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The Practical Failure of German Export Control Law: A Lesson in Modern Trade

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Abstract

This Comment will argue that the process of controlling exports must change fundamentally if the foreign policy and security objectives of export controls are to be met. Part I will examine the existing international obligations of exporting nations, such as the FRG, highlighting current public international law. Part I will also analyze the structure of the relevant German legislation. Part II will discuss the practical failure of German export controls. Additionally, Part II will review the subsequent reform legislation. Part III will argue that restructuring of the current national controls is necessary. The national measures should control either categorically or completely, and a comprehensive international network of enforcement should supplement these controls. Finally, Part III will also address the practical implications of these options. This Comment concludes that national export controls should change structurally and that a more comprehensive approach to international coordination and enforcement should be adopted as the model. This Comment will argue that the process of controlling exports must change fundamentally if the foreign policy and security objectives of export controls are to be met. Part I will examine the existing international obligations of exporting nations, such as the FRG, highlighting current public international law. Part I will also analyze the structure of the relevant German legislation. Part II will discuss the practical failure of German export controls. Additionally, Part II will review the subsequent reform legislation. Part III will argue that restructuring of the current national controls is necessary. The national measures should control either categorically or completely, and a comprehensive international network of enforcement should supplement these controls. Finally, Part III will also address the practical implications of these options. This Comment concludes that national export controls should change structurally and that a more comprehensive approach to international coordination and enforcement should be adopted as the model.

THE PRACTICAL FAILURE OF GERMAN EXPORT CONTROL LAW: A LESSON IN MODERN TRADE*

INTRODUCTION

Over the past decade, numerous German firms have sold chemical and biological weapons products and technology, as well as advanced nuclear-destruction expertise to Third World countries including India, Iran, Iraq, Pakistan, and South Africa.¹ The transactions ranged from illegal exports to exports of questionable legality due to lax controls and legal loopholes.² The series of dubious German transfers raises fundamental questions about the efficacy and legitimacy of traditional export controls and their national and international implementation and enforcement structures.³ The Federal Republic of Germany's ("FRG") bureaucratic system of export controls has been largely unsuccessful in preventing the trans-

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1. See, e.g., Hans O. Eglau, *Mit einem Bein im Gefängnis; Unklare Bestimmungen, fragwürdige Geschäfte: Rüstungsexport im Zwielficht*, DIE ZEIT, Sept. 2, 1983, at 21; Frauke Hartmann, Wolfgang Hoffmann & Kuno Kruse, *Deutsche Waffen für die Welt; Mit vielen einfachen Tricks können deutsche Rüstungs-Exporteure die ohnehin schwammigen Kontrollbestimmungen umgehen*, DIE ZEIT, Feb. 3, 1989, at 11; Wolfgang Hoffmann, *Affäre um Agni: Die neue indische Atomrakete soll mit deutscher Hilfe entstanden sein*, DIE ZEIT, Aug. 4, 1989, at 18; Wolfgang Hoffmann, *Alles ohne Kontrolle; Bonn macht illegale Waffenexporte zu leicht*, DIE ZEIT, Jan. 13, 1989, at 17 [hereinafter Hoffmann, *Alles ohne Kontrolle*]; Wolfgang Hoffmann, *Die große Heuchelei; Trotz Hinweise auf illegale Ausfuhren blieben die zuständigen Stellen lange untätig*, DIE ZEIT, Jan. 25, 1991, at 31; Wolfgang Hoffmann, *Ein Schuß aus dem Hinterhalt; Für den Export deutscher Waffenteile gibt es kaum noch Beschränkungen*, DIE ZEIT, Nov. 18, 1983, at 33; Hannes Krill, *Rohlinge jeden Kalibers; Der Fall einer Coburger Firma zeigt, wie dürftig die Kontrollen für Exporte in den Irak waren*, SÜDDEUTSCHE ZEITUNG, Feb. 22, 1991, at 3; Hannes Krill, *Saddam Husseins deutsche Geschäftspartner*, DIE WELT, Feb. 11, 1991, at 6; Albrecht Müller, *Damit die deutschen Waffen ausschließlich im Bündnis bleiben; Warum die Sozialdemokraten ein Verbot von Rüstungsexporten außerhalb der Nato fordern*, FRANKFURTER RUNDSCHAU, Jan. 31, 1991, at 39; Herbert Wulf, *Was nicht schießt und knallt ist keine Waffe*, FRANKFURTER RUNDSCHAU, Feb. 10, 1987, at 12; see also Pete Stark, *Stopping Saddam's Bomb*, CHRISTIAN SCI. MONITOR, Dec. 28, 1990, at 18.

