. As one British executive noted, London’s embrace of this regime meant that British industry could not necessarily count on Whitehall’s support to promote a parochial national vision.¹⁰³ Indeed, the decision to surrender leadership to agencies that did not prioritize commercial logic and favor technological strength was regarded as a political *fait accompli*. Another industrialist remarked: “[The government’s compromise to the consortium] has worked out to getting 2 percent of something or 100 percent of nothing and we have gone for the 2 percent because we have no other choice if we are to stay in the game.”¹⁰⁴

Attitudes such these were not universal: some welcomed the wide reaching level of equality to program. Fiat’s chief engineer, Giandomenico Captele, noted:

¹⁰² B.O. Heath, “MRCA *Tornado*: Achievement by International Collaboration,” *Aeronautical Journal* (September 1979): 337.

¹⁰³ Price, *Panavia Tornado*, 22.

¹⁰⁴ Edgar, “The MRCA/Tornado,” 29.

Three nations acting as equals in the design of an aircraft: we really welcomed that idea. In previous international projects, we Italians had almost always been a minority partner, and it is frustrating when you know your engineering judgment is always being downgraded on that account. We thought it a sound concept for engineers to give their ideas and have them judged on technical merit rather than the size of the shareholding in the programme held by their country.¹⁰⁵

The significance of this innovation, however, extended far beyond facilitating Italian contributions to program's design. Non-discrimination in both Panavia and NAMMA allowed Rome to secure shares in sub-systems development that nominally exceeded the value of its 15 percent work-share allocation:

. . .Italians succeeded in winning for their industry much of the technological infusion that the Germans had originally sought. For its 13-15% contribution, Italy reasonably should have expected little more than an assortment of modules and control boxes. But the Italians set their sights on and won some complete. . .systems.¹⁰⁶

More important than this, however, were the interpersonal relationships that this particular governance pattern created at the industrial level. Alfred Price argued that:

The decision to give each national company an equal say. . .and to make all votes unanimous, was to have a far-reaching effect on the programme now taking shape. It tended to prevent any one company trying to establish a viewpoint which it then felt it had to defend.¹⁰⁷

Captele explained this phenomenon from his personal vantage point as program participant, noting that:

Initially the people from the different countries did not know or trust each other and that caused difficulties. We were all very defensive; people thought the others were following the interests of their companies rather than the project as a whole. But very soon we built up

¹⁰⁵ Price, Panavia Tornado, 22.

¹⁰⁶ "Avionics Management Will Test MRCA Formula," Aviation Week and Space Technology, 24 April 1972.

¹⁰⁷ Price, Panavia Tornado, 22.

personal relationships and learned to respect each other, and developed a common mentality. From then on co-operation was wonderful.¹⁰⁸

While Captele was arguably exaggerating—hard feelings and hard bargaining continued to beset the program through the early 1970s—he nonetheless highlighted a feature of *Tornado* that has set it apart from other collaborative programs. According to some contemporary British analysts, the enforcement of procedural equality did more than just establish the “common mentality” of which Captele speaks: it established expectations of behavior and trust that brought the national shareholders (i.e., the national champions bound together through Panavia) closer together within the confines of the *Tornado* project over the ensuing decades than anyone had thought possible in 1970 or 1972. Indeed, as one senior British Aerospace (the successor to the British Aircraft Corporation) representative noted, since the 1970s the personal contacts between engineers has grown beyond that which has been contractually required. These connections have permeated, albeit incompletely, throughout their respective companies; for example, by the mid 1990s, it has become common for national firms to appeal to their cross-border peers to perform nation-specific maintenance and modifications to the home firm’s national *Tornado* fleet. As the representative noted, this occurred because of the *belief* that the partner companies will treat their planes with the same attention as they do their own country’s fleet.¹⁰⁹

It would be a mistake to assume that this particular innovation—the application of industrial equality within the program—was the product of some kind of grandiose collaborative vision or even some limited awareness of potentially efficiency-maximizing behavior. One can construct a persuasive economic argument that in a collaborative program, such as *Tornado*, in which national firms assume design

¹⁰⁸ Ibid.

¹⁰⁹ Interviews with British Aerospace representatives, 19 February 1997.

and production responsibilities for discrete systems, those competences should be embraced for long-term maintenance and support, if only to prevent wasteful duplication of effort. But, the relationships that have evolved at the industrial level are poorly understood by legislative elites and would be resisted by them if they were fully aware.¹¹⁰ Nonetheless, this outcome has occurred because “no one could think of a better idea” to ameliorate leadership concerns in the late 1960s and early 1970s.

Indeed, when we look at other aspects of program guidance and institutionalization, it is immediately clear that the regime of “no state leadership” that the members enacted was an exceptional component of a much larger effort that was in many ways tainted by “crass” nationalism and “undisguised political bargaining.”¹¹¹ For example, the second programmatic innovation that states enacted dealt more with the institutions of control than the procedure adopted. NAMMA, Turbo Union, and Panavia all represented significant steps forward in the conduct of European procurement collaboration. Prior co-development efforts, such as the *Jaguar*, were organizationally minimalist: little more than coordinating bodies without dedicated staff which would meet infrequently to exchange information and provide a veneer of joint guidance to partners who were comfortable keeping their industrial competitors and political rivals at arm’s length. In *Tornado*, the member states actually created an executive agency that was notionally isolated from the political whims of the national governments. While NAMMA—much like its industrial counterparts—was proportionally staffed based on country workshare totals, the agency’s mandate was to provide independent oversight. As one NAMMA manager, Heinz Birkenbeil, noted:

All service officials seconded to NAMMA had to sign a form that they would not push the interests of their own country, industry, or air force, they would push only the interests of the MRCA programme. When

¹¹⁰ Ibid.

¹¹¹ Johnson, “Burden-sharing,” 307.

service officers joined the organization, for a time after arrival, they would follow their national line of thinking and national approach. How long that lasted depended on the individual. But being forced to work with people from other two nations and to listen to their arguments, after a while they came to the NAMMA way of thinking. Although it was always staffed by people from the three nations, there was always a NAMMA line on any acquisition, though sometimes it would be contrary to the British line, the German line, or the Italian line, and sometimes it ran counter to all three.¹¹²

Although Birkenbeil recounts cases in which German, British, or Italian staffers were chastised by their respective countrymen for not embracing “their” national position, one should not assume on this evidence that state interest was completely removed from the endeavor. In reality, the states kept NAMMA on very short leash on all issues beyond mundane, day-to-day oversight. As Alfred Price notes, while national defense ministries specially selected representatives to fill NAMMA positions, those same ministries “were unwilling to forgo [their] power to the minutest degree:” all NAMMA procurement decisions not only had to be routed through the national capitals, but nationally-hatted program specialists would subsequently travel to NAMMA headquarters to sanction any agreement.¹¹³

On the industrial-side, the situation was considerably more sensible—to a point. As we noted, industry leaders in all three states eventually recognized that they had few choices but to remain in the “game.” As Price notes,

. . . They knew that they had to work effectively with their foreign partners: nothing a company could gain from clever in-fighting was comparable to the unmitigated disaster awaiting all of them if the programme collapsed.¹¹⁴

¹¹² Price, *Panavia Tornado*, 26.

¹¹³ *Ibid.*

¹¹⁴ *Ibid.*, 24.

In Britain, it was widely understood that London would not support any high-value, high visibility military aerospace development and production product unless it was assured that the state could secure an adequately sized market and recoup R&D costs. For both the Italians and Germans, membership in *Tornado* was not only seen as a source of technology infusion, but also as means for the governments to pursue their own industrial policies. For example, Rome insisted upon and won the right for every Italian airframe producer to have a share in production, either subcontracting to Fiat, or to the foreign national champions. Across the range of the program, Italy took conscious steps to ensure that work was channeled to firms located in disadvantaged areas of the country, particularly those south of Rome. Bonn, on the other hand, attained its long desired indigenization of production, but in the absence of significant civilian demand, found itself with an increased burden to sustain the sector.¹¹⁵

Consequently, the national industries found themselves pressured by their governments to behave, and being as dependent upon government largess in securing workshare and contracting opportunities as they were, industrial leaders had to be somewhat accommodating in addressing organizational disputes. Additionally, this was made easier by the absence of any kind of insulation between Panavia and the national champions. Members of both Panavia and Turbo-Union were also ranking employees of the national “parent” firms. Consequently, these individuals could act authoritatively, as they used their executive positions to ensure that agreements made at the international level would be respected and implemented back home.¹¹⁶

That said, acceptance of both the *Tornado’s* institutional machinery and its governing rules was not universal. Segments of British industry, in particular, chafed

¹¹⁵ For example, production of the *Tornado’s* engine accounted for upwards to 70 percent of MTU’s output through the early 1980s.

¹¹⁶ Price, Panavia Tornado, 26.

at its lack of program control as late as 1972. The British Society for British Aerospace Companies argued that London's compromises on leadership and work-share posed a pernicious, long-term threat to Britain's competitive advantage.¹¹⁷ British industry, however, was not alone in its uneasy embrace of the *Tornado* program. When the program began to coalesce in late 1969, there were actually three international industrial coordinating bodies: Panavia, Turbo-Union and Avionica. This last organization, a joint venture between national defense electronics associations, Britain's EASAMS, Germany's ESG, and the Italian SIA, oversaw the production and development of *Tornado's* avionics systems. Its tenure however was shortlived as both state and industrial interests proved to be irreconcilable.

Avionics represented approximately 40 percent of the total value of the program. As with every other systems area, the United Kingdom held a high technological advantage over its partners, and both London and EASAMS argued that all avionics contract should reflect that strength. Bonn and its firm, on the other hand, rejected any increase in British technological content within the overall project. While Britain pushed for a British radar suite, both Italy and Germany pressed for cheaper, off-the-shelf American systems that, it was believed, would both provide a firewall to British domination and provide for the diffusion of better technology. Unable to attain needed consensus at either the political or industrial levels, Avionica deadlocked. The radar dispute, coupled to entrenched disagreements over types and producer of other subsystems, actually halted progress on *Tornado* development for five months.¹¹⁸ This delay and the ongoing tensions between national producers eventually led the states to

¹¹⁷ Edgar, *The MRCA/Tornado*, 59.

¹¹⁸ *Ibid.*, 69.

dissolve Avionica in 1972 and transfer its functions to Panavia—though nominal avionics coordination was extended to Britain’s EASAMS group to placate London.¹¹⁹

Equity: how to build

The Avionica debacle exemplifies the lack of vision—or more precisely, the absence of a truly European vision—that characterized most of *Tornado’s* genesis. Cooperation was driven by self-regarding state interest. Innovation was possible, but could be readily offset by self-interest and relative gains concerns. The depth of this parochialism is best seen in the politics of program equity. As a former British Permanent Under Secretary of State for Defense once remarked, most armaments collaboration is managed through “opportunism, expediency, and horse-trading.”¹²⁰ We have already observed opportunism and expediency as they were manifest in *Tornado*: a perceived opportunity to change the regional balance of power and the willingness of national governments to embrace defense industrial and military compromises to sustain their new partnerships. We now turn to the compromises that shaped program work-share allocations.

Equity has both material and symbolic attributes. The symbolic equity shares within *Tornado* are exemplified by the Avionica solution: the exchange of status for substance, in this case by extending de jure British leadership while denying the British the industrial objectives that they sought. Elsewhere in the program, such trades were common. For example, a common British complaint from the early 1970s, held that *Tornado* was a German program despite fixed workshares that assigned Britain and Germany equal weight in both airframe and engine design—42.5 percent and 40

¹¹⁹ Ibid.

¹²⁰ Margat Blunden, “Collaboration and Competition in European Weapons Procurement: the Issue of Democratic Accountability,” *Defence Analysis* 5 (1989): 298.

percent, respectively. Indeed, British concerns were not totally without merit: Panavia was legally a German company, located in Munich, subject to German law, and significantly, a managing directorship permanently assigned to a German citizen. On the other hand, German analysts could claim the reverse: Turbo Union was a British company located in Bristol and enjoying similar “benefits.” Moreover, the engine that it developed was not an ab initio design, but actually an existing Rolls-Royce design augmented for the *Tornado* airframe.

As we have established, the leaderless-leadership governance model within the program made the location of coordinating bodies largely irrelevant regarding the governance and conduct of the project—other than the obvious added costs of moving engineers and administrators back and forth from national centers to the international companies. The symbolic importance, however, was substantial. German commentators regarded their compromises vis-à-vis Rolls and Turbo Union as a necessary evil and a purely political decision on their part: unless Germany offered that fig-leaf to the British, they certainly could not count on London’s willingness to compromise in other areas and the larger political and industrial goals would be endangered as the project faltered.¹²¹

Choices of location, legal setting, and even the official program language and currency—English and the Deutsche Mark, respectively—were surrogates for national dominance and facilitated future compromise. Such give-and-take was vital, because the states routinely placed their own techno-industrial and political desires over any commercial reasoning as they blessed contracts and parceled out work-share. Indeed, although the industrial division of labor had been crudely set by late 1969 at 42.5/42.5/15 (UK/GER/IT) for the airframe and avionics and 40/40/20 for the power-

¹²¹ Kolcum, “Multi-role Fighter Design Accord Reached,” 23.

plant, the national governments were very sensitive to the content of their design and production share. As one British executive put it:

. . . All partners wanted their industries to have a fair share of work – both design and production, but further a fair share of new technology, innovation, and expertise. With this they were willing to undertake the project and their share of the risk and investment involved.¹²²

For states intent upon maximizing their own gains from their collaboration, simply producing some percentage of the gross value of the platform was insufficient. They could instead be expected to follow one of two paths:

- Seek to capture those subsystems that offered the greatest returns in terms of technology infusion and prestige, or
- Ensure that national firms could act as sub-contractors to foreign primes responsible for coveted items.

Subsequently, while the nations had macro-responsibilities, e.g., German design of the center fuselage, the British leadership over the rear and front fuselages, Italian control over the wings, etc., the reality was that these governments actively campaigned to secure value-added gains throughout the platform. As NAMMA's Birkenbeil remarked, despite the recommendations of his agency, “haggling” over “lucrative contracts” was both widespread and detrimental:

The decisions were taken by the countries themselves. . . There were many times when a company proposed a system that system was accepted but it was not built by the company or even in the same country.¹²³

The government would barter contracts between themselves in a quid-pro-quo fashion that Birkenbeil described as

¹²² Heath, “MRCA *Tornado*,” 334.

¹²³ Price, *Panavia Tornado*, 25.

‘You get this part if you agree to that contract going here and this contract going there.’ That is a big disadvantage of an international project. There were many times when the entire programme nearly fell apart because the nations could not agree.¹²⁴

The project ultimately endured because the governments opted not to mask the politicalization of the development process. While each sub-system and sub-sub-system had national leads, these firms were often obliged to embrace at least two foreign partners in sub-contractor relationships. Consequently, the *Tornado* was more internationalized than is readily apparent. Systems as mundane as the platform’s landing gear were tri-national efforts uniting second- and third-tier producers from throughout the consortium.

One must not confuse this diffusion of work and technology as largess. It was instead a state-mandated phenomenon in which the governments drove up program costs through the politicalization of the development process. This “collaborative premium,” arising from parochial national goals, has been estimated to be as high as 40 percent for development and 10 percent for production.¹²⁵

Nonetheless, the *Tornado* program was not entirely colored by nationalist excess. Despite some collaborative input, single-source production was the rule for sub-systems and components.¹²⁶ The only “purely national efforts” in the program were confined to testing, evaluation, and final assembly. Further, while the politically motivated inefficiencies were significant—so much so that a 1985 British Parliamentary Committee condemned London’s handling of the work-share negotiations and argued that a better process be considered for future programs—*Tornado* ultimately proved to be a mitigated success for the participating states. Not only did they acquire the air-

¹²⁴ Ibid, 26.

¹²⁵ Edgar, “The MRCA *Tornado*,” 71.

¹²⁶ Angus, “The *Tornado* Project,” 176.

craft and its technology, they did so at a cost that was less than one would expect for purely national ventures.¹²⁷ Cost-savings for the three states, based their individual program shares, have been estimated to range between £850 million and £1.9 billion (in 1976 pounds).

Conclusion

Tornado was the first, truly multination co-development and co-production project in Western Europe. It established the baseline from which we can assess all later episodes of cooperation. *Tornado* did not reflect some kind of Europeanist epiphany on the part of European decision-makers. As we have shown, the member states pursued the project for the most nationalist of motivations: to establish a quasi-balance of power within the Community between themselves and their would-be French hegemon. The execution of the project continued to betray this ignoble beginning: states routinely allowed their national goals to contort the larger effort. That said, it was this peculiar vision of “Europe”—as one French official quipped, the idea “building Europe for us, and not for Europe’s sake”—that led to programmatic innovations that ultimately set *Tornado* apart and contributed to its enduring success.¹²⁸ *Tornado* benefited from a mix of endogenous and exogenous pressures that compelled the national governments to restrain themselves. Their compromises—affecting their military requirements and leadership designs—while seen by some as distasteful at the time, not only held them together but also established a level of intimacy that exceeded the founders’ expectations.

¹²⁷ Edgar, “The MRCA *Tornado*,” 73.

¹²⁸ Interview. Laurent Barthelemy, French Defense Attaché in the United Kingdom. 20 December, 1996.

Nonetheless, one must stress that this harmonization of interests did not germinate from some conception of an emergent, collective Europeaness. At the corporate level, inter-personal relationships paved the way for trust and greater efficiencies. Among state decision-makers, however—whose interests and perceptions ultimately mattered the most—the prerogatives of narrowly defined national interests continuously appeared throughout the early life of the program. The states never wavered in their desire to maintain control over the collaborative process and to ensure that they reaped maximum benefits from that process. Identity was an important factor in *Tornado's* conceptualization and execution. That said, the identities that were at play during that time were almost exclusively national and one could see their effects in the actions and arguments advanced by the state governments.

My hypothesis holds that a high-technology system such as *Tornado* would be a nationally driven and nationally oriented endeavor. Consequently, the legacy of the program is compatible with my argument—especially given that it emerged at a time before the notion of a European identity was systematically measured or even viewed as a notable feature of social landscape in the region.¹²⁹ The issue before us now, is to assess if the motivations and conduct of European procurement cooperation has become “European,” either over time or in different technology areas. As the Community evolved into a Single Market, and later into an Union, is it plausible that such shifts occurred. We will now turn the *Eurofighter* program to test this assumption.

¹²⁹ Stefan Höljelid, “European Integration and the Idea of European Identity: Obstacles and Possibilities,” ECPR Joint Sessions/Workshop 19: Identity Politics, 2001, 4-6.

CHAPTER FIVE

Eurofighter – Lessons Learned, Unlearned, and Lost

Europe's military aeronautics will have its new champion. The industrialization phase of EFA (European Fighter Aircraft), the most expensive, has officially begun. . . But this success will not produce others. EFA will probably be the final result of the great era of European military joint production, at least in the aeronautics field. And in other sectors too, from missiles to electronics, or major land-based weapons, things are unlikely to be any different. The era in which the major national industries reached agreements with their respective defense ministries to produce individual weapons systems jointly, carefully sharing out costs and benefits, is now ending. The history of EFA is instructive – a kind of obstacle race over higher and more difficult obstacles that is only now perhaps reaching its conclusion, after innumerable delays, reappraisals, and renegotiations. Nobody wants to or can embark on any more such operations, which, with the disappearance of the Soviet threat, are now to be considered high risk.

-Stefano Silvesteri, "After EFA, Integrated Defense," *Sole 24 Ore*, Milan, Italy, 3 September 1996, translated by the Federal Broadcast Information Service, FIBS-WEU-96-173.

Introduction

At the start of 21st century, the *Eurofighter* project is the largest collaborative armaments program in the European Union. Launched in October 1986 by the member states of the *Tornado* consortium plus Spain, it has evolved into a 60 billion dollar program set to produce at least 600 airplanes. *Eurofighter* will prowl nearly a fifth of

the European Union's skies, providing interception and air superiority capabilities well into the 2040s. This effort, whose formal development began over seventeen years after the signing of the *Tornado* development Memorandum of Understanding (MOU) in September 1969, represents much more than the joint procurement of an agile, multipurpose fighter for four Union air forces. It is the direct inheritor of the *Tornado* program, built upon the institutional and cooperative foundations of its predecessor, as well as being a response to its shortcomings. More important, the *Eurofighter* project bears witness to profound changes within both Europe and the larger international system. In the two decades separating it and *Tornado*, the European *projet* expanded both quantitatively with the admission of three new member states, and qualitatively, having taken its first transformative steps beyond being a "soulless market" of consumers, as Jacque Delors once derisively called it, into a transnational community of citizens: the direct election of the European Parliament, the establishment of a true common market via the Single European Act, the growing the "Europeanization" of public opinion and deepening of affective support for European unification.¹ In the years since project development began, the changes have been no less considerable, with the collapse of the Soviet Union and the existential threat that it posed, the establishment of the economic and monetary union as set out in the Maastricht Treaty given form in the introduction of the euro, and the pervasive expansion of Union's regulatory authority.

The Europe that *Eurofighter* will defend is worlds apart from the Europe in which *Tornado* emerged in the 1970s. Then, the member states expended their energies on the "low politics" of agriculture and intra-regional tariffs. The idea of

¹ See David Handley, "Public Opinion and European Integration: The Crisis of the 1970s," European Journal of Political Research, Vol. 9, (1981): 340-352; Richard Sinnott, "Bringing Public Opinion Back In," in Public Opinion and Internationalized Governance, eds., Oskar Niedermayer and Richard Sinnott, (Oxford University Press: New York, 1995): 62; Brigid Laffan, "The Politics of Identity and Political Order in Europe," Journal of Common Market Studies, Vol. 34, (March 1996): 95.

advancing the legitimacy through the creation and sustainment of a European public sphere—indeed, even acknowledging its presence—did not exist at the level of regional policy until 1973.² Nearly thirty years later, the “idea of Europe” is not only taken for granted—albeit with considerable qualifications—the Union is a place of pooled sovereignty where collaboration, both civil and military, has become “obligatory political policy” for the member governments.³

Nonetheless, while Europe has expanded, the gap between *Tornado* and *Eurofighter* has—in some ways—remained remarkably small. A seamless chain of industrial and political collaboration connects the two programs. At the time of this writing, more than thirty years of continuous partnership among the three principal state actors has produced two unique weapons systems designed with radically different performance characteristics and intended to perform different functions. Beyond this basic truth, however, the situation is muddled. *Eurofighter* has been as much a political aircraft as its predecessor, subject to the same ebb and flow of often-conflicting national agendas. But where *Tornado* could be seen as more a “religious

² That year, the Heads of State of nine member states of the European Community drafted a declaration at the Copenhagen in which they proposed defining “the European Identity with the dynamic nature of the Community in mind.” This “identity” would, supposedly, “enable them to achieve a better definition of their relations with other countries and of their responsibilities and the place which they occupy in world affairs.” The Nine pledged that they:

had the intention of carrying the work further in the future in the light of the progress made in the construction of a United Europe. Defining the European Identity involves: a) reviewing the common heritage, interests and special obligations of the Nine, as well as the degree of unity so far achieved within the Community.

CEC 1973 Bulletin of the EC, No 12-1973, cited in Stefan Höljelid, “European Integration and the Idea of European Identity: Obstacles and Possibilities,” ECPR Joint Sessions/Workshop 19: Identity Politics, 2001, 5.

³ There is much within “domestic” Union politics that remains contested, however. The Common Agricultural Policy, for example, has been a source of strife for more more two decades as some member states have pushed the Union toward protectionist policies in order to satisfy their own parochial interests. “A French Roadblock to Free Trade,” New York Times, 31 August 2003, Section 4, 8; Kenneth Warren, “Why Britain should stand alone again; European Aircraft Collaboration,” The Financial Times, 15 August 1984, 11.

belief” than armament, tied to a peculiar, *realist* vision of Europe and pursued vigorously by governments intent on harnessing the political, strategic, and industrial side-benefits of its procurement, *Eurofighter* has not enjoyed such incentives. Instead, it emerged in an environment in which there were no centripetal forces that would engender and sustain a commonly recognized mutual self-interest: no military threat, no shared techno-industrial priorities, no regional balance of power considerations. Indeed, as we shall see, the only things held common by these states were their willingness to pursue their own national prerogatives and the wholly insubstantial effects of an emergent European identity and its presumed redefinition of state interest. Consequently, instead of a “religious” commitment, the *Eurofighter* program has “hung by a silver thread,” from its initial conception in 1976 to production some twenty years later, periodically teetering on collapse and dissolution.

The *Eurofighter* program provides an excellent test case for the role and influence of an emergent European identity for many of the reasons highlighted above. Studying it in relation to *Tornado* provides a limited control over confounding variables that would otherwise arise if we were to explore a case defined by a different set of actors. Here, we confront the same set of significant countries, national firms, and indeed, even the same personalities.⁴ These actors have moved together in lockstep through one successful episode of collaboration into another, and yet they have achieved different results. Whereas controversy and conflict were present to some degree in the *Tornado* program, they have defined *Eurofighter* from its very conception. Moreover, this program has become immersed in what Werner Voß and

⁴ The fact that *Tornado* and *Eurofighter* overlap the working lives of engineers and administrators within the Panavia consortium has led to considerable and deliberate cross fertilization, as problems in *Eurofighter* development has compelled both industry and government to engage in “reach-back,” recalling seasoned *Tornado* personnel to apply their expertise in the new effort. Interview. British Aerospace executive, St. Annes-on-Sea, UK. 19 February 1997.

Michael Brzoska have labeled a “justification gap.”⁵ In addition to the familiar questions of what to build, how to build, and how to manage, the *Eurofighter* consortium has had to grapple with a fourth question: why build? Unlike *Tornado*, where the participating states always held clear and mutually supportive visions of what they sought to achieve from the collaboration, two decades later these states found the “why” question to be central, as the program has moved from crisis to crisis. Is *Eurofighter* a vehicle for advancing national grandeur? The national aerospace industry? The process of European armaments collaboration and the larger phenomenon of European unification? Some nebulous European defense industry? Or finally, is it an appropriate platform to defend the producing states against the myriad of threats that now exist out-of-area?