2. See, e.g., *Alles ohne Kontrolle*, supra note 1.

3. Cf. HOMER E. MOYER, JR. & LINDA A. MABRY, EXPORT CONTROLS AS INSTRUMENTS OF FOREIGN POLICY 169 (1988) ("The lessons we most need to learn about export controls are lessons about their limits . . . we have overused export controls as policy tools, frequently with unrealistic expectations of their potential impact.").

fer of dangerous technologies and goods to developing countries.⁴

The FRG attempted to reform its export controls only after extensive negative publicity and considerable pressure from the international community.⁵ To counter the continuing illegal and questionable transfers, the German parliament ("Bundestag") eventually responded with reform legislation.⁶ Each of these measures, however, has proven largely cosmetic, as sensitive materials have continued to cross FRG borders.⁷ The limited success in controlling exports is, in part, a result of

4. See HOLGER KOPPE & EGMONT R. KOCH, *BOMBEN-GESCHÄFTE: TÖDLICHE WAFEN FÜR DIE DRITTE WELT* (1990); HANS LEYENDECKER & RICHARD RICKELMANN, *EXPORTEURE DES TODES: DEUTSCHER RÜSTUNGSSKANDAL IN NAHOST* (4th ed. 1991); JÜRGEN ROTH, *DIE ILLEGALEN DEUTSCHEN WAFFENGESCHÄFTE UND IHRE INTERNATIONALEN VERFLECHTUNGEN* (1988); see also KENNETH R. TIMMERMAN, *THE DEATH LOBBY: HOW THE WEST ARMED IRAQ* (1991) [hereinafter *THE DEATH LOBBY*]. For parliamentary activity and debate regarding the controversy of German export controls, see, e.g., *BUNDESTAG PROTOKOLLE* [parliamentary transcripts] [BT-Pr.] 10/165, at 12331-36; 11/10, at 590-601; 11/233, at 18581-83; 11/118, at 18603-05, 18619-30; and *BUNDESTAG DRUCKSACHE* [parliamentary printed matter] [BT-Dr.] 11/4843; 11/7179; 11/8384; 11/4519; 11/7183; 12/60 (neu); 11/3854.

5. See R. Jeffrey Smith & Marc Fisher, *German Firms Primed Iraq's War Machine*, *WASH. POST*, July 23, 1992, at A1; see also Hermann Bachmaier, *Der Skandal mit der Exportkontrolle*, in KOPPE & KOCH, *supra* note 4, at 9. Commentators have charged that the Bundesregierung ("Federal Government") has had longstanding knowledge of the problems with export controls and did not attempt substantive remedies. See *id.* Hermann Bachmaier, member of the German parliament ("Bundestag") and chair of its Atomic Research Committee, reports that "[m]uch of the [German] deadly business was able to develop undisturbed, because the government of Bonn and its civil servants were satisfied with playing the role of spectators although the Americans and British intelligence provided information." *Id.* (translation by Comment author); see *Das Recht auf die Bombe*, *DER SPIEGEL*, Nov. 18, 1991, at 23; Richard Donkin et al., *A Country That Turned A Blind Eye*, *FIN. TIMES*, Mar. 25, 1991, at 20.