In this chapter, we shall follow the evolution of the *Eurofighter* program from its conception in the late 1970s to initial production at century’s end. We consider both the rationales that state elites used to justify their participation and their actual behavior to discern any tell-tale signs that they moved beyond narrow conceptions of self-interest and the traditionally stifling confines of *le juste retour*. The following sections details the evolution of the *Eurofighter*. Unlike *Tornado*, with its relatively straightforward developmental track, *Eurofighter* has experienced several critical junctures in which national antagonisms and conflicting agendas have endangered the collaborative enterprise. These junctures, or time periods, loosely correspond to two major program milestones:

- Conceptualization and pre-definition: 1979-1985
- Research and Development, and pre-production: 1987-1996

⁵ Werner Voß and Michael Brzoska, *Eurofighter 2000: Consequences and Alternatives*, Bonn International Center for Conversion, Brief 5 (February 1996): 13.

We will explore the underlying cooperative process that characterized each phase, focusing, as in the preceding chapter, on the issues of requirements harmonization, equity, and program control and management. This approach permits a comparison of the stated justifications for collaboration and its actual conduct, and thus allows us to assess what effect, if any, an emergent European identity may have had in shaping state approaches to the program.

Ideational Shifts?

The question before us is whether the expansion of a transnational identity in the 1980s and 1990s had any demonstrable effect on the state rationales and program execution of the *Eurofighter* project. *Eurofighter* has taken shape—indeed, has taken flight—at a time when a discernable European identity has not only emerged, but has been consciously advanced. Nonetheless, as I have noted in the theoretical argument presented in Chapter 2, I would predict that such an identity would not have played a role in *Eurofighter's* tortured history. Even a cursory examination of the declaratory positions taken by the project's principal actors during its early years supports this view. For example, Wolfgang Rupelt, the armaments director in the German defense ministry asserted that:

International cooperation is but one option for meeting national [military] requirements and thus it must follow the [determination] of national [policy]; it must not happen the other way around. [Cooperation] is not an end in itself; it must show clear advantages of quality, cost, time, and risk reduction. All other considerations are secondary.⁶

⁶ Giovanni de Briganti, "German Questions Cooperative Programs," *Defense News*, 2 October 1989, 33.

British, Italian, and Spanish notables echoed similar sentiments.⁷ One French parliamentarian—speaking just before his country’s brief flirtation with pre-*Eurofighter* concept development in 1979—was even more blunt about the limits of Europe where French defense production was concerned:

. . .Voices are being raised by the champions of European integration calling for the restructuring of the European armaments industry under the aegis of the European Community whose purpose is wreck the national economy and France’s defense. National defense requirements would be dictated by outsiders. The fate of our firms and our workers’ place of employment would be decided by them too. This is unacceptable and we oppose it with all our might. . .There is a great danger in seeing French high technology, the ordnance factories, and nationalized industries sacrificed at the European level. All goes to show clearly that we have entered into an active phase of European integration. . .but it is running up against the national will. . .⁸

While statements such as this are quite damning, one cannot assume a complete absence of discursive evidence that would definitively show the transnationalization of state priorities in collaboration. State positions on *Eurofighter* specifically have been

⁷ Rupelt’s British counterpart, D. H. Perry, provided a more comprehensive—yet no less national—appraisal of Britain’s cooperation aims:

One of the principal features that we are looking for in collaboration is a more economical method of procurement and that is hopefully obtained by the sharing of development costs, by longer production runs which lead to the benefits of learning, by non-duplication of aspects such as production investment, the tooling that has to go into a project, by the potential for a better logistics organization and by the sharing of the supply of spares and support during the ongoing parts of the programme. . .There are other aspects as well – demonstrating cohesion [in NATO], increasing military effectiveness through standardization – interoperability – these sorts of aspects.

House of Commons, “International Collaborative Projects for Defence Equipments: Estimating, Monitoring, and Control of Procurement Expenditure,” Committee of Public Accounts, Minutes of Evidence, Session 1984-1985 (London: HMSO, 3 December 1984), 4.

⁸ Serge Boucheny cited in Assembly of the Western European Union, Proceedings, 25th Ordinary Session, 2nd Part (Paris: Western European Union, December 1979), 81.

somewhat confused. At times, the *Eurofighter* states have embraced Europeanist language to bolster their arguments for pursuing that specific program. For example, French Defense Minister Charles Hernu asserted that in the development of a new multinational fighter plane, what mattered most was a solution that “correspond[ed] to *Europe’s* needs and capabilities.”⁹ Yet, Paris’ actions to dominate and subvert the project in the mid 1980s led the then-German Defense Minister Manfred Wörner to damn French aims as “inconsistent with the concept of partnership.”¹⁰ Similarly, Wörner’s successor, Volker Rühle—the individual with the greatest single influence on the development of the project—argued in 1995 that Bonn’s support for *Eurofighter* rested on the support for the “concept of *European* industry.”¹¹ But, three years earlier, Rühle had led the German defense establishment against further work in the program when it no longer supported German national aims, and having failed in that effort, campaigned to ensure that Germany received production rights exceeding its legitimate work-share allocation.¹²

Given my hypothesis, such anti-Europeanist behavior is untroubling, but assessing the supposed poverty of a European identity vis-à-vis *Eurofighter* requires a more thorough analysis of state action over the life of the project. We must be sensitive to expressions of other-regarding behavior that are more nuanced than an unambiguous declaration or action. The following sections analyses the two phases of the program outlined earlier, paying attention to state preferences and behavior as they relate to questions of requirements harmonization, equity, and institutionalization.

⁹ Cited in Michael Donne, “Peace sortie over European fighter,” *Financial Times*, 30 March 1985, 6.

¹⁰ Jonathan B. Tucker, “Partners and Rivals: a model of international collaboration in advanced technology,” *International Organization*, Vol. 45, no. 1, (Winter 1991): 115.

¹¹ Terence Guay, *At Arm’s Length: The European Union and Europe’s Defence Industry*, (New York: St. Martin’s Press, 1998), 115.

¹² *Ibid*, 114.

***Eurofighter's* Inception – 1977 – 1985: An exercise in national excess**

The history of the *Eurofighter*, as with most episodes of European armaments collaboration, is not limited to just those states that ultimately produced it. *Eurofighter's* roots extend back to 1969 when the *Tornado* consortium coalesced and set upon designing and building a political aircraft that would address their political, industrial, and strategic objectives. In this sense, *Tornado* had been a success:

- Britain's interest in joining the Community had been nurtured, and the United Kingdom's accession eventually took place on January 1973.
- German and Italian techno-industrial capabilities were enhanced, so much so for example, that Franco-German procurement was negatively affected as Bonn used its new status and competence as a design-capable aerospace state to insist that German requirements and German expertise be given consideration in Franco-German joint projects.¹³

Militarily, however, *Tornado*, failed to satisfy the consortium's needs. While it proved to be an effective interdiction platform, all the producing states had more expansive requirements. They had all looked for a platform that would perform air superiority and interception roles. The Air Defense Variant of *Tornado* proved to be an inadequate—and not universally embraced—stopgap. While this requirement could be deferred, aging air fleets and a continued threat from the Soviet bloc meant that it could not be ignored indefinitely. Consequently, the ongoing *Tornado* development effort in 1972 was accompanied by the initiation of national explorations into platforms that would fix their perceived “fighter gaps.” Peter Levene, the British Chief

¹³ Pauline Creasey and Simon May, “The Political and Economic Background,” in *The European Armaments Market and Procurement Cooperation* (New York: St. Martin's Press, 1988), 22.

of Defense Procurement in the late 1980s, argued that something had to be done to rectify *Tornado's* shortcomings:

. . .[I]n the critical areas of agility, stealth, and survivability. . .[t]he *Tornado* and *Harrier* mix, as you can see there, although one of the lowest cost solutions, [it has] fallen far short of the requirement in every way.¹⁴

The United Kingdom and Germany took the lead in closing the capability gap, although their initial response was to proceed on a national basis. The Royal Air Force drafted “Air Staff Targets” 396 and 403 to establish the requirements for a new air superiority fighter in 1972. An initial appeal to France and Germany to support the British requirement failed, and London latter applied the new specifications to an update of the *Harrier*, the GR.7.¹⁵ Four years later, Bonn drew its own requirements for a new tactical fighter, called the *Taktisches Kampfflugzeug-90* (TKF-90). *Tornado* financing pressures, however, soon led the government to cancel all development funding and to seek a non-national—preferably “European”—solution.¹⁶

While state activity toward a replacement platform slowed, industry moved forward, building upon its *Tornado* experience. The national champions comprising the Panavia consortium—Messerschmitt-Boelkow-Blohm, British Aerospace (formerly British Aircraft Corp.), and Aeritalia (formerly Fiat)—moved ahead of their respective governments and in April 1982 crafted a fighter aircraft design entitled the Agile Combat Aircraft (ACA).¹⁷ The ACA also languished due to a lack of definite government financial support, but it did provide the spark that eventually yielded the first intergovernmental *Eurofighter* negotiations a year later. More important, however,

¹⁴ House of Commons, “The European Fighter Aircraft,” Committee of Public Accounts, 14th Report, Minutes of Evidence, Session 1990-91, (London: HMSO, 1991), 1.

¹⁵ <http://www.eurofighter.starstreak.net/Eurofighter/history.html>, 18 August 2003.

¹⁶ Assembly of the Western European Union, “The European combat aircraft and other aeronautical developments,” Document 874, (Paris: WEU, 1981), 6.

¹⁷ The ACA was later christened the Experimental Aircraft Programme.

it also provided the basis for introducing *Eurofighter's* two other principal states, France and Spain, and through them, the first of a series of interstate crises that would define the program into the future.

An expanded partnership

The Panavia states came together in the early 1980s to build upon their previous collaboration and to correct its shortcomings. They shared the perception, voiced by a senior Aeritalia executive, that their *Tornado* experience would allow them to work together more effectively, as they had learned how to cooperate and had narrowed the technology gap that divided them in the late 1960s:

This is much easier than in 1968-69, when we were deciding on the multirole combat aircraft. Now we have some good experience on cooperation. Also, the governments have more confidence that we have the industrial capability to do something this sophisticated.¹⁸

None of them was willing to pursue cooperation at any cost, however, and certainly not as an end in itself. European cooperation within the consortium, or even within some larger grouping, was desirable but only as long as it supported national aims. As Manfred Wörner noted:

But there is one clear limit to any form of cooperation, any form of compromise. Since we are a technologically capable nation and since we want to keep from falling behind in the development stage, we have to insist that our national aviation industry retain its vitality. I would not sacrifice it. . . I said at the time, 'Let's make a common aircraft. Or, we'll make our own.' Of course, we cannot do it alone because the German market is too small. We prefer to go with four partners in a European scale but with a new and common concept where my own industry has its complete and fair share in development and construction. If a European solution fails, we could go into a common

¹⁸ "Dutch to Participate in the EFA Project," *Aeronautical Engineering*, 10 September 1984, 28.

German-American construction. So, we have our choices. This is the point where I have to insist on our industrial interests, because these are fields of high technology.¹⁹

That the *Tornado* partners would consider working together in a follow-on collaboration is not surprising, given their mutual comfort level and the perceived need. Moreover, that they might reach out to additional partners is also understandable: a larger partner-base meant both a larger market and longer production-run, as well as added financial support for development costs and access to new sources of innovation, should the prospective collaborators have capable defense technology bases. Reaching out to both Spain and France in late 1983 offered both these benefits, but the chain of events that unfolded from that act would also exemplify the “limits of cooperation” within European defense procurement at that time.

Spain. Madrid’s vision of *Eurofighter* in its pre-definition period assumed a somewhat different shade than the perspectives of its partner governments. While they all regarded the first intergovernmental talks as the first step toward conceptualizing a weapons system that would provide employment, technology, and security, Spanish elites regarded it as something more fundamental. Like Britain seventeen years earlier, Madrid was eager to join the European Community and to use high-technology defense collaboration as a means to that end. Accession negotiations began in 1979 and were still ongoing during the 1983 *Eurofighter* talks. *Eurofighter* offered the Spanish government a vehicle to bolster its Europeanist credentials, a means to advertise to its partners throughout the region that Spain was not a dusty, post-authoritarian backwater, but a potentially capable and dependable member of the

¹⁹ “An exclusive AFJ interview with: Dr. Manfred Wörner,” *Armed Forces Journal International*, Vol. 123, (August 1985): 58.

European Community. Moreover, *Eurofighter* was to be a signal to the Spanish public and to the larger world that Spain was firmly intent upon joining modernity and breaking what Prime Minister Felipe Gonzalez called the country's "psychology of isolation."²⁰

Of course, Spain's interests were also rooted in the tangible. Following the democratic transition in 1977, successive Spanish administrations sought to restructure and modernize the whole of its national defense industrial base. They viewed cross-border cooperation as the shortest path to this goal, and thus, as Jordi Molas-Gallart notes, Spanish participation in European and trans-Atlantic co development programs surged from zero to 20 in less than ten years:

The Spanish attitude has been described as a 'panic to miss a single cooperative weapons system'. . . It is common in Spain to use the metaphor of the 'new technologies train' allegedly moving swiftly through Europe, and which the Spanish military industry cannot afford to miss.²¹

The effect of the *Eurofighter* program promised to be substantial upon Madrid's resources and ambitions. It was projected to consume upwards to 65 percent of all national defense research and development funding into the early 1990s. Development and production would demand the construction and expansion of industrial facilities. Jet engine production, for example, which had ceased in Spain in the 1950s, would

²⁰ Forty years of Falangist rule had left Spain politically dislocated from the larger international community. Felipe Gonzalez wrote:

We are the eighth power in the world, a world which as it is, and a country, ours, which has never taken the responsibility of assuming its commitments with the other countries in its environment and with the international community; that is to say, we have lived in isolation.

Cited in Juan de Luis, "Spanish Views on the Future of West European Security and Defence Cooperation," in *In the Midst of Change: On the Development of West European Security and Defense Cooperation*, ed. Peter Schmidt (Baden-Baden: Nomos, 1992), 103.

²¹ Jordi Molas-Gallart, "Spanish Participation in the International Development and Production of Arms Systems," *Defence Analysis*, Vol. 6, no. 4, (1990): 355.

reemerge through the Spanish work-share support for the plane's powerplant. The defense industrial base as a whole would enjoy a "qualitative leap" both in its competence and its relative position.²² The allure of producing a state-of-the-art weapons system that Madrid embraced the project without any pressing military requirement, or even the ability to fully internalize and conduct the work.²³

France. French aims in the *Eurofighter* negotiations were considerably more complex than those of Madrid. Like Spain, France had no pressing need for a fighter-interceptor, given that it was set to deploy its latest *Mirage* variant, the *Mirage 2000*, in 1984. That said, the opportunity to participate in the *Eurofighter* program offered France the opportunity to reassert itself in regional armaments cooperation and to address its special grievances that had arisen nearly twenty years earlier with the *Tornado* program.

The French defense establishment had never supported the idea of its European allies engaging in any intra-regional defense aerospace collaboration in which France did not play a role, and *Tornado* represented a direct challenge to French strategic goals in Europe and to long-term French aims to impose its will in future collaborative projects. Successive French governments saw France as the natural leader of the European Community and labored to ensure that the evolution of European integration remained compatible with France's "fundamental interests."²⁴ A key component of this effort involved harnessing German political and economic support, manifest in German subservience to Paris in European institutions and in the development of a

²² Ibid, 357.

²³ Indeed, just as the negotiations were winding down in 1985, Spain was already taking possession of the U.S. made F/A-18 *Hornet*, a proven aircraft that would provide many of the functions established in the early *Eurofighter* specifications. Assembly of the Western European Union, "The European fighter aircraft for the nineties" Document 1037, (Paris: WEU, 1985), 170.

²⁴ David Marsh, "Why the obstacles are looming even larger," *Financial Times*, 30 May 1985, 26

thriving Franco-German armaments collaboration. This latter feature was particularly significant because—owing to defense production’s special excluded status within Community policy-making—procurement cooperation could move forward even if interstate collaboration were faltering in other areas. Indeed, the French establishment used its cross-border defense industrial ties as proof of “broader European cooperation,” and as a surrogate for the absence of “actual military cooperation.”²⁵

Tornado had threatened this calculus. It was the largest intra-European procurement collaboration of its time, and not only was Paris not involved, its ham-fisted attempt to break the consortium by offering Germany and Italy co-production of its *Mirage 3G* in 1969 had been damned by one German defense industrialist as an “example of national egotism.”²⁶ French exclusion and loss of potential markets for its technology, however, paled in comparison to *Tornado*’s lasting industrial effects. Jonathan Tucker, in his analysis of the Franco-German *Alpha-Jet* program, noted that French paternalism in their collaborative ventures—and moreover, German acceptance of it—was only possible when France enjoyed favorable asymmetries between itself and its prospective partners. France’s post-war reconstruction of its defense industrial base had left it with a set of design and production capabilities that were among the most comprehensive in Western Europe. For example, the firm Dassault—France’s national fixed-wing aircraft champion—was arguably Europe’s technology leader in fighter systems.²⁷ Dassault exploited the gap in experience between itself and its German counterpart Dornier to demand both project leadership and the right to

²⁵ Although a member of NATO, France was nonetheless not a member of NATO’s integrated military command and was thus removed from alliance-level coordination efforts.

²⁶ Edward H. Kolcum, “Multi-Role Fighter Design Accord Reached,” *Aviation Week and Space Technology*, 7 April 1969, 23.

²⁷ Indeed, the last non-French air superiority fighter introduced in Western Europe (excluding Sweden) before 1994 was the British *Lightning*—a 1959 design.

produce a disproportionate percentage of *Alpha-Jet's* high technology, “value-added” systems.²⁸

Dassault’s corporate position—supported by the French state—held that program equality would be inappropriate given France’s technological lead. Dassault also argued that because its partners would function as de facto sub-contractors, there would also be no need for any kind of ornate international management agency.²⁹ In the late 1960s, Bonn could—grudgingly—accept these limitations. By the early 1980s, however, its own capabilities had been significantly enhanced from the legacy of technology transfer from its prior and ongoing collaborations. More important, the managerial and design responsibilities that it received via *Tornado* demonstrated conclusively that German engineers could operate on the same level as any prospective European partner. In other words, membership in *Tornado* contributed to German self-perceptions as a mature and competent aerospace country whose requirements had value and who could contribute as an equal to even the most complicated undertaking. This newfound confidence made Germany less willing to submit France’s peculiar model of armament’s collaboration.

Indeed, this last point is probably *Tornado's* greatest legacy and one that would plague the French defense establishment through the 1980s. *Tornado* demonstrated that “leader-less” consortia could successfully engage in *ab initio* procurement collaboration. For French elites, the idea of diminishing sovereignty and sacrificing programmatic control was at the time an anathema. One French defense analyst said of *Tornado*:

²⁸ For example, the cockpit, forward fuselage, and landing gear. See Tucker, “Partners and Rivals,” 109.

²⁹ Ibid.

It is stupid to put two or three countries together during the development stage of an aircraft. A successful aircraft is the product of one [national] team. . . [Cooperation] is a way to hide mistakes. What is worse, it could be killing the [European aerospace] industry by introducing a socialist, non-competitive, non-private enterprise system.³⁰

In its relative success, *Tornado* helped change what Tucker has called the “mode of collaboration,” by both enriching its weaker members and leading them to aspire for a model of partnership that was more compatible to their national interests.³¹

The question confronting France in late 1983 was how it might prevent a repeat of its *Tornado* fiasco and assume a prominent role in the successor program, while at the same time coming to terms with the new defense industrial reality. Unfortunately, Paris failed to do either. Indeed, France’s initial response to the industry-led, multi-national Agile Combat Aircraft effort in 1982 was to launch its own national concept demonstrator, the Avion de Combat Experimental (ACX) project, and then to try to lure Germany away from its other partners. While this effort failed and led Paris to join the five-country talks a year later, it was emblematic of the limits of French cooperation. France’s inability to adapt and pursue true partnership would ensure that *Eurofighter* would begin badly.

The (Future) European Fighter Aircraft—Past as Prologue

The Future European Fighter Aircraft project began as a five-nation concept development effort in late 1983. By September 1985, and the signing of the first MoU, the name had changed to just European Fighter Aircraft (EFA), and the number of program participants had fallen to four. More important, however, those two years had witnessed some of the worst interstate bickering in the history of Western European

³⁰ “Consortium Fate Linked to MRCA Project,” Aviation Week and Space Technology, 2 June 1969, 114.

³¹ Tucker, “Partners and Rivals,” 116.

armaments collaboration. Instead of compromise and, at the barest minimum, a recognition of shared interest, the politics swirling about the EFA actually led some observers to argue that meaningful cooperation for the highest technologies was no longer realistically achievable. One senior German industrialist noted, a year before the collapse of negotiations,

We feel that there is certain weariness on all fronts. It is becoming more difficult for countries to renounce national advantages. The conviction regarding the common usefulness of coping with international problems has given way to a sobering that is causing difficulties in all projects facing us.³²

Such sentiments could arise because of the speed and extent with which wholly nationalist priorities asserted themselves in the collaboration. During the opening talks, Spain, France, the United Kingdom, Germany, and Italy were able to sketch out basic requirements and national aircraft numbers. Their agreement, entitled the “Outline European Staff Target,” called for a twin-engine, single-seat, delta-wing aircraft with agile maneuvering and the ability to perform short-distance take-offs and landings.³³ The agreement also contained the following non-binding procurement goals: 250 aircraft for Germany, 200 for France, 150 for the United Kingdom, and 100 each for both Italy and Spain.³⁴ This agreement, however, would be the last unified position that the Five took, as disputes erupted across the entire spectrum of collaborative activity.

³² “Armaments Directors Refine EFA Options,” Aviation Week and Space Technology, 28 May 1984, 18.

³³ It was projected that another 300 aircraft would be built for exports. Boelie Elzen, Bert Enserink and Wim Smit, “Weapons innovation: networks and guiding principles,” Science and Public Policy (June 1990): 175.

³⁴ Tucker, “Partners and Rivals,” 113.

Requirements Harmonization. Although the Five could craft a basic outline of the type of plane they desired, they could not reach a compromise on the system's operational requirements, or even mission need. While Spain had no discrete operational vision—other than simply to embrace the side-benefits from the collaboration—the Panavia states needed a relatively heavy (8.5 to 11 tons) air superiority aircraft with the endurance and carrying capacity to engage enemy fighters at distance. France, on the other hand, enjoyed a surfeit of fighters from its extensive inventory of *Mirage* variants. It required a light-weight (7.5 tons) close-air-support plane to replace its aging *Jaguar* fleet.³⁵ A lightweight airplane would also have the added benefits of possible marinization—for employment on French naval aircraft carriers—and would increase the platform's export potential to the Third World, as the lower weight might reduce unit costs.³⁶

Equity and Management. The Five never fully reconciled their divergent mission needs, but they did reach a loose and fleeting compromise on platform weight: 9.25 for France and 9.75 tons for the other states. This unstable arrangement—disputes over system weight reemerged at times until the end of negotiations—occurred because it was rooted in a more essential disagreement between France and partners. France's interest in a lighter platform was as much industrial as it was military. Paris regarded jet engine design as a “technology driver” with immediate applicability to the civilian economy.³⁷ Unfortunately, the French engine producer, SNECMA, was a

³⁵ Pia Christina Wood, “The Never-ending Story: Germany, Great Britain, and the Politics of the Eurofighter,” in *International Military Aerospace Collaboration*, eds., Pia Christina Wood and David S. Sorenson (Brookfield, VT: Ashgate Publishing Company, 2000), 56.

³⁶ Voß and Brzoska, *Eurofighter 2000*, 8.

³⁷ Andrew Moravcsik, “Armaments Among Allies: European Weapons Collaboration, 1975-1985,” in *Double-Edged Diplomacy: International Bargaining and Domestic Politics*, eds., Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam (Berkeley: University of California Press, 1993), 140.

technologically weak firm having no experience producing high-thrust engines and being somewhat dependent upon its collaborations with the American firm General Electric. It simply did not possess the technological competence to produce a powerplant suitable for a plane much in excess of nine tons. Rolls-Royce, on the other hand, with its proven partnerships with Germany's MTU and the Italian Fiat, had demonstrated via *Tornado* that it could produce engines for aircraft of considerable weight and complexity. Those firms recommended transporting *Tornado's* Turbo-Union model to the EFA: management equality with de facto British leadership in recognition of Rolls-Royce's technological ability, albeit with an all-new engine design.³⁸

Neither SNECMA nor the French state supported this proposal. First, the French government wanted the aircraft to showcase French technology and argued that the group should use an existing SNECMA design, the M-88 – despite the fact that that particular engine could not support its partners' performance requirements. For its part, SNECMA was not opposed to cooperation under equality, but given Paris' insistence on using a national system, the company was content to “wrap itself in the tricolor” and oppose collaboration.³⁹ While the Five ultimately deferred the issue by commissioning a number of proposals looking at alternative engines, they never fully resolved the basics, leaving open such issues as: the appropriate type of political and organizational organization, design leadership, and the physical location of engine joint-venture company (The UK rejected the suggestion that the firm be placed in Paris while the French were equally adamant that it not be London).⁴⁰

³⁸ “Armaments Directors Refine EFA Options,” *Aviation Week and Space Technology*, 28 May 1984, 18.

³⁹ Keith Hayward, British defense analyst, noted that SNECMA was not adverse to stoking Paris' hard-line as dispute progressed. The firm claimed at one point, that a non-French solution, i.e., the absence of French leadership, would lead to the end of France's independent aero-engine capability. Interview, Keith Hayward, 8 January 1997; Moravcsik, “Armaments Among Allies,” 140.

⁴⁰ Elzen, et. al., “Weapons Innovation,” 178.

Paris' hard-line with SNECMA reflected its overall approach to the EFA: control. For example, although a gentleman's agreement at the start of negotiations had slated the French electronics firm Thomson to hold design leadership over the EFA's radar, the French defense establishment argued that the entire platform should have a distinctive and overwhelming French signature. For example, under the terms of the "Staff Target" agreement, France claimed 25 percent of the total EFA production run. French negotiators, however, later demanded that France receive 46 percent of the work-share during the development phase.⁴¹ Although that number fell to 31 percent, after a series of hard negotiations, Paris remained adamant that it receive special rights across the board, demanding French nationality for the program's chief engineer and lead firms. Furthermore, France insisted that overall design and management responsibility be exclusively French and that of all program headquarters be located on French territory.⁴²

France's peculiar position did not arise from simple arrogance, but rather from a combination of political and industrial attitudes that severely constricted the space for any kind of cooperative compromise. First, the firm Dassault, which would have led the French contribution both on airframe development and systems integration, had neither the desire nor the incentive to pursue a truly collaborative program. As Andrew Moravcsik notes, Dassault had become France's monopoly supplier of fighter aircraft. It specialized in system design and integration and chose to allocate upwards to 75 percent of production to French subcontractors.⁴³ Its designs found favor not only with the French air force, but on the global military aircraft market as well, and

⁴¹ That number was derived by France's insistence that it take exclusive responsibility for all EFA exports.

⁴² Moravcsik, "Armaments and Allies," 142.

⁴³ *Ibid.*, 139.

Dassault routinely exported upwards of 70 percent of total production through the 1970s. Consequently,

Because of its dependence on high value-added design tasks in a single sector, any compromise of design leadership by Dassault could not be compensated. . . .⁴⁴

Further, because of its technological strength and export ability—which effectively subsidized French arms purchases extending production runs and the subsequent recouping of development costs—Dassault’s senior leadership opposed cross-border cooperation. Moreover, they had never initiated a collaborative program.⁴⁵

Consequently, their corporate position on EFA was remarkably simple:

- EFA was, at best, a subsidiary concern.⁴⁶ Dassault was more interested in ensuring that its newly minted *Mirage 2000* would not face competition from a multinational European fighter. As result, the company supported the French government’s argument that the EFA should not be a fighter at all, but a ground attack plane.⁴⁷ Some British analysts contended that Dassault also hoped that a redefined EFA would leave the Panavia states with their capabilities shortfalls intact and thus make them more receptive to the company’s appeal for co-production of its ACX program, renamed *Rafale*.
- Regardless of what form EFA ultimately took, Dassault must – in the words of its president, Benno-Claude Vallieres – “have the leadership.” Dassault insisted that, given its background in delta-wing fighter design via *Mirage*, only it could rightfully manage EFA design. Moreover, it

⁴⁴ Ibid., 139

⁴⁵ Ibid. They did, however, some projects such as *Alpha-Jet* through a merger with French firm, Breguet.

⁴⁶ “Britain delighted at decision France believes was inevitable,” *Financial Times*, 3 August 1985, 2.

⁴⁷ Tucker, “Partners and Rivals,” 113.

wanted to do so directly without any meddling international organization, regardless of the latter's effectiveness.⁴⁸

Dassault never wavered from its contempt of the process that the French defense establishment obliged it to embrace in 1983, or even from its disdain for its partners. As a German industrialist noted:

Dassault had by far the most qualified team in the EFA consortium, but they were not capable of creating an atmosphere in which everyone felt it was our aircraft. It was always a French aircraft.⁴⁹

Dassault lobbied the French government, arguing that failure to mold EFA to serve its interests by ensuring a *de jure* leadership role would lead to the long-term collapse of the firm as a technological center of excellence.

While this campaign arguably bolstered support for Dassault's position in the French government, Paris ultimately required little cajoling. The French state owned 46 percent of Dassault and regarded the firm as a strategic asset. The defense ministry argued that it would pursue a collaborative strategy in which there would be "no victories and no vanquished."⁵⁰ That said, French Defense Minister Charles Hernu also stated that Paris must protect its "essential interests" and could not sanction "a poorly protected transfer of high-technology" to its European allies.⁵¹ Consequently, French negotiators rejected every compromise attempted by the Panavia states. Both Britain and Germany were willing concede design leadership as long as program management fell to an international management organization operating under the principle of state equality. As we noted earlier, they were even willing to permit France a workshare 6 percent greater than justified by its production run.

⁴⁸ Kenneth Owen, "Nine firms aim for European fighter deal," *Aerospace America*, March 1984, 26.

⁴⁹ Cited in Tucker, "Partners and Rivals," 115.

⁵⁰ Michael Donne and David Marsh, "France pushes for leadership," *Financial Times*, 9 July 1984, 2.

⁵¹ Cited in Tucker, "Partners and Rivals," 113, 115.

Ultimately, French intransigence and its refusal to embrace limited dependence on its partners proved to be too solid. While the Panavia states could yield on some points, none of them were willing to sacrifice the principle of equality that they had established under *Tornado*, or their own military requirements to appease French industrial maximalism. By late 1985, the defense establishments in these states became convinced that despite ongoing talks, Paris no intention of pursuing the partnership that they demanded. Indeed, some contended that France was simply stalling so that EFA would crumble and *ACX/Rafale* would become the default option.⁵² Indeed, one British parliamentarian noted:

“. . .The French are out-maneuvering us. People at all levels of industry tell me that the French are getting away with murder. I am not prepared to tolerate it any longer. I am fed up with urging the project and with apparently not getting very far.⁵³

The Panavia group issued one last non-negotiable compromise to Paris on 1 August 1985, affirming that EFA would adhere to their military requirements, and that further cooperation could only take place if *de jure* leadership were invested in an international management agency. France subsequently withdrew to pursue *Rafale* development.

As an aside, it would be wrong to conclude that the Panavia member states were somehow more “European” in their approach to the early *Eurofighter* negotiations. True, they indulged Paris for nearly two years and notionally argued for a non-nationalized partnership, but their motives were as rooted in national concerns as their erstwhile French allies. First, both Bonn and London coveted the industrial and

⁵² This belief wasn’t misplaced given the replacement pressures confronting the other states and the fact that Germany had suspended cooperation on the ACA for nearly 18 months in order facilitate inclusive negotiations. “British Firms Urge Fighter Policy,” *Aviation Week and Space Technology*, 4 March 1985, 24; Pia Christina Wood, “The Never-Ending Story,” 57.

⁵³ *Ibid.*

technological benefits that French membership in EFA would convey. France's production run of 200 aircraft would increase economies of scale and lower unit cost, thus lowering the financial burden on the other states. Furthermore, they recognized that Dassault's claim of expertise in delta-wing military aircraft was no idle boast. German negotiators, for example, were adamant that any agreement with France ensure unimpeded technology transfer.⁵⁴

Second, Britain and Germany were concerned about their bilateral relations. Bonn insisted that France be included in any collaborative venture, if possible, to prevent additional damage to its traditionally special relationship with Paris. French inclusion would also prevent the need to make the unpalatable choice of harming Anglo-German relations by choosing an exclusively Franco-German cooperative solution. For its part, Britain's concerns centered on possible German defection. As one source noted,

. . . The big fear of the British government [was] that the West Germans would side with the French for political as opposed to military reasons, [and take] the Italians with them.⁵⁵

Consequently, the British moved to placate Bonn by massaging Paris' ambitions.⁵⁶ Ultimately, Germany placed its military and industrial interests above its political relationship with France, and thus both it and United Kingdom could sever their tortured attempts at partnership with Paris once they mutually concluded that they had exhausted all efforts at accommodation.

⁵⁴ Moravcsik, "Armaments and Allies," 141.

⁵⁵ Cited in Pia Christina Wood, "The Never Ending Story," 57.

⁵⁶ Ibid.

The Second Juncture: Ongoing controversies and old sins revisited, 1987-1996

As noted, France was not alone in pursuing a national agenda in shaping *Eurofighter* and its departure from the European Fighter Aircraft negotiations did not mark the end of nationalist excess. Instead, the pursuit of national prerogatives by the remaining states simply assumed different forms. Within a year of the Panavia group ultimatum and the French withdrawal, the United Kingdom, Spain, Italy, and Germany signed the first EFA MoU in October 1986, committing them to begin development on the fighter-interceptor specifications that had been drafted during the early EFA talks. At that time, they also took steps beyond codifying a common requirement by establishing a framework for institutional control, and addressing equity concerns. While no binding production goals were set, the Four established an initial cost-share/work-share for the development phase of 33 percent for both the United Kingdom and Germany (250 aircraft), 21 percent for Italy (165 aircraft) and 13 percent for Spain (100 aircraft). The *Eurofighter*, however, quickly became a victim of circumstance: the end of the Cold War, changing state priorities in high technology, and the budgetary pressures generated by European integration, which reduced military spending in order to meet established convergence criteria for monetary union. These phenomena led to shifts in state interests that threw *Eurofighter* into near perpetual crisis throughout the following decade. These shifts are visible in the institutionalization process, as well as in the requirements harmonization and equity issues.

Management

The success of *Tornado* as a model inspired the Panavia states to recreate its organizational structure and apply it to their new collaboration. Madrid, who announced its intention to join the reduced EFA consortium in September 1985, did

not object to this arrangement as it extended a degree of managerial equality that the Spanish had never enjoyed in any of their past collaborations within NATO. Consequently, the Four moved to establish a mirror EFA administrative system in the summer of 1986. At its apex, stood the NATO European Fighter Aircraft Management Organization (NEFMO). Like its *Tornado* predecessor, it consisted of representatives from the national defense ministries, plus an observer from the office of NATO's Secretary General. It convened semi-annually, and provided the program's political authority and an institutionalized forum for the states to address any particularly contentious disputes. Below NEFMO, sat the NATO European Fighter Aircraft Management Agency (NEFMA). NEFMA was a permanently staffed agency, collocated in the in the same offices in Munich as *Tornado's* NAMMA. Like NAMMA, it was nationally staffed with personnel numbers determined by state cost-share allocations. The states empowered NEFMA to provide "day-to-day management and control" of the project on their behalf, as well as "letting prime contracts," and coordinating the "working methods" of the four national procurement agencies.⁵⁷

On the industrial side, the nations created two joint-venture companies: Eurofighter Jagdflugzeug GmbH, responsible for the airframe and systems integrations; and Eurojet Engine GmbH, responsible for engine development and production. Each company was also located in Munich and thus subject to German law.⁵⁸ Each functioned as prime contractors within its specific area responsibility and was responsible for "overall management and co-ordination of the development" phases of the program. Like *Tornado's* Panavia and Turbo Union, these firms were essentially shell companies that provided permanent fora for the leading national

⁵⁷ UK National Audit Office, *Ministry of Defence: Eurofighter 2000*, (London: HMSO, 1995), 27.

⁵⁸ The director nationality was not exclusively German, as British citizens have served as managing directors in both organizations.

producers—now referred to as Eurofighter Partner Companies—to coordinate their activities, albeit as *de jure* subcontractors. As noted earlier, the national champions involved in development and production were unchanged between the *Tornado* joint-venture companies and those for *Eurofighter*, with the exception of Spanish participation and some name changes among the core six. British Aerospace, Spain's CASA, MBB (later Daimler-Benz Aerospace, or DASA), and Aeritalia (later Alenia) cooperated through Eurofighter Jagdflugzeug. Eurojet's constituent firms were Rolls-Royce, Italy's Fiat Avio, Spain's SENER, and MTU (later merging into DASA).

Lessons Unlearned. That the *Eurofighter* states would embrace an organizational model with some proven value is unsurprising. Unfortunately, they not only replicated its faults, they also failed to build on its strengths. For example, as noted in the preceding chapter, interactions in Panavia generated a sense of common purpose and trust that allowed the industrial companies to move ahead of their governments and seek greater efficiencies in system support and maintenance. In the mid-1980s, many assumed that this lesson had not only been internalized, but was readily reproducible. One British industrialist with experience in Panavia noted two decades of cooperation had yielded a constant din of “information exchange and dialogue” among the national champions.⁵⁹ People throughout their respective national companies had come to know their counterparts in the partner firms, through a contact network that had been created in late 1960s, but was beginning to blossom in the late 1980s as a sense of community developed.

Nonetheless, while Panavia and those branches responsible for *Tornado* in the national partner companies “took for granted” the mechanics of cooperation – “how to

⁵⁹ Interview. British Aerospace manager, 19 February 1997.

communicate,” compromise, and secure agreements—that knowledge proved to be remarkably shallow. The “personal factor” that *Tornado* operators exalted did not extend beyond their narrow domain. Stated differently, while the Panavia companies developed loose connections at a macro-level, in which they could recognize the benefits of cooperation and initiate new partnerships, they did little to institutionalize the micro-level knowledge that is required for effective execution.⁶⁰ Consequently, by the time of their EFA partnership—as one senior British Aerospace manager noted – “we had no taken no real notice [of these lessons] and we had compounded the problems that we had seen the first time around.”⁶¹ Eurofighter Jagdflugzeug personnel have had to rely on their Panavia colleagues in Munich, as well as *Tornado* specialists located in their home firms, to learn how better to operate within the organization, as well as interact with the parent companies.⁶²

One problem that Eurofighter Jagdflugzeug and Eurojet have had to contend with that Panavia and Turbo-Union did not has been the pressing need to control cost. From the outset, Germany—and to a lesser degree, the other member states of the consortium—have worried about the project’s cost, first the notional total system cost and later the spiraling development costs. Program delays and problems in refining new technologies led to cost increases as high as 106 percent in certain major subsystems by the mid-1990s.⁶³ In *Tornado*, the political need to press forward with the project outweighed wasteful industrial practices. *Eurofighter*, however, did not enjoy any overriding political objectives, “Europe” or otherwise. Consequently, the

⁶⁰ Ibid.

⁶¹ Interview, Former British Aerospace EFA manager, St. Annes-On-Sea, UK. 19 February 1997.

⁶² Interview. British Aerospace manager, St. Annes-On-Sea, UK 19 February 1997.

⁶³ Cost increases have been across the since the signing of the initial development MoUs in 1986. For example, between 1987 and 1995, costs for airframe development increased by 12 percent over the target level. Overall, development costs increased by 23 percent during that time. National Audit Office, Ministry of Defence: Eurofighter 2000, 9; Sarah Boseley and Michael White, “Portillo backs *Eurofighter*,” Guardian, 3 September 1996: 4.

states called upon both joint venture companies to contain cost escalation. But, they did not empower either company fully to “impose its authority,” and Eurofighter Jagdflugzeug in particular was compelled to reach back and rely on the national prime contractors to manage suppliers and cut costs within their particular countries.

The added demands on the *Eurofighter* holding companies made visible the limits of the willingness of the member governments to diminish their control, or that of their national champions, to a potentially efficiency-seeking transnational body—even when they themselves create and task such an organization. That said, much of the holding companies’ difficulties have arisen from a very fastidious—and state-sanctioned—application of *le juste retour*. The *Eurofighter* program is replete with instances in which one national company was initially delegated design responsibility for a major system, and yet another firm from one of the other member states was given so-called “equipment design responsibility” for managing the supply of subsystems comprising the system. The economic waste implicit in such an organization, and the joint venture firms’ inability to ensure accountability, ultimately forced the states to rationalize systems design and equipment design, so that by the mid-1990s single companies held full responsibility for the systems that they managed on behalf of a given holding company.

Whereas the member governments were willing to make some management fixes at the industrial level—and then simply to clarify and restore the authority of their own firms—no amount of economic or political pressure would lead them to reform *Eurofighter’s* political administration. NEFMA embodies all of its predecessor’s limitations – a fact made clear by inconsistent demands placed upon it by the member governments. Although NEFMA was established to provide routine management and program control, its authority was always tightly limited by the states. For example, each national defense ministry established a *Eurofighter* project

office, ostensibly to provide an interface between the ministry and the national parliament to channel information and secure national funding allocations.⁶⁴ The project office also worked to assist NEFMA when called upon by providing technical expertise. In practice, however, the project offices have eclipsed NEFMA, providing *de facto* political guidance to the program. These offices took the lead in both identifying problems in the cooperative process, as well as proposing solutions, while NEFMA routinely deferred to them, to other national authorities, even to industry.⁶⁵ The result has been that NEFMA's residual authority has been greatly compromised, as the British National Audit Office commented:

This perception is re-enforced by the strength within the Eurofighter and Eurojet consortia of the national partner companies with whom national project offices negotiate directly without recourse to formal contractual interface between NEFMA and Eurofighter and Eurojet.⁶⁶

The unwillingness of the national governments to surrender some portion of their authority to NEFMA is arguably best symbolized by their reluctance to permit the agency to execute the one innovation that they entrusted it to perform: limited competitive tendering. In 1987, the member governments established workshare goals while also pledging to ensure “a balanced spread of technology and a cost effective distribution of work.”⁶⁷ With the commencement of the Full Development MoU a year later, the states also added the caveat that some avionics, armaments, engine accessories, miscellaneous aircraft equipment were to be selected in the “most

⁶⁴ National Audit Office, Ministry of Defence: Eurofighter 2000, 33.

⁶⁵ Indeed, when called upon to adjudicate during some politically contentious sub-system developments, NEFMA abandoned any pretense at authority and surrendered responsibility to either to the states or to industry. Specifically, during the dispute between Britain and Germany over radar selection in 1989, NEFMA repeatedly sent tender proposals to Eurofighter Jagdflugzeug in hopes that industry would find some technical reason to dismiss one of the national alternatives. Elzen, et. al., “Weapons Innovation” 181-182.

⁶⁶ National Audit Office, Ministry of Defence: Eurofighter 2000, 33.

⁶⁷ *Ibid*, 19.

competitive way possible,” while nonetheless adhering to “overall” workshare targets.⁶⁸ Under this formulation, expensive, value-added and “politically sensitive” systems like control systems, and principal engine components, were to be immune from any and all competitive tendering, with states adhering to familiar *juste retour* principles in these areas in order to maximize their technological and industrial returns.⁶⁹ Despite what one former British Aerospace *Eurofighter* branch manager called “clear criteria” based on “unambiguous competition principles,” the governments rarely allowed either NEFMA or Eurofighter Jagdflugzeug to make cost/value judgments regarding specific suppliers.⁷⁰ Instead, the states entered into the MoU fully cognizant of their ability to “get a little more,” knowing that the governments would impose “politically correct” solutions in which national firms would either be designated to fulfill the contract, or more likely, form cross-border consortia of sub-contractors and tertiary suppliers.⁷¹

The states took care to maximize their own technological and industrial side-benefits in their *Eurofighter* partnership, so much so that they were unwilling to take marginal steps to “rationalize development and production” of marginal sub-systems in the project – and this despite building pressures to seek to better economies in both development and production.⁷² Yet, as we will now see, these pressures were so acute that *Eurofighter* routinely went to brink of dissolution as the member governments argued not only about “what to build” and “how to build,” but “whether to build,” nevertheless, national interests prevailed over efficiency in management decisions.

⁶⁸ Ibid.

⁶⁹ Keith Hayward, The World Aerospace Industry: Collaboration and Competition, (London: Duckworth and the Royal United Services Institute, 1994), 158.

⁷⁰ Interview, British Aerospace manager, 19 February 1997.

⁷¹ Ibid.; National Audit Office, Ministry of Defence: Eurofighter 2000, 20.

⁷² Pia Christina Wood, “The Never-ending Story,” 68.

Requirements Harmonization

The form and function of *Eurofighter* has been a point of contention in the program throughout most of its existence, from inception right through to the start of production funding in 1996. As originally conceived by the *Tornado* states, the European Fighter Aircraft was to be an air-superiority platform, capable of both beyond-visual-range attacks and short-range interceptions. Moreover, the platform was also to have a secondary air-to-ground role given the appropriate weapons fit. The national defense establishments were united in a common fixation upon the threat poised by Soviet Mig-29 *Fulcrums* and Sukhoi Su-27 *Flanker* fighters, whose technology either rivaled or outmatched anything that NATO Europe could field in the late 1980s.⁷³ For the first four years following France's withdrawal from the project, this view held and provided a solid military rationale for proceeding forward with collaboration. Mikhail Gorbachev's reforms, however, followed by the dissolution of the Warsaw Pact, and ultimately the collapse of the Soviet Union itself, totally undermined this justification. Instead of confronting a well-armed, security-obsessed superpower and its satellites, between 1989 and 1991, the *Eurofighter* consortium faced a NATO Central Front pushed eastward by Bonn's absorption of the German Democratic Republic and a Russian Federation that could no longer afford to operate its existing Mig-29s and SU-27s, much less produce new ones.⁷⁴

This strategic shift produced a profound psychological shock for the allies, and one felt most acutely in Bonn.⁷⁵ The other national governments could legitimately continue to envision a role for *Eurofighter*: the United Kingdom maintained a global concept of operations (CONOPs) and argued that an air-superiority platform remained

⁷³ House of Commons Defence Committee, European Fighter Aircraft, Session 1991-92, Sixth Report, (London: HMSO, 1992), vi.

⁷⁴ House of Commons Committee of Public Accounts, The European Fighter Aircraft, Session 1990-91, Fourteenth Report, (London: HMSO, 1991), 6.

⁷⁵ Heinz Schulte, "Political agenda is behind split," Jane's Defense Weekly, 15 August 1992, 26.

a valid requirement in the face of the potential threat posed by Third World air forces equipped with not only Soviet technology, but also French and American aircraft as well; and Italy and Spain had more tangible needs as they found themselves on what had become NATO's new frontline confronting a restive and politically unstable Mahgreb.⁷⁶ Germany, on the other hand, lacked any pressing military reason to modernize its air force capabilities, given the absence of any realistic air threat its territory and its lack of an "out-of-area" component in its national security policy.⁷⁷ The crisis, however, extended far beyond simple security arguments and order-of-battle calculation. The collapse of a real military threat fed into more fundamental questions that were emergent in the late 1980s and early 1990s about the shape and direction of Germany's defense policy.

Bonn as Spoiler – The "New" European Fighter Aircraft Crisis. Defense procurement in Germany in the post-war period involved balancing elite visions of reestablishing Germany as a "normal" state with the pervasive anti-militarism in the larger German society. Armaments collaboration provided a means to make procurement more palatable, as well as to promote intra-regional rapprochement and ensure that Bonn could fulfill its defense obligations along the Central Front. With the Cold War ending and Europe moving toward economic and monetary union, there was no longer any countervailing political pressures to make—as Carl-Ludwig Thiele, senior member of the German Free Democratic Party once commented—"[German] taxpayers realize that the Federal Republic of Germany has to measure up to international standards when it comes to sticking to the treaties it makes."⁷⁸

⁷⁶ Voß and Brzoska, *Eurofighter 2000*, 13; "EFA Answers," *Flight International*, 4 November 1992

⁷⁷ Schulte, "Political agenda," 26.

⁷⁸ "Politics and the Eurofighter 2000," *Military Technology*, February 1994, 65.

To many Germans—even some within the defense establishment—the European fighter aircraft simply was no longer relevant in the new strategic environment, and made further irrelevant by the high (and rising) costs of the project.⁷⁹ One DASA executive remarked:

There are fundamental differences between the *Tornado* and EFA situations. We now have no obvious threat from the East, so there is no publicly perceived need for advanced weapons systems as the EFA. Secondly, we haven't been in such a critical financial situation for a long time.⁸⁰

Indeed, the end of the Cold War meant that Germany had to “exchange military insecurity for financial liability.”⁸¹ First, German reunification meant that Bonn had to devote significant outlays toward regional development and welfare spending in the new eastern Länder. Second, the end of “hostilities” heightened expectations that Bonn might strive for some sort of “peace dividend,” and public supported the radical drop in procurement spending—which fell 50 percent between 1991 and 1995.

While *Eurofighter* undoubtedly competed with public expenditures in all of the member states only Germany witnessed any kind of significant public debate, more importantly public opposition, about the rightness of the project.⁸² This opposition peaked in 1992 when, following increasing German dissatisfaction with rising program costs, Volker Rühle became defense minister in Bonn in January 1992 and almost immediately launched a sustained attack against the EFA program. Rühle, supported by the public, the media, the opposition Social Democrats, and the ruling coalition's minority Free Democrats, argued that Germany could no longer afford the program and would withdraw from the production phase.⁸³ Rühle's principal concern

⁷⁹ Pia Christina Wood, “The Never-ending Story,” 60.

⁸⁰ “Decisions, decisions,” *Flight International*, 27 May 1992.

⁸¹ Boseley and White, “Portillo backs *Eurofighter*,” *The Guardian*, 3 September 1996.

⁸² Voß and Brzoska, *Eurofighter 2000*, 14

⁸³ Pia Christina Wood, “The Never-ending story,” 60.

lay in containing unit costs which in some estimates for EFA ranged as high at 150 million deutsch marks.⁸⁴ R  he asserted that Germany would not support a program with unit costs higher than 100 million DM. He recommended that the consortium abandon the several billion dollars in research and development that they had invested since the ACA and instead procure a less expensive and technologically less complex aircraft that he dubbed the “New European Fighter Aircraft” (NEFA). NEFA’s cost-savings were to derive from a 4-5 percent reduction in capability from the EFA baseline, principally by sacrificing avionics and incorporating a less capable, single engine powerplant.⁸⁵

R  he assumed—wrongly—that Spain and Italy shared his disenchantment with EFA, and that possibly even Britain might be persuaded to recognize that the project posed too great a financial burden. As he noted to the British media:

I must explain it to my people in Dresden. I would like to know how my British colleague will be able to explain it to his miners. I don’t think the streets of Birmingham are plated with gold and silver and that they can afford everything the military would like them to have.⁸⁶

Neither the Britain or the other allies, however, were willing to abandon their chosen (and common) requirements and certainly not to abandon their research and development investment. They were, however, willing to compromise. First, they agreed to permit both Bonn and Madrid a lower production allocation, 140 and 87 units respectively, as opposed to the 250 planes and 100 planes that they had tentatively established in 1986-87. Second, they reformed the logistical support system to achieve an 11 million DM cost saving. Third, and significantly, they consented to

⁸⁴ Vo   and Brzoska, *Eurofighter 2000*, 14.

⁸⁵“EFA Answers,” *Flight International*, 4 November 2002.http://ezproxy.library.cornell.edu:2056/universe/document?_m=424ff80cd376504b18269bdbbed1df46&_docnum=1&wchp=dGLbVtz-zSkVb&_md5=a129864dfe2112acd4410b0715015c03

⁸⁶ “Germany accused of cheek after questioning payment for aircraft,” *The Herald (Glasgow)*, 21 October 1992, 26.

nationalized variants of the platform. While none of these national “fits” involved anything as radical as the divide between the *Tornado*’s ADV and IDS variants, they basically involved states adopting non-standard defensive aids avionics packages for their planes and opting out of the development of those systems employed by the other partners.

After rigorous negotiations throughout the remainder of 1992, Bonn ultimately chose to remain in the program. The project was officially renamed *Eurofighter 2000*, and the Germans agreed to continue in project development. German Chancellor Helmut Kohl proclaimed that:

A common European solution to the EFA question is a precondition for our future development in Europe and for our aircraft industry. We found that the project was too expensive in its general configuration and we made great savings. Now, new calculations are available and I am certain that we have a sensible result. We wish to have a common European solution.⁸⁷

While Bonn welcomed the concessions, remaining in the program ultimately hinged on concerns over the industrial penalty that they would likely pay through a unilateral withdrawal, as well as a desire to preserve Germany’s status in Europe. Some analyses suggested that Germany stood to lose as many as 20,000 jobs should it terminate its *Eurofighter* work without a replacement. Given that the national German economy had been in recession in the early 1990s, loss of those jobs was politically untenable.⁸⁸ In addition, DASA pressed the government that withdrawal might severely affect its ability to form future industrial partnerships in Europe. Such concerns were well founded, as German opposition to the project led some to believe that Germany was

⁸⁷ Andrew Lorenz, “German U-turn will rescue EFA,” *Sunday Times*, 15 November 1992. <http://web.lexis-nexis.com/universe/document> . . .