6. See BUNDESMINISTERIUM FÜR WIRTSCHAFT, *BERICHT DER BUNDESREGIERUNG ÜBER DIE VERSCHÄRFUNG DER KONTROLLE DES EXPORTS VON ZIVIL UND MILITÄRISCH VERWENDBAREN GÜTERN* (1992) [hereinafter *BMW 1992 REPORT ON REFORM OF EXPORT CONTROLS*]; BUNDESMINISTERIUM FÜR WIRTSCHAFT, *DIE REFORM VON AUßENWIRTSCHAFTSRECHT UND -KONTROLLE* (1991) [hereinafter *BMW 1991 REPORT ON REFORM OF EXPORT CONTROLS*]; see also HOCKE/BERWALD/MAURER *AUßENWIRTSCHAFTSRECHT: GESETZE, VERORDNUNGEN, ERLASSE MIT KOMMENTAR* Hauptteil I, Wortlaut der Änderungsgesetze zum AWG, and Hauptteil II, Wortlaut der letzten Änderungsverordnungen zur AWV (Siegfried Berwald et al. eds., June 1992) [hereinafter *HOCKE COMMENTARY*].

7. See Donkin et al., *supra* note 5, at 20. The most dramatic example is the outfitting of Iraq during a U.N. embargo. *Id.*; *Saddams Legion*, *DER SPIEGEL*, Jan. 21, 1991, at 31; see S.C. Res. 660, U.N. SCOR, 45th Sess., Res. and Dec. Supp., at 19, U.N. Doc. S/INF/46 (1990), *reprinted in* 29 I.L.M. 1325 (1990); S.C. Res. 661, U.N. SCOR, 45th Sess., Res. and Dec. Supp., at 19, U.N. Doc. S/INF/46 (1990), *reprinted in* 29 I.L.M.

an approach that is technologically⁸ and politically⁹ outdated

1325 (1990) [hereinafter Iraq Embargo]. An estimated 110 German companies were suspected of attempted violation of the AWG. Donkin et al., *supra* note 5, at 20.

The Iraq Embargo was implemented nationally under NEUNTE VERORDNUNG ZUR ÄNDERUNG DER AUßENWIRTSCHAFTSVERORDNUNG, 1990 Bundesanzeiger [BANz.] 4013 (F.R.G.) (sharpening transfer controls against Iraq and occupied Kuwait, and freezing of all accounts, deposits, and other property belonging to occupied Kuwait); ZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AUßENWIRTSCHAFTSVERORDNUNG, 1990 BANz. 4065 (F.R.G.) (forbidding legal business and trade violating Iraq Embargo); DREIZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AUßENWIRTSCHAFTSVERORDNUNG, 1990 BANz. 6757 (F.R.G.) (refining controls further to include activities in addition to Iraq Embargo); and VIERZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AUßENWIRTSCHAFTSVERORDNUNG, 1991 BANz. 1725 (F.R.G.) (sharpening of foreign trade restrictions with certain countries; requiring authorization for dual-use goods, which can also be used for military purposes if exporter has "knowledge" of intended military appropriation; and requiring authorization for services on military projects in these designated countries). For a discussion of these revisions, see Peter Löffler, *Zur strafrechtlichen Bewältigung von Verstößen gegen das Irak Embargo*, 10 ZEITSCHRIFT FÜR WIRTSCHAFTSSTEUER STRAFRECHT 121, 122 (1991).

8. See *infra* notes 269-84 and accompanying text (explaining difficulty in controlling modern technology transfers).

9. See PANEL ON THE FUTURE DESIGN AND IMPLEMENTATION OF U.S. NATIONAL SECURITY EXPORT CONTROLS & COMMITTEE ON SCIENCE, ENGINEERING, AND PUBLIC POLICY, FINDING COMMON GROUND: U.S. EXPORT CONTROLS IN A CHANGED GLOBAL ENVIRONMENT 39 (1991) [hereinafter FINDING COMMON GROUND]. The international political dynamic has changed drastically since the conception of German export controls. See *id.* The security concerns that shaped modern export controls have been inverted. See *id.* For example, the Coordinating Committee for Multilateral Exports ("CoCom") has recently called for a relaxation of export controls. See Keith Bradsher, *U.S. and Allies Ease Sales to Former Soviet Republics*, N.Y. TIMES, June 3, 1992, at D18 (reporting loosening of CoCom controls and CoCom's intention to invite former Soviet Republics to join its members in forum to discuss cooperation on export controls); see also Keith Bradsher, *Bush Eases Cold-War Trade Curb*, N.Y. TIMES, Apr. 24, 1992, at D1 (reporting that as national security threat of cold war diminishes, export controls will be loosened on supercomputers, although some arms experts contend that other threats exist as exemplified by arming of Iraq); Keith Bradsher, *Export Curbs Will Ease, Official Says*, N.Y. TIMES, Apr. 9, 1992, at D1 (reporting that U.S. Commerce Department would pursue export promotion policy and loosen controls on 11 products including computer chips, eventually increasing American exports by US \$3,000,000,000 per year). In fact, "[t]he multilateral control framework embodied in CoCom is an artifact of the Cold War—which is over." FINDING COMMON GROUND, *supra*, at 39.

Moreover, the former Soviets are now selling some of their most sensitive technology to the West. William J. Broad, *U.S. Is Shopping as Soviets Offer To Sell Once-Secret Technology*, N.Y. TIMES, Nov. 4, 1991, at A1. More than ever, policy formulation attempts to address the competing needs of facilitating the movement of goods to enhance trade and of restricting the transborder movement of goods capable of being deployed militarily. See Oliver Remien, *Aussenwirtschaftsrecht in Kollisionsrechtlicher Sicht zur internationalen Reichweite von Aus- und Einfuhrverboten*, 54 RABELS ZEITSCHRIFT FÜR AUSLÄNDISCHES UND INTERNATIONALES PRIVATRECHT 431, 432 (1990).

As an academic matter, the theoretical underpinnings of these controls are likely

and difficult in practice to enforce.¹⁰

This Comment will argue that the process of controlling exports must change fundamentally if the foreign policy and security objectives of export controls are to be met. Part I will examine the existing international obligations of exporting nations, such as the FRG, highlighting current public international law. Part I will also analyze the structure of the relevant German legislation. Part II will discuss the practical failure of German export controls. Additionally, Part II will review the subsequent reform legislation. Part III will argue that restruc-

the maintenance of spheres of economic and political predominance. These precepts are implicitly expressed in policy statements concerning the controls. There is interesting scholarship, however, portending the inherent mortality of such premises, i.e., that the global power dynamic is likely to shift. Compare GEORG WILHELM FRIEDRICH HEGEL, *THE PHILOSOPHY OF HISTORY* (J. Sibree trans., Dover Publications 1956) (1830-31) (conceptualizing dialectic that history moves in logical fashion as God's or Absolute's intention and purpose move from state to state in recurring pattern of thesis, antithesis, and synthesis) with PAUL KENNEDY, *THE RISE AND FALL OF THE GREAT POWERS: ECONOMIC CHANGE AND MILITARY CONFLICT FROM 1500 TO 2000* (1987) (dealing with possible political repercussions of loss of economic-technological competitiveness of United States and decline as world power).

10. See, e.g., *Der Apparat macht was er will*, *DER SPIEGEL*, Nov. 4, 1991, at 30. Many players and factors are involved in the practice of export. Reportedly, the industrial lobby has great influence over German export legislation and licensing. See Michael Brzoska, *Legen markige Sprüche des Todes das Handwerk?*, *FRANKFURTER RUNDSCHAU*, Mar. 9, 1991, at 14. Additionally, the private political agenda of the Bundesnachrichtendienst ("Federal Secret Service" or "BND") appears at odds with official policies. See *Der Apparat macht was er will*, *supra*, at 30. Most recently, the BND attempted to ship Soviet-made military hardware to Israel, despite the express prohibition of the Bundessicherheitsrat ("National Security Ministry"). *Id.*