⁸⁸ Another concern was the concentration of DASA military facilities in Bavaria and the disproportionate impact that cancellation would have on that Land’s economy.

abandoning the “common interests” that it had established in *Tornado* and had initially reaffirmed in *Eurofighter*. British Aerospace’s president, John Weston, noted:

We are receiving confusing messages from Germany. [Concerning EFA] do we need to look elsewhere? . . .The question is how are we going to maintain European defense forces. . .Partners need to be reliable.⁸⁹

DASA criticisms of Bonn’s wavering were even more pointed, with DASA chief Eric Riedl commenting:

How is it possible that Germany assesses threat one way when Italy, Spain and the UK see it another? There must be a single, common European threat analysis. It cannot be that not only the EFA partners, but also the Swiss, the Swedes, the Finns and the French are all basing their security on air-based defense, whilst we Germans say that it is not necessary. . .It is ironic that, at a time when we are on the threshold of a common single market, political union and joint security policies, Germany should branch out with its own security policy when, in previous decades, it has always been oriented towards European security. Look at the Italians. They urgently need EFA. They are currently defending a critical area of Europe with *Starfighters*. What will their feelings be if we leave them in the lurch?⁹⁰

Fears of alienating its industrial allies and losing the side-benefits of continued cooperation in *Eurofighter* would continue to influence government calculations through to the start of the production phase. The lack of popular support and ongoing concerns over the program led to three additional episodes of German wavering concerning its planned procurement. Ultimately Germany remained in the program, and furthermore, remained mindful of both maximizing its return and ensuring its relative position in the collaboration

⁸⁹ “BAe doubts German role in EFA successor,” *Flight International*, 6 November 1991.

⁹⁰ Brian Davidson, “Is there life after EFA,” *Aerospace World* (September 1992): 15.

Equity

Despite tensions over requirements and need, the prerogatives of *juste retour* were something that the states could agree upon. Indeed, the same issues that had surfaced in *Tornado* decades earlier were also manifest in *Eurofighter*. The governments divided the airframe and engine to provide a “fair” distribution of value-added systems development and production, as well as to conform to cost-share allocation. For example, the airframe responsibilities were:⁹¹

- British Aerospace designed the front fuselage and half of the right wing.
- DASA developed the central fuselage and the central tail.
- Alenia focused on the left wing and half of the rear fuselage.
- CASA worked on the other halves of the right wing and the rear fuselage.

Like *Tornado*, purely national activities were limited to assembly and testing, and the nations prohibited duplication of systems production. This clearly Byzantine execution of development and production was augmented by the established practice of promoting national representation on most sub-systems and minor equipment. For example, the electronics for *Eurofighter*'s control stick consisted of four circuit boards made in two continental countries and then sent to the United Kingdom for assembly—ostensibly to satisfy single-source production rules.⁹²

While one might expect this kind behavior in a high technology, high-visibility program like *Eurofighter*, the tensions inherent in the program concerning controlling costs brought into sharp relief how little the states had progressed since *Tornado*. For example, while Bonn threatened repeatedly to kill the program unless its financial

⁹¹ Voß and Brzoska, *Eurofighter 2000*, 9.

⁹² Peter Beaumont, “*Eurofighter*'s Crash Landing,” *The Observer*, 13 August 1995, 2.

burden was diminished, its response to its requested reduction in unit production was to insist DASA nonetheless retain its former work-share allocation. The 1992 compromise led to a fall in Germany's work-share from 33 percent to 23 percent. Conversely, Britain—as the only partner with the industrial capacity to address the shortfall—increased its work-share to 42 percent.⁹³ As Germany had already made 33 percent cost-share investment, Bonn demanded that its share of production remain unchanged. Barring this, the German government asked the London revise its production goals downward to ensure balance and “prevent [German industry] losing out.”⁹⁴ Eventually, London and Bonn worked out an arrangement in which Germany pledged to increase its unit purchases by forty aircraft while Britain lowered its production from 250 to 232. The UK would receive an additional billion pounds of work and reserved the option to buy an additional 65 planes. This deal set German and British workshares at 30 percent and 38 percent, respectively, where they have remained into final production.⁹⁵

Conclusion

A British Aerospace executive, later designated to serve in the senior leadership of Eurofighter Jagdflugzeug, once asserted that techno-nationalism was a constant in the *Eurofighter* program. States—naturally, in his view—aspired not only to protect their national ambitions, but also to gain the technological return need to “remain sexy” for future collaborations.⁹⁶ The history of the *Eurofighter* certainly conformed to this worldview. The program began reflecting some of the worst in European cooperative procurement: non-partnership, non-collaboration, and the

⁹³ Pia Christina Wood, “The Never-ending Story,” 65.

⁹⁴ David Fairhall, “Reprieved Fighter Flies Off Course Again,” *Guardian*, 6 January 1993, 6.

⁹⁵ Pia Christina Wood, “The Never-ending Story,” 65-66.

⁹⁶ Interview. British Aerospace manager. 19 February 1997.

attempted imposition of a single state's singular vision and objectives. That said, it also began with a modicum of promise as the beneficiary and product of nearly two decades of ongoing collaboration in *Tornado*.

Unfortunately, *Eurofighter* demonstrated that—at least in the area of high technology procurement—national agendas both lead and distort the collaborative process. States can cooperate and engage in the type of compromises necessary to prevent a complete rupture in their partnerships—albeit in pursuit of their own narrow self-interests and with a willingness to translate inefficiency into national advantage. Indeed, we see in *Eurofighter* a recognition that the process can be improved through even limited embrace of commercial reasoning, and yet also the steadfast refusal of the governments to depoliticize collaboration and gain the efficiencies that they themselves claim to covet.

This latter point is significant. As noted, *Eurofighter* emerged in a period of considerable change within Europe and the larger international community. While it meandered from inception to initial production, the Cold War ended and the European project deepened. While Europeans embraced common passports and eventually a common currency, the practice of collaboration did not become easier. At best, it remained as baroque as it has been since the late 1960s; at worst, it became more difficult as governments were freer to advance their own petty industrial policy concerns in the absence of a pressing security rationale. Moreover, progress in European integration beyond defense has arguably had the perverse effect of weakening a driver for more effective cooperation, as the incentives to use collaborative procurement as a demonstration of solidarity, fealty, or just good “European-ness” are lessened. Consequently, one does not see the sublimation of national agendas in the evolution of *Eurofighter*. They evolve and even expand, but they do not diminish.

My hypothesis presumes the primacy of nationally-oriented state policies in high-technology armaments collaboration. Consequently, there is no “puzzle” as to why *Eurofighter* did not evolve to embody more intimate forms of cooperation than the *Tornado*. An emergent transnational identity cannot, as one German defense official asserted, override “two thousand years of divergence,” and certainly not for “artifacts” as central to common visions of statehood as high technology weapons.⁹⁷ What is striking, however, is that these technologies are so ideationally laden that *Eurofighter* could falter despite advances in both European identity and practice, notably monetary union and a common citizenship.

We will now turn explore the history of low-technology collaboration in Europe to discern if states behavior is more “progressed” in that technological domain. In the following chapters, we shall look at the so-called Euro-howitzer program in the 1970s and 1980s and the Anglo-French Reciprocal Purchasing Agreement and there we shall determine the true limits of “Europe” in state defense industrial policy.

⁹⁷ Interview. Norbert Pipperger, Bundesministerium der Verteidigung, London, 21 January 1997.

CHAPTER SIX

The “Euro”-Howitzers

Introduction

We have examined the politics of high-technology armaments cooperation in Western Europe as it has evolved in the region’s successive flagship collaborations: *Tornado* and the *Eurofighter*. These two high-technology ventures were not simply the largest collaborative programs in the European Community from the 1970s onward, they were also the largest armaments projects in terms of the monies invested by the partner governments. Given that billions were spent for weapons systems valued for the techno-industrial and status benefits that they conveyed, as well as for their military utility, it is unsurprising that their respective developments were tainted by economic nationalism. They reflected both the promise and parameters of defense industrial collaboration in the Union, as these systems demonstrated the impact of conflicting national agendas on states’ willingness to compromise and embrace interdependence.

The high level of interest in these programs—and others like them, such as *Alpha-jet*, the AFVG, and *Puma*—reveals a bias that high technologies not only matter more to states, but that their joint procurement holds some special significance in international and European affairs. As one French Science Minister once quipped in 1966: “Europe will be made by the atom, space, aeronautical construction, and computers, or it will not be made.”¹ The belief that collaboration in high technology is both a driver toward greater integration and reflection of it is both appealing and widespread. To many, the entwining of national defense industrial interests denotes

¹ Cited in Roger Williams, European Technology: The Politics of Collaboration (London: Croom Helm, 1973), 57.

movement toward not only a distinct European “identity” in regional defense affairs, but also a step toward the Union’s Common Foreign and Security Policy.² While such a position may hold some merit—that collaboration however flawed, however distorted by national politics is both symbolically and substantively important—it remains to be seen what tangible progress has been made in either defense industrial integration or, more broadly, the emergence of a transnational interest guiding state action. In a Europe that has been defined by uneven progress first toward a single market and later, to economic union, the key to real progress in cooperative procurement—and certainly toward identifying actions indicative of an emergent European identity—would be the *absence* of political sensitivity.

Are there technologies that impinge less upon the “emotional bond” between “defense procurement and national sovereignty,” as a Dutch NATO procurement representative once asserted?³ Recall that a key hypothesis of this dissertation holds that state preoccupation with defense industrial activity is partially a function of its technological sophistication—and the associated perceptions of military utility, economic spin-off effects, and prestige benefits. Some armaments are essentially banal; or rather, as the British Ministry of Defense has argued of conventional munitions, lack any “relevant,” innate “strategic or industrial policy considerations.”⁴ In the following pages, I assess two additional collaborations between Germany, the United Kingdom, and Italy which were at the opposite spectrum of defense industrial activity from high

² According to research conducted by the United Kingdom’s National Audit Office, the defense ministries of Italy, Germany, and France explicitly emphasized both “the importance of protecting national industrial interests and enhancing European political co-operation through co-operative acquisition” by the late 1990s. That is, while they saw armaments cooperation promoting European integration, they nonetheless, continued to measure cooperative success by the “national industrial benefits” that it generated. UK National Audit Office, Maximising The Benefits of Defence Equipment Cooperation, Report by the Comptroller and Auditor General, HC 300, Session 2000-01 (London: HMSO, 2001), 44.

³ Interview. Bob Reedijk, Dutch NATO Armaments Director Representative (NADREP). Brussels, 1 July 1996.

⁴ UK House of Commons Defense Committee and Trade and Industry Committee, Aspects of Defence Procurement and Industrial Policy, First Report (London: HMSO, 1995), xi.

technology fighter aircraft: the *Field Howitzer for the 1970s (FH-70)* and *Self-Propelled Howitzer for the 1970s (SP-70)* programs. Peter Levene, a former British minister and advocate for increased marketization in regional European defense procurement, once argued that the size and complexity of *Tornado* and *Eurofighter* made inter-state collaboration “inescapable.”⁵ Such technical issues were noticeably absent in the howitzer projects. Whereas *Tornado* and *Eurofighter* were marvels of late 20th-century technology, modern tubed artillery was a Victorian innovation: recoil dampers, tempered rifled cylinders, and mechanical ammunition transport systems to convey shell from storage areas to their guns were all pioneered before the First World War.⁶ By the 1950s, artillery and conventional ordnance production were arguably the most well distributed technical competences in NATO Europe. As C. J. E. Harlow notes, by 1964 practically every country in the Alliance possessed the ability to cast cannon shells or forge mortar tubes without incurring any extraordinary pressures, either financial or technical.⁷

Artillery presents us with an excellent technological foil to assess the degree to which Europeans structure and execute their cooperation differently between low and high technology arms. In FH-70 and SP-70, we have two related weapons systems that cost a fraction of the aerospace projects. Indeed, total program costs for both systems amounted to £450 million, while UK-only expenditure on *Tornado* alone approached £12 billion.⁸ Not only is the core technology mature and thoroughly dispersed, European countries have clearly given lower priority to this area than to more complex

⁵ David Buchan, “Business Meets Bureaucracy,” The Financial Times, 30 November 1987, 10.

⁶ “The Daily Telegraph looks at another British defence contract failure with the write-off a 13 year, £88 million howitzer project,” Daily Telegraph, Textline Multiple Source Collection (1980-1994), 15 January 1987.

⁷ See country case studies in C. J. E. Harlow, Defence, Technology, and the Western Alliance. The European Armaments Base: A Survey. Part Two: National Procurement Policies (London: Institute for Strategic Studies, 1967).

⁸ UK National Audit Office, Ministry of Defence: Collaborative Projects. Report to the Comptroller and Auditor General (London: HMSO, 1991), 50.

technologies.⁹ For example, Britain abandoned autarky in artillery in 1960, while other countries such as Holland, France, and Italy redirected their defense funding toward more prized sectors, like aerospace and electronics.¹⁰

These countries, and nearly all of their NATO allies, have periodically used the establishment of common standards, and even cross-border procurement of whole systems, to symbolize their willingness to advance NATO procurement through standardization and interoperability. Similarly, the three states supporting the FH-70 and SP-70 also sought to make a statement: to show to their other European allies, and to the rest of the international community, that their partnership was not limited just to advanced aerospace.¹¹ Unfortunately, this “statement” has come to symbolize the poverty of regional weapons procurement cooperation in Western Europe. The SP-70 has been the only intra-regional collaborative project in Europe to fail after entering full development. It and its towed cousin, the FH-70, are members of very small set of low-technology co-development projects ever attempted in the European Union. Although they were partially initiated serve a “communal function” by demonstrating partnership and interdependence, their execution was markedly national, reflecting the same state preoccupations with *juste retour* and nationality of production that characterize high-tech ventures.

⁹ One survey of British parliamentarian, for example, ranked self-propelled artillery in fourth place in its utility to national defense, after naval surface combatants, tactical aircraft, and main battle tanks. “Three out of Four MPs Support Favoritism for UK Defense Industries,” Armed Forces Journal International (January 1989): 35.

¹⁰ Indeed, artillery has been an undervalued combat arm throughout the Cold War. Whereas most artillery units constituted 20 percent to 25 percent of most NATO armies at the end of the Second World War, that percentage had fallen to between 9 and 15 percent by the late 1980s. Andrew Cattaway, “The Field Artillery Market in the 1990s,” Military Technology 2 (1990): 44; Harlow, The European Armaments Base, 16, 35.

¹¹ Interview. Heinz Wolf, German National Armaments Defence Representative to NATO. Brussels, 2 July 1996.

Background

As noted in Chapter 3, states make real distinctions between high- and low-technology weapons. For most of the last fifty years, countries throughout NATO Europe have found less difficulty in embracing a greater measure of dependence on munitions and conventional land arms than they have in the high-technology realm. This “comfort level” has been manifest in the moves toward NATO standardization that have taken place over this period. Instead of common aircraft or tanks, the little success the Alliance has had in forging greater commonality among its members has been limited to the most mundane elements of their armaments “profiles.” The establishment of common gun calibers, for example—5.54mm, 7.62mm, 9mm, 105mm, 120mm, 155mm—has been described by NATO’s former head of armaments planning as one of the Alliance’s “unqualified” achievements.¹² This simple, and relatively costless, act did much to improve the logistics burden within NATO, as it ensured notionally interchangeable munitions stocks. Interoperable gun standards, in turn, gave way to common munitions and even NATO “standard” weapons.

One should not confuse the process of standardization with the creation of “European” weapons. Instead, NATO—utilizing consensus decision-making—periodically has established specifications and unique national systems as baselines to promote greater interoperability. The Alliance has a long history of selecting national systems and recasting them as “NATO” weapons. For example, the United Kingdom’s shift from autarky in artillery production in 1960 occurred because it chose to produce under license an Italian-designed 105 mm gun that the NATO member governments had pegged as the standard in medium artillery. Other countries in the Alliance have taken similar steps with other technologies, notably the Belgian-designed SS109 5.56

¹² Interview. Anthony Scott. Head of NATO Land Armaments Planning Section. Brussels, 3 July 1996.

mm ball ammunition and the Italian OTO Melara 76 mm naval gun. Militaries throughout NATO have not only embraced the specifications established by these systems, but in many instances, the technologies themselves, either through licensed production or outright cross-border purchase.

That said, the “NATO Standard”-model has never moved the Alliance—either at the Trans-Atlantic or intra-European levels—any real distance toward defense industrial integration. Indeed, it has proven to be somewhat illusory. For example, while common calibers prevent gross mismatches in ordnance types and thus increase the probability that one country can use another’s stocks, exact matches are not guaranteed—even when the common caliber is complemented by a supposedly standard munition type. As one official in NATO’s Maintenance and Supply Agency (NAMSA)—an intergovernmental body chartered to promote collaborative maintenance, calibration, procurement, and technical support—noted, in the absence of any supranational authority, member states routinely rejected rationalized purchases of common arms and ordnance—that is, cross-border procurement from single-source suppliers who are recognized as possessing a competitive advantage in the production of a given system.¹³ Moreover, they have even ignored some common standards that they themselves have established under the veil of national requirements.¹⁴ Consequently, modifications are often required to ensure that the exchanged ordnance operates effectively in different nationally designed guns.

Even when ammunition can be interchanged seamlessly, buyers must also grapple with the prospect of vulnerability and dependence on Allies who may not al-

¹³ The example of the SS109 was illustrative of this point. The SS109 was designed by the Belgian firm, Herstal. The NATO member states declared that its physical and ballistic characteristics provided an ideal baseline for 5.56mm ball ammunition to satisfy the Alliance’s newly established 5.56 standard caliber. Although Herstal’s product established the ordnance specification, most governments insisted upon production under license, despite the fact that these variants rarely approached the quality of the Belgian original. Interview. Commander J. Pijls, Royal Dutch Navy. London, 16 December 1996

¹⁴ Ibid.; http://www.namsa.nato.int/home/namsa_e.htm, 31-Aug-03.

ways share their interests. In 1990, Britain discovered this fact to its cost after it had become partially reliant on Belgian-made 155mm shells to bolster its own national holdings. At that time, Brussels opposed Britain's participation in the 1990-91 international coalition to end the Iraqi occupation of Kuwait. The Belgian government, in an act that did much to harm intra-regional trust, elected to suspend all arms shipments to Britain and its other allies involved in the campaign. Fortunately, Britain was able to turn the United States to make up the munitions shortfall.¹⁵

Problems of this type are pervasive. For practically every example in which states take a non-national approach to their low technology procurement, one can identify either a counter-example or some qualifying step that the governments may use to mitigate their dependence. The OTO Melara 76 mm gun is arguably NATO's only successful case at defense equipment rationalization. Not only have the member governments accepted the gun as their "standard," but they have also accepted the sole-source production of this weapon from its Italian manufacturer. Even the United States—the Alliance's defense industrial hegemon and a country that has rarely accepted any off-the-shelf purchases of any allied arms—chose to buy this weapon for use on its *Perry*-class guided missile frigates. Nonetheless, there remained limits to the extent that the United States and its European allies were willing to rely upon foreign technology. While they used the naval gun, countries such as Germany also insisted on buying their own nationally designed and manufactured ammunition to fire from it.¹⁶

In an environment such as this, one cannot definitively predict if European states will regard low-technology weapons procurement as different from high technology. On the one hand, we find that European states have declared an explicit focus

¹⁵ Interview. Group Captain David Hecken, Royal Air Force. Brussels. 5 July 1996

¹⁶ Interview. Alessandro Politi. London, 21 May 1996.

on protecting “national core competences.”¹⁷ Consequently, a country like Germany may indulge in off-the-shelf purchases in some munitions from practically any source, as it did from Hungary in 1990, without concern to “political phrases” such as “Europe,” according to one German procurement executive—as long as quality and cost concerns were met.¹⁸ But the German government also held that there was “no different philosophy on how to handle high-tech or low-tech equipment procurement.”¹⁹ Another German procurement official was more blunt in describing Bonn’s reluctance to pursue “cross-border” cooperation in the late 1990s:

Land armaments still carries too much of the sovereignty issue with it, and neither our government nor [Britain’s] has reached that point of detachment yet.²⁰

A British official assigned to NATO was equally dismissive of the potential for significant cooperation in the low-technology realm. While one could point to examples of cross-border procurement, and even limited dependencies in certain items, any argument that these items provide a fast road to meaningful defense industrial integration is “infantile wooly thinking that doesn’t stand a moment’s scrutiny.”²¹ This official argued that the principal barrier to substantive change in this technology domain was “historical memory:”

To the average man on the street, and more importantly to the typical parliamentarian whom he elects, the ability to produce the trivial—the commonplace—is the essence of national sovereignty and national security. Production of rifle-barrels, munitions, handguns, grey hulled ships with ornate gunnery, all these things are traditional instruments of defense and the traditional symbols of sovereignty. . .no British parliamentarian would support the notion that the UK’s next as-

¹⁷ Interview. Heinz Wolf, German National Armaments Defence Representative to NATO. Brussels, 2 July 1996.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Brooks Tigner, “Inertia Stalls European Consolidation Efforts,” *Defense News*, 20-26 July 1998, 22.

²¹ Interview. Official in NATO Secretariat. Brussels, 9 July 1996.

sault rifle simply be bought off-the-shelf from elsewhere. You cannot underestimate the emotional significance of this issue. The knee-jerk reaction of most people is to simply not give up this capability.²²

Attitudes such as these clearly represent a barrier to any sustained shifts toward the de-nationalization in low-technology defense procurement. The question remains, however, about the significance and nature of the movement that has occurred in this domain. The FH-70 and SP-70 projects provide an opportunity to assess the steps European states have taken to shape their collaboration in low technology weapons.

The Howitzers

FH-70 and SP-70 were Western Europe's first venture in collaboratively designed and procured tubed artillery. Their inspiration, however, had less to do with the "idea" of Europe than with the perennial NATO standardization debate. The specifications and perceived mission need for these systems grew out of discussions among the United States, Germany, and the United Kingdom that began in 1963. These countries sought to satisfy NATO Basic Military Requirement 39, which laid out detailed specification for a family of towed and self-propelled howitzers that would have a burst capability (i.e., rapid fire), and a 30 km firing range. The NBMR also called for a new family of 155mm ordnance that would provide maximum lethality against armor, dismounted infantry, and enemy artillery batteries.²³ These countries, later joined by Italy in 1967, established a "common ballistic" for 155 mm artillery, which they also set as their NATO standard.

The four governments briefly explored initiating a trans-Atlantic program in which they would jointly develop a new system to meet their agreed objective. The United States soon abandoned these negotiations, however, to singly develop a purely

²² Ibid.

²³ "SP 70 – the \$400 million fiasco," *Defense Attaché*, No. 1 (1987): 9.

national system, the M198. In 1968, Britain and Germany agreed to develop a joint towed gun, the FH-70, with a self-propelled variant to follow once development had progressed in the field howitzer.²⁴ In 1970, after the construction of an initial batch of prototypes and the establishment of agreed operational characteristics for the system, Italy joined the project as a full partner. Three years later, the three countries signed a separate memorandum of understanding committing them to begin development of a self-propelled howitzer utilizing the FH-70's gun as its core.

Harmonizing Requirements – What to build

The NATO discussions that began in the early 1960s established base requirements for both the towed and self-propelled systems. Indeed, the only point of contention among the discussants emerged during the quadrilateral talks in which the United States desired a lighter system than that advanced by its European allies—14600 pounds vice 20000 lbs—in order to maximize air portability.²⁵ This divergence led the United States to split from the other governments. On the European-side, the countries shared compatible mission needs. All three countries found themselves facing replacement cycle pressures to procure new artillery systems. They had acquired the bulk of their national holdings in the 1950s and early 1960s. Given technological innovation and operational wear, these would have to be replaced, or at least supplemented by more modern hardware beginning in the late 1970s and 1980s. This need presented the three states with the opportunity to indigenize their artillery forces, or at the very least break a cycle of dependence on American technologies that had developed following the end of the Second World War and the early years of defense

²⁴ R.B. Pengelly, "The U.S. Army's M198 Towed 155mm Howitzer," International Defence Review, Vol. 7 (1979): 1163.

²⁵ Ibid.

industrial reconstruction in Western Europe. The United Kingdom, for example, needed a more modern artillery system to replace its obsolescent mix of towed and self-propelled 105 mm and 5.5-inch guns, as well as its inventory of American designed 155mm M109 and 175mm M107 guns. These latter systems would require replacement by the end of the century and which no longer satisfied NATO performance goals for fire, mobility, and reaction time.²⁶ Germany and Italy also sought to replace their American inventories of M109s and M114 towed guns. Requirements differences between these countries centered on relatively minor operational issues in the FH-70, namely the sighting systems, the appropriate rate of burst fire, and the addition of an auxiliary power unit to the FH-70. These issues were readily solved but they did lead to delays in development. The SP-70's requirements, on the other hand, remained within the parameters established by the NBMR and largely reflected a desire for a generational upgrade beyond the systems that they then held. As initially conceived, the SP-70s specifications would have made it superior to the dominant M-109 with enhanced range (24km versus 18km) and improved road speed (67 kph versus 56 kph).²⁷

Equity – How to build

Development and production for both FH-70 and SP-70 followed a modified *juste retour* pattern. Member governments received sub-system design and fabrication responsibilities commensurate with their planned production runs. The split on FH-70 was 36.25/36.25/27.5 for Germany, Britain, and Italy, respectively. Because it began as a bilateral program, and had actually progressed into development before Rome joined the collaboration, Britain and Germany opted to evenly divide their work shares by

²⁶ Ingo Niemzig, "The SP-70-1," NATO's Fifteen Nations (Oct.-Nov. 1981): 84.

²⁷ "SP 70 – the \$400 million fiasco," 12.

allowing Italy to carry 27.5 percent of production work share while reimbursing them for 27.5 percent of their already incurred development costs.²⁸ System responsibilities for FH-70 included:

- UK/Vickers Shipbuilding Group– carriage, traversing gear, high explosive shells, and propelling charges
- Germany/Rhinemetall GmbH – loading system, auxiliary propulsion unit, suspension, sighting computer, smoke and illuminating shells, and propelling charges
- Italy/OTO Melara – gun cradle, recoil system, sights bracket, elevating gear, high explosive shells, smoke and illuminating shells, and propelling charges.

Except for ordnance, there is no evidence that the governments carried the *juste retour* principle to sub-system design, in contrast to their high technology collaborations. That is, the participating states did not insist that multinational consortia design and fabricate sub-systems. Arguably, this was due to the low cost/low value-added nature of the technology and the fact that there were no gains to be made from technology transfer between the member states.

FH-70 entered production in 1976, the same year as *Tornado*, and operational employment began two years later. SP-70, on the other hand, collapsed in its development phase. Its failure emanated from delays rooted in equity tensions between the governments. Upon the signing of the initial Memorandum of Understanding in 1973, the partner states had many reasons to believe that this follow-on system to FH-70 would proceed smoothly. Unlike its cousin, SP-70 was established as a German-dominant program with Bonn receiving a 56 percent work share, followed by Britain

²⁸ Major General R. J. Crossley, "Collaboration – A Winning Hand or a Busted Flush," Journal of the Royal Artillery, Vol. CXV, no. 1 (March 1988): 51.

at 34 percent and Italy at ten percent.²⁹ SP-70, however, was to utilize an assortment of established technologies that not only reflected the legacy of partnership begun with FH-70, but also noted Germany's position as project leader and primary contributor. First, and foremost, the heart of the SP-70 was to be the FH-70's gun for which there were already nearly 2 dozen prototypes undergoing testing at the time. Second, the platform chassis, as well as the tracks, suspension, and ventilation and nuclear-biological-chemical protection systems, were lifted from the German-designed *Leopard I* main battle tank, in service in both Germany and Italy.³⁰ Third, the powerplant, the MTU MB 8711 diesel engine, and the ZFP 25000 final drive were also German in origin, having been developed for the *Leopard II* tank. Finally, the producing states also opted to incorporate transmission components from the German *Marder* infantry combat vehicle.³¹ Unfortunately, however, these perceived strengths ultimately proved to be illusory.

Instead of saving both time and money in the development and production of the SP-70, reliance upon these existing technologies contributed to the project's collapse. The developmental strategy confined the partner states to a platform that was not flexible enough to readily accommodate the platform-unique sub-systems that the members hoped to employ within it. Whereas most western self-propelled howitzer systems enjoyed relatively large internal spaces for crew accommodations and gun housing at the cost of increased weight and reduced stability, the SP-70s use of existing German tank designs meant that it would be essentially tank-like with a limited turret volume and restricted loading, although it would gain greater stability and protection from its reduced profile.

²⁹ Ibid.

³⁰ "SP-70 – the \$400 million fiasco," 12.

³¹ Ibid.

Once development proceeded toward indigenous systems such as the fire control system and the ammunition handling system (AHS), however, project engineers found themselves in an unenviable position. First, these and other sub-systems presented significant interface challenges with the main platform and led to successive delays and re-engineering efforts. Second, as this slippage pushed the desired in-service target date from the early 1980s to the early 1990s, system engineers found that the SP-70 design lacked the internal volume to support the crew and base functions, and leave room to employ new innovations in guidance systems, fire control computers, and automatic gun laying systems.³²

While these problems were considerable and could be traced to the logic of *juste retour* that justified the use of German systems as the basis for the SP-70's housing and propulsion, it would be wrong to assume from this that the project was simply a victim of too much—or more accurately, poorly conceived—sub-system specialization. Perversely, the same sub-systems that were problematic fits within the SP-70's hull were themselves manifestation of the same kind of *juste retour* calculus that had distorted collaborative activity in aerospace. SP-70 was more than a rifled tube attached to an already developed tank chassis. It was also a collection of relatively sophisticated electronic and mechanical systems that would allow it to engage targets at distance, provide saturating and accurate fires, and relocate quickly as required. These sub-systems were to provide SP-70 with a qualitative edge that would made it rival any self-propelled artillery platform in either NATO or the Warsaw Pact.³³ As such, these technologies transformed SP-70 into something that resisted easy categorization as it was concurrently both a low-technology and high-technology platform, albeit with very small overall system cost.

³² “SP 70 – the \$400 million fiasco,” 15.

³³ *Ibid.*, 12.

Nonetheless, the promise of technology transfer and the acquisition of proprietary rights to new innovations were irresistible to the partner governments. Whereas they had embraced sub-system specialization throughout FH-70, their approach to SP-70 was to extract as much benefit from the value-added components as possible, with procurement decisions following political, i.e., protectionist, concerns instead of efficiency or even engineering ones. For example, the automatic handling system (AHS) was arguably the most sophisticated piece of native hardware fitted to the SP-70. It consisted of a complex, electro-mechanical ordnance conveyance and control system that was superior to that found in other self-propelled howitzers during the 1970s, i.e., the US M109 and the French AMX 155GC.³⁴ The AHS worked by transferring shells from a magazine into a loading tray where it positioned them for insertion into the gun breech. From there, shells were hydraulically rammed into the gun. A computer controlled this entire process, which was ultimately an ornate series of fully automatic vertical and horizontal shell movements.³⁵ The member governments were keen to apportion it into “value packages” in which all three could claim key components such as the shell replenishment gear and the magazine. Consequently, although the AHS was the responsibility of Royal Ordnance in the United Kingdom, its key constituent sub-systems were nationally divided among the other two partner companies, Rheinmetall and OTO Melara. The British produced the magazine and the tray, the Germans led with the ramming system, and the Italians specialized on the shell transfer arms. System engineers were unable to reconcile these national contributions. Persistent incompatibilities between national components in the AHS meant that the

³⁴ Ibid.

³⁵ Ibid., 13.

system not only failed to satisfy its fire performance requirements, but also had an unacceptably failure rate under stress.³⁶

By 1977, the inability of the nations to remedy this issue, coupled to fears that the SP-70 would fail to meet its most basic requirement—that the platform would remain cheap enough for the member states to produce and employ in quantity—led them to attempt to “desophisticate” the system by employing less innovative technology in the AHS.³⁷ In addition, they also recognized that the Byzantine national work-share arrangement could not work, and they agreed to assign the United Kingdom total system responsibility—accompanied by a financial offset to Rome for its sunk development expenses.³⁸ This quickly proved, insufficient, however, as the obligatory U.K. redesign of the entire AHS, and subsequent problems integrating this system with rest of the platform, effectively extended development for another eight years, pushing the planned start of production to 1990 at the earliest.³⁹ By 1985, member states still had not resolved the problems with the AHS interface and its operational performance shortcomings. This persistent failure led to growing dissatisfaction among all three national defense establishments. As conceived in 1968, SP-70 was to be a relatively cheap platform to be introduced by 1981. Instead, recurring technical issues had led to ever-receding in-service dates: 1983, 1987, and finally 1990.⁴⁰ Moreover, on-going development and slipping timelines meant increasing cost—a particularly troublesome issue for a program some national officials regarded as a collaborative affectation, or, in other words, a collaborative venture that lacked any material drivers, such as tech-

³⁶ Trials indicated a reliability rate of roughly 51%. Andrew Chuter, “W. Germany will not back current SP-70 development,” *Jane’s Defence Weekly*, 21 December 1985, 1337.

³⁷ Walter Stone, “Current Trends in Artillery,” *Defense* (November 1985): 511.

³⁸ “SP-70—The \$400 Million Fiasco,” 14.

³⁹ UK National Audit Office, *Ministry of Defence: Collaborative Projects. Report by the Comptroller and Auditor General* (London: HMSO, 1991), 54.

⁴⁰ By the mid 1980s, British and German gunners derisively referred to the project as the “SP-2000.” Stone, “Current Trends in Artillery,” 511.

nological complexity or cost that necessitated some measure of foreign outreach in order to offset national shortcomings.⁴¹

SP-70's problems arose from national agendas distorting the procurement process and imposing inefficiencies. While this was a normal feature of European collaboration, unlike *Tornado* or *Eurofighter*, each member government possessed the ability to build a similar system on its own. In fact, the same year that the governments opted to rationalize AHS development, the Italians launched their own national 155 mm self-propelled howitzer system through OTO Melara, which entered production in 1982.⁴² This reality made the governments reluctant to pour money into the platform once the system began to run the risk of becoming obsolete by the time it was introduced.⁴³ By 1986, all of the states had agreed to cancel the project and within two years they were each either developing or producing national systems to satisfy SP-70's requirements niche.

Institutionalization – management and control

FH-70 and SP-70 utilized relatively simple administrative structures – ones that arguably reflected the low significance that the member governments assigned to these collaborations. Because the systems were conceived at the same time in 1968 as sister programs, Bonn and London adopted a “family of weapons” approach in which the countries would alternate as “lead nation:” the United Kingdom for FH-70 and

⁴¹ Interview. Anthony Scott. Head of NATO Land Armaments Planning Section. Brussels, 3 July 1996.

⁴² See Christopher Foss and Ronald T. Pretty, “OTO Melara OF-40 main battle tank and Palmaria 155mm self-propelled howitzer,” *International Defense Review* Vol. 2, no. 3 (1981): 221.

⁴³ Because of the ordnance handling issue, the SP-70 design did not change to accommodate new innovations in the 1980s in guidance systems, fire control computers, and automatic gun laying systems. Adding these technologies would have required significant changes to the platform's hull given its cramped operator spaces, and thus would have necessitated an even greater expense and delay to a program suffering extensively from both. “SP 70 – the \$400 million fiasco,” *Defense Attaché*, No. 1 (1987): 15.

Germany for the SP-70. This designation meant that the system program office which was located in the defense ministry of the selected country would act as program coordinator responsible for harmonizing the trilateral efforts. The office supplied the administrative staff to Joint Management Boards established in each program to provide political control and harmonize state interests. Further, the office managers would also chair these organizations. The lead nation's program office did not, however, possess any delegated authority to make binding decisions.⁴⁴

In practice, decision-making remained consensual and all the partners held equal voices in the programs' management structures. As noted, in both FH-70 and SP-70, political guidance lay vested in Joint Management Boards consisting of general-officer representatives from the three states who met every six months. Beneath the Boards, program offices in each national defense ministry provided day-to-day oversight of each system. Given the absence of an international project office, however, this supervisory function was largely limited to those sub-systems "of the joint program(s) allocated to their respective governments."⁴⁵ At the industrial level, the governments opted not to create holding companies to serve as prime contractors, but instead established "technical project management teams" consisting of representatives from each of the three national partner companies. These teams met infrequently and sought to ensure that the individual efforts of the national firms matched each other as the programs moved through development, and in the case of FH-70, production.

Subsequent analyses by the British and German governments have contended that this austere management system represented a failing in both programs. More-

⁴⁴ UK National Audit Office, Ministry of Defence: Collaborative Projects, 54.

⁴⁵ Independent European Programme Group, Towards a Stronger Europe. Volume 2 (Brussels: IPEG, 1989), 112.

over, it arguably contributed to the collapse of SP-70, as the lack of contractual bonds among the partner companies hampered “industrial coordination” and magnified the equipment interface problems that plagued the AHS.⁴⁶ For our purposes, however, they are suggestive of the limits that European countries impose upon their collaborations in a mixed-case such as the SP-70, or more notably, in low technology cooperation embodied in the FH-70. Indeed, while the states did not create complex ornate administrative structures as they did in their aerospace partnership, nonetheless, they were keen to not mitigate their own sovereignty or undermine the independence of their national producers.

Conclusion

The Euro-howitzer projects demonstrate that European countries did not behave in substantively different ways in low-technology collaboration, as compared to their high technology partnerships. While I have examined here the FH-70 and SP-70 as a weapons family, given their common origin and staggered development, in reality, they were different systems open to different interpretations regarding the limits of state interest in collaborative European defense procurement. In both projects, *le juste retour* and national control remained the defining attributes of state activity. That said, in the FH-70 we saw limits to the extent that states were willing to go toward capturing and controlling the procurement process in their collaborations. In this case, the member states executed relatively straightforward work-share arrangements with the apparent purpose of producing a weapons system as quickly and as cheaply possible. The states did not express any particular vision other than satisfying their national requirements. The SP-70, on the other hand, was much closer to what I have established

⁴⁶ UK National Audit Office, Ministry of Defence: Collaborative Projects, 54.

as the model of high-technology cooperation in Europe, in part due to its peculiar nature. As Walter Stone wrote,

SP medium artillery is a very fine thing, but not if the equipment costs more to purchase and maintain than a main battle tank, and this is the way the trend seems to be drifting. . .By this time [the 1970s-1980s] there should be no problem in designing a piece of ordnance, or a chassis to go underneath it, but it is ancillaries demanded by current doctrine which are giving the designers headaches.⁴⁷

The SP-70's problems were magnified by the incorporation of high-technology sub-systems that invited state-centric politicalization and inefficiencies as the member governments initially tried to maximize their individual gains from the innovation.

The history of the SP-70 demonstrated that the line between high technology and low technology could be remarkably hard to distinguish. A single value-added component, or sub-systems suite, could provoke the same petty behavior that we witnessed in *Eurofighter* and *Tornado*. In those projects, however, the states were willing to pay almost any price to secure their procurement, arguably because they did not have the option of wholly local production. The SP-70, on the other hand, was wholly optional as a collaborative venture: each country could go it alone, as indeed they ultimately did. The governments did this because although SP-70's complex sub-systems arguably made it more a high-technology program than a low-tech one, those elements were within the technological and financial capacities of each state. SP-70 was intended as a demonstration of depth of Anglo-German-Italian partnership and secondly as a means of pooling resources and sharing costs. Once the collaborative process began to falter as the member states failed to integrate their industrial contributions to the program, and thus could no longer restrict program costs within a comfortable threshold, the ideals of alliance fealty, "Europe," etc. were readily set

⁴⁷ Stone, "Current Trends," 511.

aside as the governments moved to secure more fiscally sound, non-collaborative procurement options: service life extensions to the M109 in Germany, or the production of national self-propelled artillery systems, such as Britain's AS-90.

Nonetheless, the question remains as to what can one say about the role of European identity in these two cases. FH-70, like *Tornado*, was a baseline case, initiated in the late 1960s and brought into production by the mid-1970s. Moreover, its formative development had already been completed before the concept of a transnational identity in Europe was even deemed an appropriate social development by regional leaders, much less systematically studied. Consequently, one would not expect any shifts in state collaborative behavior in that platform to reflect identity shifts. FH-70, however, did not mirror the pattern found in high-technology projects. While the national governments were unwilling to loosen their control over program management, they did not rigorously pursue *juste retour*. They divided the platform into purely national, single-source sub-systems, which they later integrated. The presence of this "innovation" in the absence of an established transnational identity suggests that some other factor shaped state decision-making. I suggest that the banality of the technology was such that the national governments could enjoy the best of worlds: robust state involvement and a measure of industrial return without the inefficiencies ensured that by the fine divisions of work-share down to the component level. In other words, the technology simply was not valuable enough or sufficiently exotic to warrant unabashedly petty behavior.

The same was not true for the SP-70. The addition of a few computer control and loading sub-systems was enough to transform an otherwise unchallenging platform based largely on existing technologies into a source of friction as the partner states insisted on maximizing their national shares in those key electro-mechanical systems. This behavior ultimately led to the collapse of the program as SP-70 clearly

lacked any justification, either ideational or material, for the national governments to seek timely compromises to move beyond their differences or to set aside their industrial return concerns. First, SP-70 arguably did not enjoy an ideational environment that might encourage states to rationalize the program. By the mid-1980s, the existence of a collective identity in Europe had been well established by polling data, but this arguably was not sufficient to impede state-centric behavior in the program. Second, as noted earlier, SP-70 was neither expensive or exotic *enough* to lock the national governments into a collaborative program.

This “failure” of European identity in low-technology procurement certainly poses a challenge to my hypothesis. Nonetheless, one must also consider other forms of low-tech cooperation. By its very nature as an inexpensive and technically unchallenging procurement area, co-development of low-technology equipment arguably will be rare and collaborations of this type may not be the best measure of transformations in state interest and identity. Indeed, FH-70 and SP-70 are thus far (2004) the only cases of tubed artillery co-development in Europe. We must still assess under what conditions European countries are actually willing to depoliticize their cross-border defense procurement. All co-development projects are innately political: involving the selection of management structures, mitigating equity concerns, and so on. Perhaps the best test for shifting state interest and ideas about the varying importance of different level of defense technology lies in those instances in which states truly set aside the burdens of nationality—the national local of production and the nationality of producers—and act on economic logic bounded by their larger political relationships within the European or even Trans-Atlantic “communities.” There is a well-established pattern in Europe of simple, cross-border procurement, for example. Although it is unregulated and often offset by crude calculations of national interest, it nonetheless

occurs. We shall now turn to Europe's first major effort to promote the market over national politics in regional armaments cooperation.

CHAPTER SEVEN

TRADE, COUNTER-TRADE AND LAST BEST HOPES: THE ANGLO-FRENCH RECIPROCAL PURCHASING AGREEMENT

The mid-1980s witnessed important transformations in the evolution of the European project. Political Europe and Economic Europe enjoyed nothing less than a *relance* following nearly fourteen years of institutional stagnation and inefficacy.¹ The passage of the Single European Act in 1986, and its enforcement a year later, both strengthened and expanded the then-European Community. The Community gained new powers to shape regional policy and technological innovation; qualified majority voting replaced the universal application of unanimous decision making in all but the most nationally sensitive areas of the developing internal market.² Most striking was the empowerment of the European Parliament, which was given added legislative competencies to scrutinize and modify proposals emanating from the European Council and from the Commission, thus increasing Europe's democratic legitimacy to a level then unmatched in the Community's history.³

¹ Vincent Wright, "Explaining *Relance*: European Integration as Model, Myth and Instrument," in The European Community after 1992: A New Role in World Politics, eds. Armand Clesse and Raymond Vernon (Baden-Baden: Nomos Verlagsgesellschaft, 1991), 80.

² Since 1966, all decisions approved by the European Council, the EC's executive institution, required unanimity from the member states. Following the institutionalization of the Single European Act, only select issue-areas deemed vital to state sovereignty remained under unanimous voting regime. These were: taxation, cross-border labor movement, and labor rights. Gary Hufbauer, "An Overview," in Europe 1992: An American Perspective, ed. Gary Hufbauer (Washington DC: The Brookings Institution, 1990), Appendix 1-5.

³ For a detailed discussion of the European Parliament and its reformation under the Single European Act, see Juliet Lodge, "The European Parliament — from 'assembly' to co-legislature: changing the institutional dynamics," in The European Community and the Challenge of the Future, ed. Juliet Lodge (New York: St. Martin's Press, 1989), ch 3.

These developments, coupled to the designation of the 1992 deadline for completing the common market and achieving economic union, generated a sense of hope and expectation in European affairs that had not been felt in nearly a generation.⁴ While these areas of European integration moved forward, however, the ideal of an Armaments Europe remained uncertain, at best. Within the text of the Single European Act, its signatories pledged to strengthen their cooperative bonds and reaffirmed their collective intent to “maintain the technological and industrial conditions for their security” both at the national level and, whenever possible, multinationally within existing European institutions and organizations.⁵ To their credit, by 1987 they had invested billions of pounds, marks, francs, and lira into collaborative projects such as *Tornado* and the *FH-70*; and there was every reasonable expectation to assume they would continue to spend billions more in future projects. General Alfred Cahen, Secretary-General of the Western European Union, argued that Europe should and would move forward in armaments coordination because it had by this time attained a level of “like-mindedness” and industrial homogeneity that could permit such an achievement.⁶

Nonetheless, as we have seen in the preceding chapters, the mid-1980s were hardly a high point in European defense industrial collaboration. The bulk of all procurement moneys invariably went to purely national programs. Further, in 1985, the *Tornado* project was nearing the completion of its original production run; the *SP-70*

⁴ See Ernst Haas, *The Obsolescence of Regional Integration Theory* (Berkeley: Institute for International Studies, 1975); Roger D. Hansen, “European Integration: Forward March, Parade Rest, or Dismissed?” *International Organization* (Spring 1973): 225-254.

⁵ Adapted from Article 30(6)(b) of the Single European Act. See Terrence Guay, *At Arm’s Length: The European and Europe’s Defense Industry* (London: MacMillan Press, 1998), ch. 3, fn. 12.

⁶ Western European Union, *Proceedings: Minutes - Official Reports of Debates* 34th Ordinary Session, 2nd Part (Paris: Western European Union, December 1988), 67.

was locked in a slow death of bureaucratic paralysis, and would soon collapse; and the tortured negotiations of the *European Fighter Aircraft* were also nearing an end, but only after they had displayed the worst effects of the persistent nationalisms and petty industrial patriotisms that had distorted armaments cooperation for years. Indeed, by Summer 1987, a report commissioned by the parliamentary assembly of the Western European Union proclaimed that after forty years of defense cooperation,

the only conclusion that [can be drawn] here is that in the Independent European Programme Group as well as in the European Community there is obviously still a lack of political will and courage to develop the common European technological programmes which are so badly needed to prevent Europe becoming increasingly dependent upon the United States and Japan in this area.⁷

François Heisbourg, a French diplomat-cum-industrialist assigned to NATO and later the WEU's International Institute for Strategic Studies, went so far as to argue that the "heyday" of European defense industrial collaboration had come to an end. Cooperation would become an unavoidable necessity, but would only become harder over time to initiate and organize such that there was "little reason to expect dramatic breakthroughs in this direction."⁸

While the validity of Heisbourg's supposition over the long-term has yet to be proven, the situation was not completely hopeless in the mid-to-late 1980s. Ongoing changes in defense markets at the national, regional, and global levels—coupled to attitudinal shifts as the significance of defense technologies to national economies evolved within a slowly integrating Europe—would pressure governments to shift their collaborations in both form and intensity. The end of the Cold War and the result-

⁷ Western European Union, "Document 1119," Proceedings: Assembly Documents 33rd Ordinary Session, 2nd Part (Paris: Western European Union, December 1988), 235-236.

⁸ François Heisbourg, "Public Policy and European Arms Market," in The European Armaments Market and Procurement Cooperation, ed. Pauline Creasey and Simon May (New York: St. Martin's Press, 1988), 76.

ing collapse of defense budgets would soon move this process even further forward. We have seen these pressures and transformations manifest through the evolution of the *Eurofighter* project, as the member states attempted to denationalize their collaborations through the limited use of market principles in the awarding of sub-contractor tenders.

Europeans have always recognized the existence of other models of cooperation that they might apply to better manage their collaborations. For example, the proposals embedded within the European Defense Community treaty demonstrated that armaments coordination need not always be innately politicized and economically inefficient. Beginning in the mid-1980s, one saw the first ostensibly sincere efforts in Western Europe to move beyond the traditional models of co-developement and co-production; indeed, to move beyond collaboration completely and embrace market principles of competitive procurement and trade. The Anglo-French Reciprocal Purchasing Agreement, or RPA, enacted in the Fall of 1987 was the cornerstone of this renewed awareness. At the time of its founding, the RPA marked the most comprehensive effort in NATO Europe to liberalize the regional defense equipment market through competitive cross-border tendering. It was the model for a subsequent series of market-opening, reciprocal trade pacts within the alliance which were intended to incrementally rationalize regional defense production through rewarding efficiency and providing greater economies of scale. The intent of the creators of the RPA and its successors was to affect painless—and therefore politically acceptable—change through an explicit emphasis on low-value and unsophisticated defense goods, principally dual-use, general purpose, and off-the-shelf items.⁹

⁹Arthur B. Steinberg, *The Transformation of the European Defence Industry* (RAND: Santa Monica, 1992), 51.

This chapter addresses the history and record of the Reciprocal Purchasing Agreement. Originally hailed as a milestone in the evolution of defense cooperation, one that would finally yield the level of military, economic, and political/symbolic benefits that Europeans had coveted to attain from their cooperations for years, the RPA's legacy in no way matched the promise with which it was invested. It floundered in an environment in which national political establishments were loathe to exploit foreign comparative advantage or to accept the specter of dependence upon foreign sources of supply, as well as the risk of techno-industrial specialization that even a restricted liberalization in trade would entail. For the purposes of this thesis, however, the practical failings of this Anglo-French pact are important only for their theoretical significance. The RPA, perhaps more than any of the defense industrial cases that we have reviewed, best demonstrates the limits of a collective European identity in the defense sector by showing the degree that European decision-makers have converged, and how much they are willing to sacrifice to create a rationalized regional procurement regime.

In the following sections, I shall discuss the economic and political background surrounding the Reciprocal Purchasing Agreement. Banality was one of the most profound aspects of the RPA. There was little in the agreement that was unique. The agreement itself was not even the first attempt between France and the United Kingdom to promote and liberalize their cross-border trade. Most of its procedures and goals had been promoted in European defense discourse and even institutionalized on a bilateral basis elsewhere in the Atlantic Community. The RPA surfaced when it did because of a confluence of economic, political and ideational shifts which was alluded to earlier. I will first discuss these in greater depth. Second, I will overview the Agreement and what it detailed. Third, I will analyze the RPA's execution and highlight the foundations of its performance.

Background

Few concepts better define the condition of the European defense market through the 1980s than that of “irony”—and by the time of the Reciprocal Purchasing Agreement, irony was three-fold. First and foremost, in an environment increasingly dominated by regional economic integration, the European defense market did not exist in any real form. Since the creation of the European Coal and Steel Community in 1950-51, Western Europe moved haltingly toward the creation of a single market. Through a mixed strategy of positive and negative integration, such as harmonizing exchange rates and eliminating tariffs on intra-regional trade, Europeans forged a solid customs union and by 1985 created the foundation for a common market—a process advanced that much further with the passage of the Single European Act. Even by that time, the civilian European economy did not enjoy a truly unified market: no common currency, the retention of intra-regional non-tariff barriers, little crossborder public procurement, and four civilian industrial sectors excluded de facto from Community market regulation—telecommunications, transportation, energy and water supply.¹⁰ Nonetheless, the strides outside the defense sector of the European economy far exceeded anything that had occurred within.

Armaments Europe by the mid-1980s was not a market, or a customs union, or even a free trade area. It was instead 12 distinct and separate national markets, which as a report of NATO Conference of National Armaments Directors noted, were “based on national priorities” and intent upon the “protection of national technological and industrial bases.”¹¹ Through nearly all of the post-war period, national defense indus-

¹⁰ One 1989 study noted that cross-border government procurements had not exceeded 2 percent public procurement per annum within the Community. Hufbauer, “Overview,” 9.

¹¹ [Adapted from] NATO, Report by the Conference of National Armaments Directors on an Initial Investigation of the Feasibility of Improving the Conditions of Defense Trade Between Allies, C-

tries in Europe have been predominately publicly owned, and as the same NATO reported affirmed, “characterized” by a lack of competitive procurement not only between states, but also within national borders. As discussed in chapter 2, European decision-makers regarded their defense equipment firms as assets whose techno-industrial value was as important as their military role. Marketization, at any level, threatened to deny governments the ability to use defense procurement as a means to channel capital, promote employment, and to create systems of technology innovation deemed critical to support their national economies. This desire had been present and substantial since the reconstitution of state defense industries in the late 1950s. The founding treaty of the European Community, the Treaty of Rome, enshrined defense production as a special category of economic activity, inseparable from national interest and state security. Article 223 designated an exhaustive list of primary and dual-use defense goods for which Community regulations over internal trade and industrial policy would not apply.

From the institutional beginning of the integration movement in Western Europe, member states isolated their defense industries, and using Article 223 as justification, “systematically protected” their defense from the “europeanizing” pressures found within the civilian economy.¹² Defense Ministries regarded the outright purchase of foreign arms to be, at best, a “measure of last resort” undertaken under the most extreme economic or political constraints.¹³ Only the smaller allies with their restricted defense industries and relatively minuscule defense budgets had little choice

M(91)47 (Brussels: North Atlantic Council, 21 June 1991), 15. Quoted in Alistair D. Edgar, “A New European Defense Market: Cooperation, Competitive Interdependence, or Divisive Competition,” in *From Euphoria to Hysteria: Western European Security After the Cold War*, ed. David Haglund (Boulder: Westview Press, 1993), fn. 3.

¹² Jacques Fontanel and Jean-Paul Hébert, “The End of the ‘French Grandeur Policy,’” *Defense and Peace Economics* 8 (1997): 45.

¹³ James Moray Stewart, “The European Defense—Principles and Policies,” *NATO’s Sixteen Nation’s* (Dec. 1989/Jan. 1990), 21.

but to rely upon the direct purchase of competitively priced foreign weapons. The medium-sized and large states, with home industries to protect and money to spend, insisted on maximum domestic production, even when they ostensibly bought existing systems from abroad.

Europeans sought to limit their intra-regional defense industrial cooperation to those partnerships that would provide guaranteed returns to their home industries. Through co-development and co-production, they managed internationalization such that a minimum of national procurement moneys went beyond state borders. Countries sought to share the total costs of development and/or production, but ensured that most national funding would go exclusively to national research centers and firms. This is not to say, of course, that no defense trade occurred within Europe. Dyadic trade throughout NATO Europe ranged from tens of millions to hundreds of millions of dollars in a regional defense market spending over \$42 billion on weapons by 1988.¹⁴ This figure included the transfers of assemblies and components procured as part of the myriad of co-development and co-production programs linking national defense industries. Intra-regional trade in complete weapons systems, however, represented only a small subset of this range—so small that most analyses did not even account for it until the late 1970s.¹⁵ By comparison, trade between the United States and countries like the United Kingdom, Germany, and Italy reached into the billions—that is, these states purchased billions of dollars worth of equipment from the

¹⁴ European Parliament, European Armaments Industry Research, Technological Development and Conversion Final Report (STOA/GRIP/IA, 1993), 73; William Walker and Susan Willet, “Restructuring the European Defense Industrial Base,” Defense Economics 4 (1993): 155; Robert Gessert, The Impact on the Rationalization of European Defense Industry of Alternative US Approaches to Transatlantic Defense Cooperation - Volume II (McLean, VA: General Research Corporation, April 1979), 130-131.

¹⁵ European Parliament, Working Papers 1983-1984 Document 1-455/83 (Brussels: European Communities, 1983), 11-12, 65-67. For an example of the bias in European defense analyses to focus exclusively on transatlantic trade gaps see also Keith Hartley, NATO Arms Co-operation: A Study in Economics and Politics (London: George Allen and Unwin, 1983), ch. 2.

United States in asymmetrical trade relationships at ratios ranging from 10:1 to 2:1 annually between the United States and Europe as a whole.¹⁶ Indeed, the volume of arms transfers between the whole of NATO Europe and the United States was (and still is) between four- to eight-times greater than the level of trade *within* the region.¹⁷

This often criticized fact of European defense procurement represented the second “irony” underlying the so-called European defense market: European states enjoyed better defense trade relations with their American allies than with their partners in the Community. For most Europeans, this arose as a by-product of the post-war defense industrial ties forged under the Military Assistance Program and other American initiatives to resupply European militaries and to rebuild the region’s defense industries. Furthermore, the enormous size of the United States’ defense industry, with its economies of scale and technical resources, ensured that the United States could supply weapons that were often less expensive and technologically superior than comparable systems produced within Europe. Europeans, consequently, were unwilling to completely wean themselves from American production for items that were either too financially or technically demanding to be met nationally, or when intra-regional industrial collaboration could not be attained. Even the dominant European producer/suppliers, the United Kingdom and France, retained a substantial level of dependence upon transatlantic trade. These countries, between 1967 and 1976, imported roughly the same amount from the US as from other NATO states, 96% and 99% respectively.¹⁸

Hans Dietrich Gensher, the former German Foreign Minister, once argued that such relationships endured because Europeans lacked the courage to embrace more

¹⁶ Simon Webb, NATO and 1992: Defense Acquisition and Free Markets, The RAND Corporation R-3758-FF, July 1989, 11.

¹⁷ Walker and Willet, “Restructuring the European Defense Industrial Base,” 155.

¹⁸ Gessert, The Impact on the Rationalization of European Defense Industry, 132.

radical methods of rationalizing their collective defense industrial needs, saying “it isn’t the Americans who are too strong; it is the Europeans who are too weak.”¹⁹ Instead of working together and embracing the diversity and national industrial strengths within the Community, Europeans devoted most of their energies first to criticizing trade imbalances with the United States and later to forging bilateral agreements with the US to liberalize procurement rules and regulate cross-country trade.

This was the third and final “irony” of the pre-1985 European defense market. The first efforts at the promotion of defense trade within Western Europe occurred not from European vision, but from American instigation and European particularism.²⁰ Beginning in 1975, and in response to growing European criticism over the perceived closure of the American defense equipment market, the United States signed a series of Memoranda of Understanding (MoU), first with Britain and then with the other arms-producing states in NATO Europe.²¹ The MoUs pledged the signatories not to discriminate against each other’s defense firms in national procurement contracts and to alert the others about bidding opportunities in the home market. Europeans had long coveted better symmetry in US-European defense trade. Since the post-war re-establishment of national defense industrial bases in the 1950s, Europeans had subsidized their domestic armaments production through exports, principally to customers in the Third World. These transactions diffused R&D costs, and also ensured longer production runs than could be supported through solely domestic consumption. In fact, within military aerospace, the exportation of 40% to 50% of total output was not only

¹⁹ Cited in Thomas Callaghan, “NATO’s Collection of Forces,” *Journal of Defense & Diplomacy* 5 (1987): 19.

²⁰ Heisbourg, “European Arms Market,” 81.

²¹ This criticism formed the basis the “Two-Way Street” debates of the 1970s and 1980s.

considered normal, but also necessary to maintain the financial well-being of the firms involved.²²

The American market, consequently, represented an enormous prize to any European defense industry that gained better access to it. The United States' yearly military expenditures from 1967 to 1976 were on average 2.5 times greater than all of NATO Europe. Moreover, its military requirements often called for high valued-added systems. For many European decision-makers, the United States market presented a means of advancing their defense firms through orders of quantity and quality impossible to attain in any other market. It is little wonder that European governments rejected a United States' offer in 1984 to sign an "umbrella MoU" that would liberalize trade on an Alliance-wide basis.²³

Throughout the 1970s and early 1980s, Europeans were content to set aside any proclaimed fealty to the ideals of Europe and of European cooperation in favor of bilateral agreements with an extra-European party, in order to maximize their national interests. This *dis*-integrative behavior was matched, and indeed, compounded by the relative disinterest among Europeans themselves to reproduce the United States' liberalization initiative on an intra-regional basis. Before 1975, suggestions to reduce impediments to defense trade and promote cross-border procurement were dismissed as utopian and not reflecting the reality of Europe's equipment procurement "regime," in which states increasingly worked together economically and politically, and yet continued acquire defense goods on the basis of distinct national requirements.²⁴ D. F.

²² Robert Gessert, *The Impact on the Rationalization of European Defense Industry of Alternative US Approaches to Transatlantic Defense Cooperation - Volume I* (McLean, VA: General Research Corporation, April 1979), 13

²³ Callaghan, "NATO's Collection of Forces," 18.

²⁴ D.F. Ingrey, "The Philosophy of International Equipment Collaboration," in Weapons Procurement, Defense Management and International Collaboration (London: Royal United Services Institute, October 1972), 28.

Ingrey, the manager of the International Policy Division in the Procurement Executive of the United Kingdom's Ministry of Defense, argued in 1972:

From the political viewpoint, it appears to me that the concept relies upon the achievement of a measure of political unity within Europe which certainly does not exist at present.²⁵

It seems unlikely that conditions and mindsets would have changed dramatically within four years to permit a cross-border defense trade regime to arise in Europe. Nonetheless, explicitly following the American example, the United Kingdom launched its own set of bilateral defense trade MoUs, first with France in 1976 and latter with the Netherlands. While these were similar in form and function to the transatlantic agreements, they were not extended the same importance and dedication as the American MoUs. The US-Europe agreements were at least accompanied by a lessening asymmetry in defense trade. Between 1976 and 1985, one RAND study noted that trade gap between the United States and whole of NATO Europe declined from 5:1 to 2:1.²⁶ In Europe, on the other hand, the British initiatives were neither reciprocated nor earnest. There was no evidence that other European states launched any cross-border liberalizing reforms of their own. Further, Britain's efforts were extremely circumscribed. The 1976 Anglo-French agreement was little more than a declaration of principles, and negotiated in less than half a business day.²⁷ While Britain did not strive for an agreement of substance with the French, they did not form a pact with the Germans at all. As we have seen, Germany was the United Kingdom's principal collaborative partner by the late 1970s. Yet neither country strove for a more institutionalized and rationalized defense industrial base.

²⁵ Ibid.

²⁶ Webb, NATO and 1992, 11.

²⁷ Gessert, et. al., "The Impact of the Rationalization of European Defense Industry," 145

While this initial European effort to reform intra-regional defense trade was clearly half-hearted, its true efficacy could be judged by its ability to promote actual changes in state behavior. In the case of the Anglo-French agreement, it was an unmitigated failure. Between 1967 and 1976, the cumulative value of transfers of complete weapons systems between the United Kingdom and France was \$10 million (in 1979 dollars)—and this figure was entirely British, as the French purchased nothing from across the Channel during this period.²⁸ As each country's annual military expenditure averaged nearly \$11.5 *billion* over these 10 years, \$10 million in trade was practically no trade at all. By the early 1980s, Anglo-French trade had improved to only approximately \$12 million per year, mostly through one-off purchases for small, discrete items and for the procurement of spare parts for Anglo-French joint ventures dating back to the early-1960s.²⁹

Why the 1987 Reciprocal Purchasing Agreement?

As we have seen here and in the preceding chapters, Europeans had little to be proud of in their efforts to create a European armaments base, and even less to cheer concerning the liberalization of intra-regional trade by the early 1980s. Nonetheless, near the end of 1987, Britain and France created a new defense trade agreement, one that was quickly praised as a model of defense procurement cooperation within the Alliance, and indeed, became a template for the Independent European Programme Group's 1989 European Defense Equipment Market initiative—the first multilateral attempt to promote cross-border defense trade on a Europe-wide basis.³⁰ The question

²⁸ *Ibid.*, 131.

²⁹ Marcel Benichou, "The Development of Anglo-French Relations in Defense Equipment," *RUSI Journal* (Winter 1989), 55.

³⁰ North Atlantic Assembly, Defense and Security Committee, Interim Report of the Sub-Committee on Conventional Defense: New Patterns of European Security Collaboration (Brussels: NATO, October 1989), 13.

arises as to how such a transformation could occur, as well as to its ultimate significance.

Carol Reed, a defense journalist focusing on European affairs in the 1980s and 1990s, argues that the Reciprocal Purchasing Agreement with its emphasis on market reform was in part a reflection of community-feeling that existed with French and British policy-making circles, as well as permeating the region as a whole. “Pan-European political pressures” generated by the Single European Act and the anticipation of 1992, nurtured a “no-frontiers” attitude upon European elites that led to a surge in civilian commercial activity. The RPA was the first purely military manifestation of this phenomenon to occur in Europe.³¹ Such sentiments may have played a part in launching the initiative, and as we shall see, a certain Europeanist rhetoric did surround the early negotiations behind the Agreement, as well post-hoc official justifications for its creation and implementation. Nonetheless, far more apparent were structural economic forces and shifting national attitudes toward procurement liberalization and competition.

Arguably the most pronounced pressure upon European procurement practice in the 1980s occurred not from some institutional transformation or ideational shift, but rather from the collapse of export markets beginning in 1984. Many of the traditional buyer states, such as Israel and India, had become, by the 1970s and early 1980s, arms producers themselves and had begun competing with their former European suppliers in emerging markets. The effects of this new development, coupled to constant competition with the United States for many of the same markets, were dramatic. European weapons exports reached a post-war high in 1984, totaling 17.4

³¹ Carol Reed, “The Anglo-French Connection: The Reciprocal Purchasing Agreement,” *Defense* (November/December 1989): 853.

billion ECU in sales.³² Following that year, exports fell steadily and by 1992, were 40% of their 1984 figure.³³ For some countries, the situation was still more traumatic. In France, the value of export orders fell by roughly 40% in just two years, between 1984 and 1986.³⁴ This shock had an immediate impact on both defense industrial turnover and employment throughout Europe, leading to a slight but protracted fall in both area into the 1990s that accelerated with the collapse of the Soviet threat.

For France and the United Kingdom, with their advanced and highly export-dependent defense industries,³⁵ the shrinking global arms market meant that both states had to place either a greater emphasis on domestic sales and as yet untapped export markets.³⁶ In each country, export sales allowed their defense firms to recoup fixed costs and produce lower unit costs yielding an annual savings ranging between \$844 million and \$1 billion.³⁷ The loss of these cost savings placed upward pressure upon state defense budgets—a situation that exacerbated the existing effects of cost escalation profiled in chapter 2.

Both Britain and France regarded this as a major challenge to their defense industrial well-being. In Britain, equipment expenditure as a percentage of the total defense budget increased from 41 percent in 1980-81 to 46 percent in 1983-84.³⁸ While the system replacement needs of the Falklands War accounted for some of this growth, most occurred due to outlays for a number of long-term arms projects reach-

³² European Parliament, European Armaments Industry, 9.

³³ Ibid.

³⁴ United States Congress, Office of Technology Assessment, Lessons in Restructuring Defense Industry: The French Experience—Background Paper, OTA-BP-ISC-96 (Washington DC: US. GPO, June 1992), 8.

³⁵ In 1987, for example, France was the world's 3rd largest arms exporter with exports consuming 40 percent of all defense production. The United Kingdom was a very close 4th. "The Future Challenge: Aiming for a European Armaments Industry," Military Technology (November 1988): 39.

³⁶ Mark Smith, "Entente more cordiale," The Engineer 265 (17 September, 1987): 22.

³⁷ Steinberg, The Transformation, 17.

³⁸ William Walker and Philip Gummatt, "Britain and the European Armaments Market," International Affairs 65 (Summer 1989): 420

ing peak levels: the *Tornado* fighter-bomber, the *Nimrod* airborne early warning aircraft, and the *Ptarmigan* tactical communication system, among others. The British defense establishment quickly became concerned about the potential for a “funding gap” in the late 1980s and 1990s as the equipment budget threatened to consume monies earmarked to supply other security needs. Simply increasing the defense budget was not a politically acceptable solution, given the recessionary UK economy of the period, as well as elite fears that defense procurement had begun to divert manufacturing output from the civilian economy.³⁹ The UK Ministry of Defense either had to contain these costs, or face the prospects of canceling weapons programs, or reducing personnel and salary levels, or curtailing some defense roles, e.g., the withdrawal of landforces from Germany or the termination of the naval air arm.

The British Government chose to apply Thatcherite, neo-liberal ideals concerning market-based reform. Peter Levene, Chief of Defense Procurement in the Ministry of Defense (MoD), enacted the so-called Levene Reforms in 1984 that: compelled defense firms to compete for R&D and production contracts; placed the responsibility of controlling cost with the industry through fixed-cost contracts; and strengthened government oversight of the procurement process with successive payments dependent upon the completion of each phase of research and development. These initiatives have been credited with controlling defense equipment costs and ensuring “value for money” in procurement. Indeed, the value of contracts awarded through competition doubled from 1979 to the 1986, and produced an average 20 percent savings in project costs compared to pre-reform practice.⁴⁰ MoD custom

³⁹ In any event, defense spending had increased 13 percent in real terms between 1977 and 1983 as part of a NATO agreement to expand the Alliance’s conventional force posture. This level of growth could not be sustained. Walker and Gummett, “Britain,” 421, 423

⁴⁰ Kenneth Freeman, “Defense Procurement Policy in Europe: Competition, Industrial Policy and Restructuring,” *RUSI Journal*, December 1987, 29. Note that in 1979-80, competitively awarded contracts were 30 percent of all contracts awarded. This figure surged to 64 percent by 1985-86.

restricted almost all of this competition to domestic suppliers, with approximately 10 percent of the value of British procurement sourced abroad by 1985. Levene argued, however, that these savings could be expanded by extending competitive tendering policies internationally. Specifically, he stressed within European circles that, while defense industrial competition at the national level had relieved the “financial bonds” facing the UK, its adoption at the regional level would not only maximize Britain’s opportunity to stretch its procurement pounds, but “at the same time competition [would be] the obvious trigger for rationalization and strengthening of the European defense industrial base.”⁴¹

At first glance, France seemed an unlikely candidate to answer such a call. Of all the large- and medium-sized national arms producers, France historically has placed the greatest emphasis on its national independence and the pursuit of national autarky in international procurement collaboration. Most principal French defense firms were state-owned, and as a consequence the French procurement agency, the *Délégation Général pour l’Armement* (DGA), has had little experience in and less tolerance for the practice of free competition in contract tendering. Nonetheless, the same pressures that sparked concern in London, were no less felt in Paris. France held a larger share of the world export market and suffered proportionately more as those markets began to contract in the mid-1980s. Further, France also overextended itself with a number of costly, high-technology procurements projects, such as the *Helios* I observation satellite and the *Rafale* fighter. In particular, France’s traditional procurement policies were becoming untenable in the absence of annual defense budget increases or production run extensions. Years of sluggish economic growth, persistent budget deficits, and of course, increasing weapons cost ran against established desires

⁴¹ Peter Levene, “European defense research and procurement after 1992,” *NATO’s Sixteen Nation’s* (December 1989): 75.

to sustain a broad-based defense industrial base capable of fielding every category of weapon system found in superpower arsenals.⁴²

French officials did pursue limited attempts at reform: the “encouragement of competitive tendering,” limited privatization, and a general “tightening of procurement procedures.”⁴³ None of these initiatives were embraced with the same passion as their British counterparts.⁴⁴ Statist traditions proved to be a considerable barrier to change, as well as the fear that other advanced defense industrial states might successfully exploit a liberalized, internal French defense market. Nonetheless, the French appeared quite keen during this time to pursue greater European armaments cooperation to promote production economies of scale. This, of course, kept with the long-standing French practice of championing the “indispensability of European cooperation” in armaments — in the words of one French parliamentarian in the late 1970s — whenever possible.⁴⁵ By 1986, however, with the election of the conservative government of Jacques Chirac, French rhetoric had moved a step further to embrace a potential European defense division of labor in the defense field through managed trade based on competitive cross-border procurement.

Between 1986 and the end of 1987, French and British thinking on the need to gain maximum efficiencies in their national procurements converged sufficiently to at least make their Reciprocal Purchasing Agreement possible. Indeed, France was the first to advocate the establishment of a cross-purchasing scheme in the fall of 1986.⁴⁶

⁴² Robert Rudney, “French 1987-1991 Programming Law: An End to French Independence?” Armed Forces Journal International 125 (January 1988): 30.

⁴³ Walker and Gummett, “Britain and the European Armaments Market,” 428

⁴⁴ A substantial privatization of both the defense and nationalized civilian sectors was not attempted until 1991, and then limited private holdings to 49%. OTA, Lessons in Restructuring, 20.

⁴⁵ Elliot R. Goodman, “France and Arms for the Atlantic Alliance: The Standardization-Interoperability Problem,” Orbis (Fall 1980): 557.

⁴⁶ David Buchan and George Graham, “France, UK discussing reciprocal navy purchases,” Financial Times, 26 March, 1987.

According to André Giraud, the French Defense Minister, France's desired objective was to rely on counter-trade to provide equipment needs in situations where joint development was impractical due to low R&D costs and competition between contractors might provide substantial cost savings. The intent of the proposed system was not to replace traditional interstate weapons collaboration, but to augment it — in the words of DGA Chief Jacques Chavalier, to extract “a better defense from a given budget.”⁴⁷ France's British MoD counterparts were reportedly “enthusiastic” to follow the French lead, both to pursue their own organizational, Thatcherite ideological fixation with market liberalization, and to avoid needless duplication of effort when suitable foreign technologies existed for import.⁴⁸

Both sides also perceived themselves to be natural allies for defense trade. France and the United Kingdom possessed the largest and most advanced defense industries in Western Europe. They also had the most comprehensive military requirements, e.g., blue-water navies and air-portable artillery. Moreover, as each state aspired for a global military posture, they also faced the need for weapons that could be deployed in almost every conceivable military theater on the planet, from the Norwegian arctic to tropical Africa. One French industrialist went as far as to assert:

While we may be trying to work with Germany, if push comes to shove, we know that our true European ally in military terms lies across the Channel.⁴⁹

This commonality in requirements offered the potential for considerable cross-channel business, given the depth of each country's need and the sizable range of products that

⁴⁷ “UK/France talks on off-the shelf buying,” *Jane's Defense Weekly*, 26 September, 1987, 703.

⁴⁸ Buchan and Graham, *op cit.*; Interview with UK MoD officials, May 1996.

⁴⁹ Francis Tusa, “France Leans Toward the UK,” *Armed Forces Journal International* 129 (October 1992): 48.

each could offer the other—a potential unmatched by any other possible European partner.⁵⁰

The Agreement

The final agreement that Britain and France settled upon in December 1987, after a year of negotiations, was at once modest and spectacular. Both states pledged to open their procurement processes to the other's defense firms. Each national defense ministry would submit to the other's contracts bulletin modeled upon the United States' *Commerce Business Daily*.⁵¹ Foreign companies would be allowed to compete against each other and against home country firms for those production contracts valued between \$2 million and \$80 million dollars (in 1990 dollars) and for development contracts between \$2 million and \$20 million. All bids falling within these specified limits were to be guaranteed "full and impartial consideration regardless of their country of origin."⁵² This meant that French firms, for example, competing for MoD contracts would face the same procedural and legal scrutiny as would their British counterparts.

The only legitimate criteria permitted under the Agreement for awarding contracts were cost-effectiveness and time scale. For example, a proviso of the treaty established common Quality Assurance Standards for both the DGA and the UK MoD. Under this system, any firm successfully registering with its home defense ministry to serve as an equipment supplier, would automatically receive a comparable ranking within the other state's ministry, and therefore not be obliged to "resubmit

⁵⁰ David Buchan, "Anglo-French weapons deals possible," *Financial Times*, 19 September, 1987.

⁵¹ William Gilman, "First UK AWACs Rolls Out: Younger Refutes "Fortress Europe," *Armed Forces Journal International* 126 (August 1989): 44.

⁵² National Audit Office, "Ministry of Defense: Collaborative Projects," (London: HMSO, 1991), 11.

proof of its technical competence and financial viability with the foreign ministry.”⁵³ In order to ensure that defense companies could make the most of this new non-discriminatory environment, the RPA established semi-annual conferences between industrial and ministerial representatives to explain differences between national procurement policies and to identify possible cross-Channel bidding opportunities. Supporting this entire process, a permanent Joint Anglo-French Committee would meet four times a year to oversee the application of the treaty and to review the number and value of all contracts awarded. The Committee, jointly chaired by the British Deputy Undersecretary for Defense Procurement and his immediate DGA counterpart, also functioned as an adjudicating body. Given the tendency for defense ministries to reflexively support the interests of their national firms, the Committee functioned as a “court of appeal” to ensure that all complaints received a fair hearing.⁵⁴

While the Committee sought balance in interstate trade, its full mandate was unlike anything ever before attempted in Western Europe. The terms of the RPA stated that Britain and France would strive for diffuse reciprocity in their relationship. Instead of tackling nascent trade imbalances immediately with counter-purchasing, both states were expected to make good faith efforts to achieve a rough symmetry between them. Moreover, this balance was not sought on a project-to-project basis, but rather at the end of each annual review of the treaty’s progress. This facet of the accord was arguably its most outstanding attribute. As previously noted, traditional weapons collaboration in Western Europe emphasized immediate and exact reciprocity between states, either through the application *juste retour* in co-development/co-production schemes, or through industrial offsets.

⁵³ Reed, “The Anglo-French Connection,” 852.

⁵⁴ Reed, *loc. cit.*

The RPA directly prohibited this kind of trade distortion. Cross-purchasing was to be just that: a depoliticized trade relationship within proscribed limits. Indeed, as DGA Chief Chevalier noted near the end of negotiations for the Agreement, the primary purpose of the exercise was to reduce unit costs by expanding the “home” market for certain technologies, not to increase these costs through political meddling. The RPA’s explicit emphasis on diffuse reciprocity reflected the idea that the national interests of Britain and France were sufficiently intertwined to permit the non-discriminatory procurement of low-end defense goods. Moreover, once initiated, trade interdependency would become self-sustaining in a long-term procurement relationship. Comparative advantage in certain technologies could conceivably, for example, lead to British dependence on French naval mines and French reliance on British airplane fuel pods. As neither state would resist such a trend, this mutual dependence over many goods, over time, could produce the desired equilibrium in trade.

The long-term implications of such practices were significant. Reciprocity could give way to denationalization, as national defense establishment became accustomed to employing each other’s equipment. This, in turn, might lead to product specialization as patterns of dependence become long-lived. During the final talks for the RPA, both Levene and Chevalier asserted that the Agreement would represent the tentative advance in this direction through the piecemeal creation of a unified arms market for British and French producers. As one DGA official stated:

[The RPA] has provided industry in both countries with an institutional umbrella under which it has been able to establish links and joint programs with partners across the Channel.⁵⁵

⁵⁵ Giovanni de Briganti, “Britain, France Move Toward Closer Defense Ties,” *Defense News* 6 (May 13, 1992): 12

Interstate cooperation, however, would only be the first step. Andre Giraud argued that the ideal future was one in which the distinct British and French suppliers would only be a transitory feature of an integrated Anglo-French equipment market; the development of truly “Franco-British” defense companies would be the optimal endpoint.⁵⁶

The RPA’s founders recognized that neither the defense long-term goals or the short-term economic aims would be achieved unless national sensitivities were respected. Consequently, the accord permitted competitive tendering only for low-cost, ostensibly banal technologies, such as munitions, spares, small arms, and subsystems. Not only had state defense ministries declared these goods non-essential for domestic procurement, they were also most amenable to a competitive industrial strategy as this segment of the market was characterized by “numerous small or specialized producers, each selling goods for use in a number of different weapon systems.”⁵⁷ This strategy would offer the best possible combination between the chance of success and the opportunity to impose some significant impact on procurement efforts: an emphasis upon “the least politically and socially sensitive” items that nonetheless “affects a very large proportion of all equipment acquisitions.”⁵⁸

Major weapons systems, on the other hand, were explicitly excluded from the RPA’s provisions. The framers intended the accord to be a bridge between the UK and France and to strengthen defense ties that had waned since the mid-1970s. They realized, however, that neither state would accept even the shadow of dependence for high-value procurements without significant industrial benefits—in effect, imposing a significant national footprint akin to the *juste retour* principle found in other areas of

⁵⁶ “UK/France talks on off-the shelf buying,” *Jane’s Defense Weekly*, 26 September, 1987, 703

⁵⁷ Andrew Moravcsik, “The European Armaments Industry at the Crossroads,” *Survival* 33 (January/February, 1990): 76

⁵⁸ François Heisbourg, “A European Defense Industry: Dream or Reality?” *NATOs Sixteen Nations* (Dec. 1988 - Jan. 1989), 25-26

interstate weapons collaboration. The economic justification for this preference was straightforward, as both Britain and France had monopoly producers for items such as jets, tanks and submarines. For either state to procure such technology from the other in a direct purchase, would deny work orders to its own national champion and thus endanger that firm's economic standing. This possibility was recognized as politically untenable and was avoided outright under the terms of the RPA—the accord's framers believed this preferable to the spectacle of defense companies bidding for contracts that they would not be allowed to win under any circumstances. Consequently, an additional function of the semi-annual defense conferences mandated under the RPA was to identify high-value projects at an early stage that might be suitable for co-development/co-production between select Anglo-French firms.⁵⁹

Results

One year after the RPA's signing ceremony, James Moray Stewart, the UK Deputy Undersecretary of State for Defense Procurement, argued that the accord marked a major step forward in European armaments cooperation, as well as the beginning of a new era in Anglo-French defense relations. He argued:

. . . each country now sees the other as an integral part of its domestic procurement base. As a consequence of the links being built, we hope [for] greater industrial cooperation. Certainly, we are seeing French and British companies talking to each other much more than they did.⁶⁰

True, the RPA represented a novel alternative to the traditional conduct of multinational procurement in Western Europe: It established the principle of competitive bidding between NATO Europe's largest and most autonomous national defense markets; it extended defense cooperation to low-value, low technology goods; and finally

⁵⁹ David Housego, "UK and France plan arms link," *Financial Times*, 18 March, 1987.

⁶⁰ Stewart, "The European Defense Market," 20.

the RPA proclaimed that, at least in one issue-area of traditional state high-politics, national interests had converged to the point to facilitate unanticipated levels of cooperation. Indeed, the signing of the RPA was itself regarded as a testament to transformations in way states identified with each other and with defense technology. As one UK MoD official noted in late 1987:

Two or three years ago, doing this kind of thing with France would have been unthinkable. French procurement policy is moving the same way as our requirements are. If successful, we may move towards standardization of equipment.⁶¹

While the RPA certainly established a new dialogue with new rules and approaches for multinational procurement in Anglo-French bilateral relations, what matters in the final analysis is the transition from discourse to practice. Here, reality clearly did not match Undersecretary Stewart's optimistic assessment. Today, defense representatives on both sides of the Channel regard the RPA as a failure: at best, it produced only a deeper understanding between the British and French defense establishments; at worst, it was a utopian experiment that never had a chance to succeed—indeed, it was an initiative that was never *given* the opportunity to succeed.

Good measures to the success or failure of any trade agreement are its implementation and performance: were the stipulated rules adhered to and the desired results attained. Hard, quantitative measures on the performance of the Reciprocal Purchasing Agreement are not readily available. Information pertaining to sessions of the Joint Anglo-French Committee and the ministerial conferences is categorized as either confidential or classified, and is thus outside the public domain. Traditional state policies stressing secrecy in areas of national security in both France and Britain

⁶¹ Jacques Isnard and Lesley Bedford, "France looks for co-operation with UK, USA," Jane's Defense Weekly, 19 September, 1997, 568.

ensures that most available data is highly impressionistic and qualitative.⁶² Nonetheless, available information indicates the inability of the RPA to promote any significant change in procurement behavior. Moreover, the very governments championing the accord never truly intended to exploit the new possibilities that it presented.

First, Anglo-French defense trade between 1988 and 1992 remained insignificant, with the exact level highly contested. The UK MoD claimed in 1991 that France and Britain had achieved a rough balance in trade since 1987. The MoD stated that since that time, the UK bought approximately \$200 million dollars in French defense goods (in 1990 dollar amounts), whereas France purchased approximately \$190 million from Britain.⁶³ The British Defense Ministry admitted, however, that it could not conclusively link any single instance of procurement to the RPA. Cross-channel, inter-firm relationships between small and medium-sized companies cooperating as partners in small-scale projects emerged in the early 1980s—in addition to the long-standing intergovernmental agreements to supply spare parts for co-production projects dating back to the early 1970s. These partnerships generated some traffic in components and materials, and they continued to have a follow-on effect into the RPA period. In any case, French defense transfers from 1988 through late 1991 accounted for only 3 percent of Britain's defense imports.⁶⁴ Stated differently, this meant that the direct purchase of French defense goods by the United Kingdom amounted to only 0.3 percent of the value of all British military procurements.⁶⁵

⁶² For example, a 1991 report by the UK National Audit Office — the British equivalent of the US GAO—criticized the UK MoD for being deliberately evasive in providing information concerning Britain's collaborative programs. NAO, "Ministry of Defense: Collaborative Projects," 4.

⁶³ NAO, "Ministry of Defense: Initiatives in Defense Procurement," (London: HMSO, 1991), 5.

⁶⁴ House of Commons, Defense Committee, Anglo/French Defense Cooperation (London: HMSO, HC 91, 1991), para 71.

⁶⁵ This assumes that the 10 percent defense import threshold Britain attained the mid-1980s remained constant through the early 1990s.

The UK House of Commons Defense Committee believed at the time that the reciprocal French figure to be substantially less—and with good reason, as it appears that the British MoD embellished France’s trade record.⁶⁶ Data independently compiled by the Stockholm International Peace Research Institute (SIPRI) pertaining to weapons-only trade supports British purchasing claims. According to SIPRI, the UK bought \$171 million (1990 dollars) of conventional weapons systems from France between 1987 and 1991. The reciprocal French figure, on the other hand, was only \$42 million.⁶⁷ While SIPRI defense trade statistics are notoriously incomplete, excluding categories such as light munitions and dual-use goods, they do point to divergent ideas as to how the RPA should operate.

Indeed, a common complaint held by British officials was that the French never fully adhered to the basic tenets of the Agreement. Whereas Britain consistently informed French firms as to bidding opportunities for UK MoD contracts, France was not so forthcoming.⁶⁸ According to UK defense sources, official French Contracts Bulletins that were to inform British firms and the MoD of French equipment needs were neither timely nor wholly complete. While this obviously did not prevent British companies from bidding on what contracts France made available, they did not have as many cross-Channel opportunities as the French counterparts. Additionally, British sources claim that the French government did not seriously motivate French firms to

⁶⁶ This is not the time to delve too deeply into this possibility. Suffice to say that the MoD faced conflicting pressures from the British political establishment concerning overseas defense purchases. A 1989 survey of British parliamentarians indicated that 76 percent of MPs regarded common defense policies in the Alliance as “desirable,” an almost equal percentage, 72 percent, insisted that the MoD extend preferential treatment to UK firms. In this environment, it is easy to understand that MoD might insist that “fair” trade with France had been achieved. William Gilman, “Three Out of Four MPs Support Favoritism for UK Defense Industries,” *Armed Forces Journal International* (January 1989): 35.

⁶⁷ cited in Hans B. Feddersen, “The European Defense Firm, National Procurement Policies, and the Internationalisation of Arms Production,” *The Future of the Defense Firm: New Challenges, New Directions*, eds. Andrew Latham and Nicholas Hooper (Dordrecht, The Netherlands: Kluwer Academic Publishers, 1995), 38.

⁶⁸ Interview, UK MoD, April 1996.

consider to UK tender invitations. By early 1990, for example, the number of French companies regularly subscribing to the UK Contract Bulletin was nearly half that of their British counterparts who received the equivalent French document, 128 French firms versus 244 British companies.⁶⁹

To be fair, the reluctance to aggressively adhere to the Agreement's mandate was not completely one-sided. A 1991 UK National Audit Office (NAO) report accused the MoD of systematically discriminating against French firms in violation of the RPA. The NAO asserted that the Defense Ministry continued to nurture a "buy British" mentality that prompted middle- and junior-level bureaucrats to make "conservative assessments" and to therefore not solicit overseas tenders when domestic competition was present.⁷⁰ While similar French critiques of attitudes within France's Délégation Général pour l'Armement are not known to exist, it seems clear from the DGA's procurement practice that it was even more brazen than the British at discriminating against foreign firms. Bernard Retat, Assistant Armaments Director of the DGA's International Relations Division, arguably reflected the disposition of France's defense establishment when he said in late 1988 that while:

the tasks of the DGA include the procurement of the best possible military material for the French Armed Forces, *irrespective of the country of origin*. . .it happens only very seldom that equipment developed in another country is capable of fully meeting these requirements. . .In this context, it is only too natural that a national company will be approached first.⁷¹

While this logic may be valid with regard to strategic bombers or capital ships, it is extremely thin when applied to the technologies that were under the RPA's mandate.

⁶⁹ Stewart, "The European Defense Market," 20.

⁷⁰ NAO, "Ministry of Defense: Initiatives in Defense Procurement," 15.

⁷¹ "The Future Challenge: Aiming for a European Armaments Industry," *Military Technology* (November 1988), 42.

Items such as 5.56mm rifle cartridges or 155mm artillery shells are manufactured throughout the Alliance to NATO standards pertaining to size, performance, etc. It is therefore difficult to believe that one NATO military's requirement for these items could be significantly divergent from another's. Nonetheless, variants of this thinking were well established on both sides of the Channel and used to justify nationalist procurement behaviors.

There is also evidence, however, that attitudes toward the RPA involved much more than just a pro-national bias. As one French industrialist noted: "It is important that such things are created. I am not sure that they work. No one wants or intends [for] them to have any real power or significance."⁷² A retired UK procurement official mirrored this sentiment, noting that for many in the MoD rank-and-file, the RPA was regarded as an act of political showmanship and after its signing ceremony, it was "mentally filled away" and "never taken seriously."⁷³ Statements such as these indicate that the grand visions espoused by senior officials as to expansion of home markets or the integration of domestic defense bases did not extend to those who would implement the treaty and compete within its guidelines. To these people, the RPA was just more Euro-symbolism: good for the "cause," but lacking any real value.

Additional information pertaining to the implementation of the RPA after 1991 is extremely limited. By this time, the accord had been overshadowed by the symbolism of "1992" and the anticipated completion of the Common Market. Moreover, the Agreement itself had been made redundant by the 1989 European Defense Equipment Market Initiative. Nonetheless, it is known that by the Fall of 1994, then-UK Defense Secretary Malcolm Rifkind publicly announced that Britain would no longer seek to

⁷² Interview, French Aerospatiale official. 3 March 1997.

⁷³ Interview, Official in the NATO Secretariat. 10 July, 1996.

link its domestic defense base with those of its European allies.⁷⁴ Rifkind stated that while the UK had opened its market and purchased foreign goods, other Europeans did not share Britain's "open procurement policy." Britain would consequently privilege its domestic defense suppliers to provide its military needs. While the Defense Secretary's statement undoubtedly pleased anti-Europeanist and protectionist elements within British society, it concealed the fact that the UK never truly de-emphasized its home producers. Between 1988 and 1991, the UK only purchased an average of \$50 million in French defense goods annually—and this assumes that the MoD estimate that the UK purchased a total \$200 million of French goods over this period is correct. Given that NATO estimates on the UK's total weapons expenditure over these four years averaged \$9.5 billion each year, it is evident that Britain never seriously pursued its French option.⁷⁵

Conclusion

Marcel Benichou, of the French DGA, asserted in 1989 that through the accord, France and the UK were European "pioneers:"

. . . [whose] experience will be very valuable in easing the opening up of national borders throughout the community of the 13 IEPG nations. A Europe which is stronger, more homogenous and more firmly welded together should result from such a development.⁷⁶

Yet by the early 1990s, the RPA failed to significantly affect either French or British procurement policies. More importantly, instead of paving the way toward a "European" future and emphasizing the European ideal of integration, the Agreement

⁷⁴ Bernard Gray, "Defense buying will stay British, says Rifkind," *Financial Times*, 28 September 28, 1994.

⁷⁵ NATO, *Financial and Economic Data Relating to NATO Defense* (Brussels: NATO, annual)

⁷⁶ Benichou, "The Development of Anglo-French Relations," 57.

actually accented the “national sentiments that permeate each country’s national psyche.”⁷⁷ Indeed, whereas both France and the United Kingdom stood to gain economically from a properly functioning RPA, neither state was willing to increase its dependence on the other—and not even for those defense technologies that they themselves declared to be non-essential.⁷⁸

For both states, the economic rationality of a given procurement mattered less than the “nationality” of the item in question. This was the lesson of the RPA. It demonstrated that national identity, and in turn national interest, remains tightly bound to the pursuit of the national defense. Despite the lofty rhetoric of Europe and of European cooperation, for the French DGA, the most appropriate means of defending France lay with French defense firms producing “French” technologies—ranging from the simplest mortar tube to most sophisticated tactical missile. The British held comparable views as to the symbolic importance of their defense base. The Agreement showed that where national prestige and sovereignty are concerned, the social value of defense technology can be very difficult to gauge. Indeed, as one British NATO representative noted the ability to produce the “trivial” was no less tied to national sovereignty than high technology systems. Rifle-barrels and bomb casings, in the imaginations of most decision-makers, were regarded as the “traditional instruments” of both defense and national sovereignty.⁷⁹

These technologies therefore possess considerable, albeit, latent emotional significance. They are, after all, very old tools of statecraft with histories extending back through the World Wars and into the nineteenth century. In terms of historical

⁷⁷ Doug McVitie, “Single Market Faces Roadblocks,” *Defense News*, 9 March 1992, 20.

⁷⁸ According to French DGA estimates, if properly implemented, the Agreement could produce cost-savings for certain equipments as high as 50 percent as competitive firms achieved economies of scale, and as states ceased squandering funds on duplicated programs. Smith, “Entente More Cordiale.”

⁷⁹ Interview, 9 July, 1996.

memory, they can hold as much resonance with the protection of the national community as would a variable-geometry fighter-bomber. Consequently, where these technologies are concerned, there exists a chasm between what is said and what is done. States may declare such items to be mundane and much less valuable than the more glamorous systems filling their military inventories. These assertions, however, do not necessarily translate into the actual procurement of these technologies from one's allies or even a willingness to abandon automatic state preference for domestic suppliers—even if this incurs some economic penalty.

The RPA shows that French and British decision-makers could not make the leap between statement and practice. The implementation of the Agreement also denotes the tenuous nature of the collective European identity. A French DGA representative argued the accord failed in the absence of necessary “*cultural revolutions*.”⁸⁰ First, both countries were unable to frame symbolic value distinctions between high- and low-technology goods. A second required cultural transformation related to how these states identified with each other as members of the European project. Some decision-making circles, certainly in France and arguably in the UK as well, mistrusted the RPA because it implied specialization, which is a natural by-product of marketization. Because a competitive firm would be rewarded with binational contracts, it could over time possibly become the dominant producer of given items for both equipment markets. The same DGA official noted, however, that when the possibility existed that such a firm might not be French, “we are not [and were never] ready for that step in any armaments area.”⁸¹ National specialization, however, should not be a concern between two states who regard the other's interests as inseparable from its own—and certainly not in an issue-area that is presumably of marginal

⁸⁰ Interview, French Defense Official, 20 December, 1996.

⁸¹ Interview, 20 December, 1996.

importance to state interests, such as low-end defense procurement. What we see in the history of the RPA, however, is that neither France nor Britain wished to heighten their interdependence, much less *integrate* their domestic defense markets through the non-discriminatory treatment of each other's defense firms in certain procurement areas. Consequently, despite surveys indicating that 54% of French citizens identify as Europeans or that 45% of Britons since 1987 favored European initiatives to strengthen the common defense, it is clear that these sentiments did not extend deeply into the defense procurement field.⁸² The idea of Europe was used to legitimize the RPA, but it did little to influence state behavior and to promote the efficacious implementation of the treaty.

Indeed, while the defense establishments in both France and the UK recognized and appealed to common interests and to converging security identity, these were not strong enough to undermine the national "politics of high and low security."⁸³ Defense officials who claimed to promote European interests, invariably privileged their own myopic state interests. For these elites, it remained more convenient to talk about Europe than to practice it. The Anglo-French Reciprocal Purchasing Agreement represented a minimalist strategy to exploit "marginal" procurement fields where states might safely and beneficially pursue "ideas of a collective European-ness." The failed implementation of the Agreement shows us, however, that the most salient identity throughout European defense procurement remains national identity and that the symbolic value of national defense is still tightly constructed through the prism of national interest.

⁸²Philippe Manigart and Eric Marlier, "European Public Opinion on the Future of Its Security," Armed Forces and Society, 19 (Spring 1993): 341.

⁸³ Wyatt-Walter, *The European Community and the Security Dilemma*, 255.

CHAPTER EIGHT

Conclusion

In this dissertation, I have attempted to conduct a “hard test” of the role of an evolving transnational, European identity in shaping state interest and action in Western Europe. I have done this by focusing on an area of state activity—arms procurement—that has been innately bound to conceptions of state identity since the 17th century. The production and possession of arms does far more than simply provide a means of national security or supply industrial and technological benefits to countries: armament procurement also defines states as it often denotes modernity, sovereignty, efficacy and strength. I postulated that weapons are a source of status and grandeur in an international system in which conceptions of self and of self-interest are reinforced by the existence and quality of a country’s defense industrial base. Consequently, not only have these technologies been highly coveted by most state actors, a consistent theme of state behavior throughout most of the 20th century has been to remain as close to autarky in procurement as a country’s human and material resources will permit.¹

There are movements, however, in both national societies and in the relations among states that compel us as scholars to question if the old state preoccupations with military production remained as immutable and omnipresent at the end of that century as they were during its initial decades. Western Europe has been a region in transition as it moves closer toward economic union and political confederation under

¹ Rae Agnus, "The Tornado Project," in International Arms Procurement: New Directions, ed. Martin Edmonds (New York: Pergamon Press, 1981), 166.

an umbrella of interlocking military alliances and the de jure expectation of a common defense. It is a region in which multinational arms procurement cooperation has generally increased both in complexity and scale over time, with the member governments of the European Communities—now the European Union—traditionally using such collaboration to spread the costs and the risks of defense technology innovation. It is also a region, moreover, which has witnessed the development and expansion of a discrete European identity among significant percentages of nearly all West European publics. More enticing, however, is the development of a discursive tradition among governing elites to justify procurement cooperation in “European” terms that elevate the regional good over the welfare of any of its national components, e.g., a *préférence européenne* in arms collaboration, or the construction of an *European* aerospace industry that would make *Europe* a force worthy of respect from both allies and adversaries.

Attracted by a discourse of collaboration that is implicitly one of self-redefinition, I have sought to determine if these sentiments serve an instrumental function masking self-oriented cooperation, or if some partnerships truly reflect the ideational changes shown consistently in over thirty years of polling data since the first comprehensive surveys of European attitudes were conducted in the 1972: an emergent, and relatively weak, European identity and a stated desire by sizable numbers of Europeans who regard their national security as best maintained through regional initiatives.

As we have seen in the preceding chapters, however, such visionary perspectives had little effect in either the motivation or conduct of the leading examples of European defense industrial cooperation through nearly the entire latter half of the 20th century. Across the spectrum, from technologies so complex they are akin to magic in the popular imagination—as one NATO official noted—to those so

mundane that some are little different from their 19th century predecessors, European governments have been doggedly resistant to either assigning the collaborative process to the market or withdrawing themselves and substituting for state control that of an impartial and empowered international agency.² That these states would be reluctant to deepen their intimacy in this area while concurrently advancing a monetary union and even establishing a non-discriminatory regime for cross-border, non-defense government procurement would not be a controversial notion to many defense analysts. Scholars, such as Philip Gummet and Edward Kolodziej, have long argued that procurement cooperation in Europe has always been an exercise in attaining national ends through poly-national means. To these individuals, an undeniable reality of the European condition has been that member states do not collaborate because their elites have suddenly opted to internalize and execute the ideas codified in the Union's founding treaty—the 1951 Treaty of Paris that called upon member governments to “substitute for age-old rivalries the *merging* of their essential interests.”³ Instead, the states form and structure their partnerships to satisfy their own petty national interests. Behavior that might be construed as other-regarding, or even more narrowly as recognition of complex mutual self-interest, is absent.

I, however, argued differently, contending that both cooperation and non-cooperation reflected identity and that in an environment of contested identities, some may have tangible effects in some areas and none in others. A European identity might be weak and emergent, but defense procurement is not a monolithic activity. At a glance, some defense technologies appeared to be more important than others in the calculus of state decision-makers. In a region where surveys have shown that support

² Interview. Simon White. NATO First Secretary for Armaments Cooperation. Brussels, July 1996.

³ The Treaty of Paris established the European Coal and Steel Community. Cited in Brigid Laffan, Integration and Co-operation in Europe (London: Routledge, 1992), 92.

for deepening cooperation and expanded Union competences was greatest in those areas of social and political activity that were deemed relatively inconsequential to the security and well-being of individuals and their communities, e.g., international humanitarian aid and poverty alleviation, I postulated that certain defense technologies might be more amenable to “communal” solutions than others.⁴ My research has indicated, however, that such distinctions were not made in the 1960s, 1970s, 1980s and 1990s, and moreover no radical differences emerged in how states viewed their varied collaborations. In the following pages, I shall revisit this hypothesis, which I loosely call the Technology-Identity Hypothesis, and summarize the findings of the five cases of cooperation that I examined in this dissertation.

The Technology-Identity Hypothesis

In order to consider the potential role of identity in shaping state interest, and subsequently, state behavior, I looked beyond conventional international relations approaches, notably Realism and Neoliberalism, which are founded upon on the *a priori* assumption of the “self-interested state.”⁵ I embraced a Social Constructivist framework that allows one to assess state actions based on the subjective meanings that decision-makers hold toward others and toward objects. I contended that this concept was crucial in any understanding of procurement cooperation or non-cooperation in Western Europe, for the following reasons. High-tech military hardware, such as main battle tanks or high performance aircraft, is bound to conceptions of self that are not conducive to collaboration. This technological domain was ideationally special because it presents considerable material and symbolic

⁴ Stefan Höljelid, “European Integration and the Idea of European Identity: Obstacles and Possibilities,” ECPR Joint Sessions/Workshop 19: Identity Politics, 2001, 16.

⁵Alexander Wendt, “Anarchy is what states make of it: the social construction of power politics,” International Organization 46 (Spring 1992): 392.

benefits for state actors. An advanced national defense industrial base (DIB) produces security, sustained and expanded national systems of innovation, and significantly, provides culturally-valued artifacts that became components of national identity and vehicles for national prestige.⁶

Not all weapons, however, possess the same value on either economic or political-symbolic terms. An air-superiority fighter, for example, is a symbol of power and an instrument that both demands and supports a sophisticated industrial foundation. The same cannot be said, however, for a broad range of military hardware based on older technologies, often mass-produced and regarded as quasi-commodities. Just as the ability to possess and produce an advanced aircraft provided tangible security and economic benefits, so to do low technology weapons like artillery shells. The crucial difference, however, is that high tech items also become part of state self-perception in the international system, and importantly, how that state wants to be regarded by others. I hypothesized that this difference would shape how far states are willing to go to monopolize the "sophisticated" compared the "commonplace."

As conceived, the ideational value of high technology weapons would likely taint efforts at procurement collaboration because these systems should invoke myopic, nationalist responses among partners. Low technology armaments, on the other hand, should not challenge national identity. These weapons are not symbols of national grandeur or of economic sophistication. Consequently, production collaboration at this level might reflect the influence of a weaker, cross-cutting identity, namely the evolving transnational idea of self in Western Europe. Here, we should expect collaborative behaviors that do not reflect orthodox notions of self-

⁶Robert O'Connell, "Putting Weapons in Perspective," Armed Forces and Society, Vol. 9, (Spring 1983): 450; William Bloom, Personal Identity, National Identity, and International Relations, (Cambridge, UK: Cambridge University Press, 1990), 52.

interest but rather denoted a deliberate minimization of state interference either through marketization or the surrender of competence to international organizations.

In practical terms, such an outcome might occur through:

- A regime of open, cross-border procurement competition between partners in which comparative advantage was at least considered in determining the source of supply.
- Allowing commercial and competence criteria to determine contracts in consortia relationships.
- Empowering international management agencies to function autonomously and decisively without state meddling.
- Permitting a foreign company to operate as the *de jure* prime contractor without need for joint venture legal fictions.
- Embracing a less exacting *juste retour* model for consortia, one that forgoes state insistence on securing shares of both advanced technology work and production work, thus eliminating national participation on all value-added systems, as well as duplicate testing and assembly.⁷
- The development of defense "Eurocompanies" without "distinctive national affiliations."⁸

I hypothesized that if any of these events were to occur, they would arguably be the products of an ideational shift—an assessment that could be validated by examining the behavior and declared rationales of the actors involved.

⁷ Keith Hartley, "Public Procurement and Competitiveness: A Community Market for Military Hardware and Technology," *Journal of Common Market Studies* XXV (March 1987): 244.

⁸William Walker and Philip Gummett, "Nationalism, Internationalism, and the Future of the European Defence Market," CHAILLOT Paper 9 (Paris: Institute of Strategic Studies, Western European Union, 1993)

Simply stated, I contended that the development of a collective, European identity should produce complementary behaviors within the narrow, yet significant, issue area of low-technology defense industrial cooperation. While identity shapes behavior, i.e., the form of procurement cooperation, the level of technology involved in a given collaborative scheme should determine *which* identity is most salient to state actors at a given time. I recognized that national identities remain the strongest ideational factors influencing state decision-making and interest calculations. Nonetheless, because low technology weapons production is not enmeshed in notions of sovereignty or modernity, a transnational identity should have a greater impact on state action and facilitate economically rational interstate procurement arrangements.

The Evidence

Regrettably, while this hypothesis may have had some conceptual appeal, the record of European cooperation through the mid- to late-1990s did not support it. In assessing the case studies, while collaborative successes and failures were clear, but none of the cases exhibited any signs of diminished self-interest at the governmental level.

The High-Technology Dyad: *Tornado* and *Eurofighter*

The *Tornado* provided us with a baseline high-technology case. Initiated in 1968, this program took shape five years before the European Community either recognized the development of a European identity or affirmed that such identity represented a normative goal that would sustain and expand the European project.⁹ In

⁹ CEC 1973 Bulletin of the EC, No 12-1973, cited in Stefan Höljelid, "European Integration and the Idea of European Identity: Obstacles and Possibilities," ECPR Joint Sessions/Workshop 19: Identity Politics, 2001, 5.

the formation of this system, there was no evidence of a European identity shaping and moderating state behavior. The participating governments were willing to compromise and set aside desirable national goals, such as project leadership, in order to move the effort forward. Nonetheless, they created in an organizational framework that ensured that all of them retained direct state involvement in the developmental process in order to ensure that they could beggar that process to satisfy most of their parochial desires. Appeals to Europe mattered only insofar as they ennobled the efforts of the member states to promote their own defense aerospace bases without regard to any larger regional transformation. While the national industries learned to how cooperate better among themselves and developed a significant level of mutual dependence in this one project, there is no evidence their governments either acknowledged or welcomed this limited intimacy.

Arguably, the most damning facet of *Tornado* lay in that its very beginning represented more the weakness of Europe as an ideal than its strength. Recall that the project began as much as an effort to attain a “balance of power” within the European Community—and thus protect national autonomy—as it was to be a manifestation of solidarity and partnership. In the end, *Tornado* provided both national independence and a symbol of European fealty. That said, no one intended it to be an example of other-regarding behavior.

Similarly, *Eurofighter* betrayed some of the most base and unmistakably national instincts of its participant governments. *Eurofighter* took shape—indeed, it has taken flight—at a time when a European identity has not only emerged but also has been consciously advanced. While affective support for European integration and for the expansion of European policy-making beyond low politics has waxed and waned over time, collectively and within individual member states, from 1981 to 1989, popular support for widening European cooperation surged across the

Community and remained more or less stable ever since.¹⁰ In spite of this, the first three years of *Eurofighter* presented a picture of national egotism run amok. International cooperation to find a successor for *Tornado* was no one's first choice, and when that option was finally embraced, France campaigned either to dominate the program or to suffocate it (and one could argue, both concurrently). Even once that irritant was removed, the remaining members of the consortium were quite eager to pursue the same policies of state control and political interference that they had enjoyed with *Tornado*.

Unlike that project, however, the *Eurofighter* members gave lip-service to rationalization and marketization—expressed in this instance as the desire for competitive tendering. Nonetheless, the governments continued to default to a “Little League-Rules” approach to international procurement in which the states designate the national industrial actors who subsequently all get a chance to play regardless of their aptitude or cost-effectiveness. Given my hypothesis, such behavior was untroubling. *Eurofighter* and its predecessors were high-technology, high value-added programs that were regarded as too important to national military requirements, national economies, and national self-perceptions of modernity and competence not to invoke nationalist behavior. That these states would pursue their disparate self-interests to the extent of imposing higher costs on themselves was to be expected.

¹⁰ Fluctuations in support notably correlate to the oil shocks of 1973 and 1979 and its resulting impact on national economies. Additionally, popular uneasiness with the increased competence of European institutions following the Maastricht Treaty in 1992 led to momentary dips in average net support for unification. Richard Eichenberg and Russell Dalton, “Europeans and the European Community: the dynamics of public support for European integration,” *International Organization* 47 (Autumn 1993): 519.

Low-Technology Dyad: FH-70 and SP-70

The Euro-howitzer cases presented me with the opportunity to test if European governments actually differentiate between types of defense technology and thus possibly permit themselves different approaches in collaborative acquisition. In FH-70 and SP-70, we saw two related programs that cost a fraction of their aerospace counterparts, and consequently did not capture a great deal of government attention or oversight. Importantly, each involved technologies that were readily available to the participants and could be developed by any one of them alone. In both projects, the governments gave themselves the smallest role in running the programs outside of assigning control to an autonomous administrative body. The states created simple oversight bodies to ensure that their interests were harmonized and program goals met. They subsequently allowed their industries to act in a parallel fashion.

Had both cases succeeded, and been equivalent in terms of technology type, this facet alone might have been suggestive of differences in the way that states view and approach low-end defense goods. While countries were unwilling to set aside sovereignty considerations and leave this end of the defense technology spectrum either to industry or some international agency, they nonetheless could abstain from unmitigated meddling in the developmental process if the technology involved were not materially or ideationally “sexy.” The FH-70, for example, which consisted of little more than a rifled tube, hydraulic shocks, and wheeled mount, was a singular case of European cooperation in which there was true sub-system specialization between the producing countries. While it was not possible to rule out that some convergence of identity and interest facilitated this behavior, such a option was unlikely in the extreme: like *Tornado*, the FH-70 was a baseline case, commissioned and developed in the late 1960s and early 1970s when a transnational European

identity was in embryonic form. A better explanation would be that this phenomenon owed more to state disinterest than any kind of communal vision.

The lesson of the SP-70, on the other hand, was that the threshold for such disinterest was remarkably low. The SP-70 differed from the FH-70 not in the organization of its administration, but rather in including a handful of complex electro-mechanical sub-systems to allow it to fulfill its requirement as survivable, self-propelled artillery. These sub-systems subsequently became contested technologies, with each state demanding its share. Given the program's administrative minimalism, the end-result was that the participating states satisfied their allotted work-shares through the construction of components that later resisted integration, owing to the lack of meaningful oversight or control at either the political or industrial level. More important for my purposes, however, was the timing of the case. Here, I observed a mixed-technology case that, like *Eurofighter*, emerged at a time when expressions of European identity had become consistent and substantial. This identity clearly was not strong enough to inhibit states from pursuing their own petty interests in this particular program.

The Reciprocal Purchasing Agreement

The Anglo-French Reciprocal Purchasing Agreement was assumed to be an outlier, albeit a very significant one. In it, one saw a deliberate attempt by Europe's two largest defense producers to declare some classes of defense technology as being unworthy of any kind of excessive state preoccupation with the nationality of production and supply. Further, the Act also codified the belief that the acquisition of such goods could be safely attained through managed trade with trusted partners. These relationships would reflect and acknowledge comparative advantage, shared interests, and mutual dependence. The existence of such a regime, coupled to

declaratory policy justifying it in European terms, could provide substantial weight to the argument that this was the leading edge of defense industrial integration in the European Union and a manifestation of a transnational identity in defense procurement. Unfortunately, however, the history of the agreement was one of apathy and resistance to any meaningful application of edicts. While both countries embraced the rhetoric of Europe, their actions betrayed the unquestioned belief that the specialization and the trust that it required was unwarranted, and that the most appropriate solution to national military requirements lay with national industry producing “national” technology.

Which way forward?

While I have falsified my hypothesis—that an integrative European identity is manifest in European defense industrial relations and shapes collaborative procurement in the European Union — it would be wrong to stop here and not to at least raise some alternative explanations behind the state projects and initiatives discussed in this dissertation. I began this intellectual journey as an effort to test the worthiness of a modernist, social constructivist approach to analyze state behavior in an issue-area in which it has rarely been applied and in which Realism has held almost hegemonic sway. Throughout the preceding chapters, however, I have crafted a narrative that does not support either my stated hypothesis or a purely realist account. On the one hand, one does see certain realist precepts characterizing state behavior—balancing logics, and concerns over sovereignty, vulnerability, and relative gains—as European governments remained very concerned about the ends and means of their defense industrial partnerships over a thirty-year period. Defense procurement received special attention from decision-makers who seemed to covet most technologies. They were unwilling to abandon their sovereign rights in design and production, and in nearly

every case, they worked to maximize their own industrial and technological returns from the process of innovation in order to channel the most benefits into their national defense industries.

That said, I demonstrated in the *Tornado* and *Eurofighter* cases, purely self-regarding behavior has led to unintended consequences. We have seen a creeping interdependence in which the national production and life-time support of certain high-visibility and high-value weapons systems has become unthinkable—indeed, unsupportable—without the assistance of group of trusted international partners. Decades of this kind of interaction has produced a situation in which purely national programs in certain technology areas are no longer regarded as either feasible or desirable by both major and minor European producers alike.¹¹ Moreover, the true legacy of these relationships may only become apparent in the intermediate term as national responsibilities in the design and assembly of subsystems and components in successive projects, like those that I have explored here, leads to a kind of backdoor specialization on a national scale. Indeed, as one British Aerospace manager said in the late 1990s, the United Kingdom's reliance on Germany to lead in fuselage design for Britain's two principal military aircraft from 1968 onwards has meant that not only have British skills atrophied in that aerospace sub-domain, but that Britain will likely have to look again to Germany to support British military requirements once *Eurofighter* completes its operational life sometime near the middle of the 21st century.¹²

In the near-term, however, legacy projects such as *Eurofighter* continue to move forward as new collaborative programs emerge in other areas. For example,

¹¹ Jordi Molas-Gallart, "Defense Procurement as an Industrial Policy Tool: The Spanish Experience," *Defense and Peace Economics* 9 (1998): 74.

¹² Interview, British Aerospace Manager, 19 February 1997.

despite the collapse of an existential Soviet threat, and a subsequent wave of budget tightening that spread from post-reunification Germany to nearly every state in the European Union, *Eurofighter* has progressed into its production phase with 18 planes in service as of early 2004. The desire to maintain this momentum has led the national governments to consider a major reformation of *Eurofighter* GmbH and recast the consortium as “a single entity company” that would function legally and practically as a true prime contractor.¹³ Moreover, they have also voiced interest in ending the national duplication of testing and assembly facilities and permitting wider competition for subcontracts.¹⁴ While the exact parameters of this “revitalization” effort will not be known for some time, it suggests that the *Eurofighter* states are thinking about moving beyond the self-oriented, state-centric preoccupations that typified much of their behavior just a decade earlier.

Realists, such as Theodore Moran, have argued that cooperation—despite its attendant reliance upon “foreign-sourced” technology and the possibility of foreign penetration of national defense industries—is preferable to the high costs and technological mediocrity of national autarky. None, however, would countenance even the specter of specialization that may have emerged in the last twenty years, as well as changes such as those we may yet see in *Eurofighter* GmbH.¹⁵ In any case, *Eurofighter* may become an additional facet in what has been an ongoing transformation in the European defense industrial landscape since 1998. As the process and depth of European cooperation has continued to move forward past the window of my research, which ended in the late 1990s, the European Union has experienced a veritable explosion of cross-border mergers producing permanent Euro-

¹³ Andrew Chutter, “Course Change for Eurofighter,” *Defense News*, 23 February 2004: 8.

¹⁴ *Ibid.*

¹⁵ Theodore Moran, “The Globalization of America’s Defense Industries,” *International Organization* 15 (Summer 1990): 55, 70.

companies such as Thales and the European Aeronautic Defence and Space (EADS) consortium, as well as the development of new multinational procurement management organizations such as the Organisme Conjoint de Coopération en matière d'Armement (OCCAR, or the Joint Armaments Coordinating Organization), and the European Union's European Defense Agency. In light of these changes, realist logic seemingly holds ever diminishing value in explaining the conduct of multinational European procurement.

The real issue before us, however, ultimately is not whether a theoretical approach, such as realism, can explain (or not) either present or future European behavior. Instead, we must assess what approach best applies to the case histories presented in this dissertation, events that began in the late 1960s. I sought to test the worthiness of a particular social constructivist argument in an area of interstate activity in which the applicability of realist logic is often assumed as a given. I found, however, that realism provided a more accurate assessment of the events between 1967 and 1997 than did my hypothesis. *Le juste retour* and dogged state control in international procurement management organizations were not reflections of "community-feeling" and other-regarding behavior. These facets of collaborative procurement in Western Europe instead denoted the persistent obsession of national governments to prevent their partners from attaining disproportionate gains from cooperation and to ensure that they retained political control over that cooperation while also channeling as many industrial and technological benefits into their national economies as possible. The intent of this behavior was not to promote integration, or some rationalized, regional defense industry, but rather to use cooperation as a means of establishing and protecting national capabilities.

While one can acknowledge the value of realism given the evidence presented in this dissertation, one must nonetheless take care not to embrace it uncritically.

Procurement cooperation in late 20th century Western Europe projected islands of realism in an otherwise increasingly non-realist sea of European cooperation. The same governments that built *Tornado* and the *SP-70* prototypes also established monetary union, the Single European Act, a European citizenship, and a host of other transformations that have advanced European unification. Realism can explain much of the politics and policies underlying the aforementioned weapons systems and others, but only so far. Emmanuel Adler once said that “one can never tell a realist something *new*—you can only tell him something *more*.”¹⁶ While I do not completely share this view, I contend that there has always been something more than state fixations on relative gains and autonomy in the area of European collaborative procurement. As Norbert Pipperger of the German Bundesministerium der Verteidigung asserted in early 1997, cooperation in defense was a “natural” outgrowth of the movements that established both “cultural” and economic union in Western Europe.¹⁷ That said, however, Pipperger also contended that,

Defense is a national aim and always has been. . . The driver for what is happening now is not this European identity that they are talking about. It is all wishful thinking. In this sense, we will never be like the US [i.e., a unified polity with a definitive national identity]. Two thousand years of divergence cannot be pushed aside. A European defense identity—or even a political union—of the type found in national federations not only is not feasible, people don't want it. Nonetheless, there is something distinctly *European* in what is happening.¹⁸

As I have shown in my case histories, Mitterrand’s “idea of Europe” has played a considerable role in rationalizing European defense cooperation. Just as one can readily perceive evidence of self-regarding behavior, one can also just as easily uncover statements from notables such as Michael Heseltine and Helmut Kohl that

¹⁶ Interview. Emmanuel Adler, Hebrew University, Jerusalem, July 1997.

¹⁷ Interview. Norbert Pipperger, Bundesministerium der Verteidigung, London, 21 January 1997.

¹⁸ Ibid.

proclaim their actions as serving some larger, regional goal. If identity shift is truly a possibility, realism cannot allow us to hypothesize as to the nature of these shifts or to their effects. Moreover, it certainly can say nothing about the discursive foundation of European collaborative procurement that has made it unique in the international system.

William Keller writes that the international community has been subject to a “global military industrial enterprise” since the 1950s that has led to the “insertion” of defense technological know-how across the planet and the subsequent diffusion of production capabilities.¹⁹ Through overlapping processes of direct sales, licensed production, and even co-development, some developing countries have become industrial competitors of their industrial counterparts. Only in Western Europe, however, has this defense “globalization” embraced the languages of identity shift and regional integration. Realism can only dismiss this phenomenon. Arguably, one must look to some other analytical toolkit that can address this issue. If neither realism or my social constructivist account fully applies to the past situation—to say nothing of the changes looming on the horizon during the first decade of this century—then what? In the next few pages, I will discuss two alternative approaches that may offer some added explanatory leverage.

First, my inability to sustain my constructivist argument may be simply that: my failure is my own and does not diminish the applicability of a constructivist toolkit in assessing the history of intra-European collaborative procurement. This alternative approach would hold that, at best, the argument that I presented is over-specified. In other words, I have implicitly postulated that a transnational European identity must inspire and lead to tangible, integrative behavior in multinational procurement

¹⁹ William Keller, *Arm in Arm* (New York: Basic Books, 1995), 10.

depending upon technology level. In reality, the effects of that identity may be considerably circumscribed. One possibility is immediately evident: a transnational European identity exists as a relatively weak part of a hierarchy of identities that includes legacy national identities. Given that national identities remain dominant in the region, they are more likely to define state interests and motivate action, especially in areas that are as emotionally wedded to traditional conceptions of sovereignty and statehood as defense procurement. This does not deny the potential for an expanding web of armaments collaborations in Europe, both quantitatively and qualitatively. This view, however, recognizes that the potency of an European identity is ultimately dependent upon its relative status in the minds of state decision-makers and their publics, and consequently, its effects may become more pronounced (and encompassing) if and when it supplants the myriad of national identities within the European Union.

Second, one might abandon the constructivist enterprise entirely and instead look to liberal theories of international relations that take into account the preferences of societal actors who translate their desires into state policy through a continuous process of bargaining and pressure politics with other sub-national groups and state decision-makers.²⁰ While this approach shares realism's rationalist disdain for issues of identity, it does allow one to assess the impact of sub-state groups in shaping cooperative procurement. Using this approach, one could hypothesize that given the extreme cost-escalation that accompanies generational advances in the weapons productions which I highlighted in Chapter 3, coupled to the contraction of export markets in the 1970s (which limits the ability of producing states to recoup their research and development costs), states face systemic pressures to cooperate. They

²⁰ Andrew Moravcsik, "Taking Preferences Seriously: A Liberal Theory of International Politics," International Organization 51 (Autumn 1997): 518.

must, however, structure this cooperation in ways that recognize and mitigate “domestic distributional conflicts” likely to arise from foreign entitlements—such as the disputes by national firms over intellectual property rights and contracts. Consequently, one could envision national producers, for example, pursuing their own parochial preferences and pressing state decision makers to preserve *juste retour* and national government oversight of the collaborative process to advance their petty, corporate gains.²¹

A Constructivist reprieve?

Mainstream, contemporary constructivist scholars, like Alexander Wendt, arguably would insist that the findings of this dissertation in no way refute the applicability of social constructivist analyses to the issue of collaborative European arms procurement for a number of reasons. First, that a collective European identity, as I have defined it, is not manifest in regional defense industrial collaboration does not necessarily imply that such activity is ideationally charged and clearly tainted by the traditional imperatives of national identity. Identity matters in this area of state action, and constructivism can say something as to why it does, how and when. Second, while one can infer what form a collective identity might take, one must remain exceedingly cautious in ascribing the effects that such an identity may have. As Wendt writes,

. . . [C]ultures have an intrinsically conservative quality which ensures that structural change (e.g., the mitigation of sovereignty or transcending long-lived antagonisms) will be the exception, not the rule. . . . Collective identity formation in international politics takes place not on a tabula rasa but against a cultural background in which the dominant response to changes in the environment has been egoistic, whether in the extreme form of enmity or the milder form of rivalry.

²¹ Ibid, 532.

The path from the “here” of self-help to the “there” of collective security must tap into and transform that disposition. This is not inevitable. Egoism is deeply entrenched in international life, so much so that the idea of states becoming “friends” can easily seem naïve. Even if the pressure to become friends is strong, as I think it increasingly is, egoistic identity commitments might not give way. The evolution of identities is a dialectic of actual and possible selves, and there are no guarantees that the weight of the past will be overcome.²²

While Wendt arguably means that sometimes identities do not evolve to become more other-regarding, I contend that one can take a more nuanced position. The egoistic identity commitments that Wendt describes can co-exist with collective identity formation. The development of a European identity does not mean that existing national identities automatically become archaic. Those identities are simply too entrenched to fade away with fifty years of regional economic integration. Successive polling data affirm that both national and European identities concurrently exist in the popular imaginations of European societies, albeit within a hierarchy in which loyalty to the nation-state almost always exceeds fealty to Europe. Moreover, one should recall that Western Europe produced both the *Eurofighter* and the Euro in the same the decade. Egoistic identity commitments clearly are not omnipresent, ideational firewalls that impede structural transformation everywhere equally.

A more encompassing social constructivist hypothesis than that presented in this dissertation might recognize that states have multiple identities each generating its own set of interests. A collective sense of “Europeaness” can exist and delineate a range of appropriate state behavior, insofar as they do not challenge core areas of national identity, such as the state’s monopoly on violence. When these lines are crossed, or at least threatened, then one can expect the prerogatives of national identity to play a more determining role in state interest and action. While issues-areas such as

²² Alexander Wendt, Social Theory of International Politics (Cambridge: Cambridge University Press, 1999), 340.

domestic social policy and monetary policy may no longer trigger nationalist, state-centric responses given the evolutionary advance of a transnational identity, as the former head of the Western European Armaments Group Armaments Secretariat attached to the Western European Union argued in late 1996, “defense is special.”²³ It remains so innately connected to conceptions of the state and what sets states apart from other socio-political organizations, that all national governments will remain reluctant about deepening their collaborations regardless of platform or technological content.²⁴ Consequently, a refined constructivist argument might contend that the most relevant questions in European defense should be future oriented, asking when and under what conditions should a developing European identity develop a “critical mass” sufficient to influence state procurement behavior.

Liberal fantasies

Constructivism and realism are not the only means of analyzing the issue of European procurement. A Liberal approach, much like that advocated by Andrew Moravcsik, at first glance, could also provide some explanatory leverage. A liberal theorist would regard the state-generated inefficiencies and politicalization that has characterized regional defense industrial cooperation as a reflection of the desires of sub-national actors who have captured state policy-making to serve their petty, corporate interests. Those actors, in the context of this study, are principally defense firms who actually execute the design and production tasks negotiated by the national governments, but conceivably could be any societal stakeholder in the collaborative process, e.g., labor unions intent on maximizing domestic employment, municipal or

²³ Interview. Pierre Delhotte, Western European Armaments Group, Brussels, 4 July 1996.

²⁴ Andrew James, “Comparing European Responses to Defense Industry Globalization,” *Defense & Security Analysis* 18 (2002): 131.

provincial governments seeking local benefits, or even groups within the state bureaucracy. While an assessment of possible impacts of these other actors would require a new research effort with a revised set of priorities, the narrative of this dissertation obliges me at least to speak to the most conceptually appealing “liberal” alternative: a firm-level, political economy approach that consider potential lobbying by industrial groups upon national governments.

While both constructivists and structural realists find rigor and parsimony in abstracting the state as a unitary actor and thus in not assigning any significant causal value to the preferences and actions of sub-state actors, none would contend that industry is a passive onlooker to international cooperation. As producers of technologies deemed critical to the economic and security well-being of the state, their desires are likely to weigh heavily in the calculus of state decision-makers, at the very least. For liberal scholars, who see the state as a “representative institution” in which powerful societal actors can their exert influence and disguise it as the national interest, defense producers can lead their national governments in ways that can either advance cooperation, or all too frequently undermine it. Indeed, this dissertation’s discussion of the *Eurofighter* program, one sees the firms of one state, France, pressing their government to sabotage the collaboration if their interests were not advanced, even as the chairman of the principal aerospace producer in another country, Germany, was publicly shaming his government to continue its support of the project. A political economy approach would link these events with the positions that these two states ultimately embraced.

I contend that while such an approach is conceptually appealing, it is nonetheless highly problematic. Defense procurement *is* indeed special, and not simply for ideational reasons. As Francois Heisbourg writes, “[t]he defense industry, whether American or European, has by definition a relationship with the state unlike

that of any other major industrial sector, for the simple reason that the state is the main customer.”²⁵ Not only do defense firms operate within monopsony markets, states also have final authority over all third-party sales, and hold “golden shares” in that they reserve the right to interfere in any corporate activities that relate directly to defense production, such as mergers and acquisitions. Moreover, state involvement has not been limited to a legal fiction, as every major European government except Bonn has dabbled in the public ownership of its key national producers since the end of the Second World War at various times. State ownership, manifest either as majority shareholding or outright management, ended in Britain in 1979 with the Thatcherite economic reforms, but continues to various degrees in France, Italy and Spain.²⁶ Consequently, in a situation such as this, one must grapple with the delicate question of where state preferences end and firm-level preferences begin if corporate chairmen and technical designers are also civil servants with direct lines to the ministry of defense. A liberal approach applied to the time frame of this dissertation could conceivably say *more* than a constructivist assessment, but it will not necessarily say anything *new*, as it is largely impractical to disentangle state desires from corporate interests.

Conclusion

For the sake of completeness, I have outlined two alternative approaches the European procurement puzzle. There remains an additional explanation, however, that requires some consideration: the constructivist arguments presented in this dissertation are valid, but not yet ripe. I have shown that European identity has not been a

²⁵ Francois Heisbourg, “From European Defense Industrial Restructuring to Transatlantic Deal?” CSIS Working Paper no. 4, February 2001, 5.

²⁶ Ibid. Even Dassault’s oft-cited independence was something of a mirage as ownership roughly split between the state and the Dassault family.

significant factor in shaping collaborative procurement in the European Union. Nonetheless, it is possible that my analysis is valid only for a discrete period of time. My research ended in the late 1990s, just as a number of noteworthy changes were emerging on the European defense industrial scene. These changes reflect industrial and political transformations that were unforeseen during the 1990s. It remains to be seen, however, if these changes denote the ideational issues that I have discussed in this dissertation. The merging national defense producers in aerospace and electronics simply may reflect what Trevor Taylor and others have labeled the pull of “Anglo-Saxon corporate governance under the effect of globalization,” instead of the push of a new social identity that compels Europeans to advance new corporate models.²⁷ Similarly, the institutional developments at the multinational and Union levels to better coordinate regional procurement may be little more than “headline grabbers,” as Keith Hayward noted, which merely “increase the numbers of [national] bureaucrats who clamber over programs and little else.”²⁸ New research is required to determine if either situation is true. Nonetheless, the record of the last century is clear: European procurement cooperation was unable to escape the bounds of established state identity.

²⁷ Jean-Pierre Maulny, Trevor Taylor, Burkard Schmitt, and Franck-Emmanuel Caillaud, “Abstract of the study on ‘Models of strategic and industrial co-operation between arms companies in Europe,’” http://europa.eu.int/comm/enterprise/defence/defence_docs/resume_iris_en.pdf, 25 December 2003.

²⁸ Interview, Keith Hayward, Staffordshire, UK, 8 January 1997.

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