Moreover, throughout the Western world, the political resolve to truly prevent these transfers is suspect. See James Adams, *The Real Lesson of the Gulf War*, *ATLANTIC*, Nov. 1991, at 36. Policy statements can be deceptive. For example, the Bush administration has announced its stand against the proliferation of "weapons of mass destruction"; however, "with modern weapons the distinction between conventional and unconventional warfare has been blurred." *Id.* Some Western countries encourage the sale of high technology weapons, such as lasers, microcomputers, and Stealth systems, to developing countries to reduce unit costs of production. *Id.* Cf. Seymour M. Hersh, *U.S. Is Said to Have Let Israel Sell Arms to Iran*, *N.Y. TIMES*, Dec. 8, 1991, at 1 (reporting that Reagan Administration approved Israeli sale of "American-made arms, spare parts and ammunition to the Iranian government" despite official pronouncements of "Operation Staunch, to stop worldwide transfers of military goods to Iran"); Elaine Sciolino, *Iraq Policy Still Bedevils Bush as Congress Asks: Were Crimes Committed?*, *N.Y. TIMES*, Aug. 9, 1992, at 18 (reporting that U.S. government may have illegally permitted sale of sophisticated American technology and equipment to Iraq in order to improve relations and including charges that U.S. Commerce Department may have falsified lists of exports to Iraq and that U.S. money may have been diverted to pay for Iraqi arms).

turing of the current national controls is necessary. The national measures should control either categorically or completely, and a comprehensive international network of enforcement should supplement these controls. Finally, Part III will also address the practical implications of these options. This Comment concludes that national export controls should change structurally and that a more comprehensive approach to international coordination and enforcement should be adopted as the model.

I. THE INTERNATIONAL OBLIGATIONS OF EXPORT CONTROL AND IMPLEMENTATION IN THE FRG

A. *International Systems Set Limited Norms on Export Control*

The traditions of public international law guide the current set of international legal controls on exports.¹¹ Public international law typically attempts to order varied national interests within a workable legal system.¹² Conceptually, international law assumes a global interest in governing sovereigns' interactions as they pursue individual and shared goals.¹³ It is an accepted social contract that ultimately operates to the benefit of its participants.¹⁴ The creation of an international legal order is a normative order¹⁵ both defining mutually acceptable behavior and prescribing procedure.¹⁶

11. Cf. Oscar Schachter, *The Role of International Law in Maintaining Peace*, in *APPROACHES TO PEACE: AN INTELLECTUAL MAP* 65, 68 (W. Scott Thompson & Kenneth M. Jensen eds., 1991) ("Virtually every sector of political, social and economic activity has become subject, in some measure, to international rules and procedures.") (citations omitted).

12. *See id.* at 67.

13. *See id.*

14. *See id.* ("Because the [international legal] system was not imposed by a superior authority, it is often viewed as basically contractual and consensual in character . . . no state has, or has had, an option to remain outside the international legal system, and, indeed, no state has professed to do so."); *see also* GRUNDGESETZ [Constitution] [GG] art. 25 (F.R.G.). This article of the FRG constitution, in its entirety, states that

[t]he general rules of public international law shall be an integral part of federal law. They shall take precedence over the laws and shall directly create rights and duties for the inhabitants of the federal territory.

Id., translated in PRESS AND INFORMATION OFFICE OF THE FEDERAL GOVERNMENT, *THE BASIC LAW OF THE FEDERAL REPUBLIC OF GERMANY* 24 (1986) [hereinafter *BASIC LAW OF THE FRG*].

15. *See* Schachter, *supra* note 11, at 67.

16. *See id.* This normative order, however, does not prevent a nation from pro-

In the attempt to achieve world peace, the international policy approach has long been, arguably, focused on the dated issue of traditional East-West arms control regulation, leaving some equally important threats insufficiently regulated.¹⁷ In the context of export controls, policy and approach appear fragmented and acceptable norms less carefully defined and regulated. Currently, a patchwork of limited multilateral systems guides German export policy. International legal coordination of export controls presupposes that the national legislative machinery will operate in synchronism, collectively preventing dangerous exports to nonaligned countries.¹⁸ The German export controls in question represent the national machinations within larger international systems.¹⁹

tecting itself in the event of impending military or economic threat. *See, e.g.*, U.N. CHARTER art. 51 (providing member states with right of self-defense); General Agreement on Tariffs and Trade, Oct. 30, 1947, art. VI, T.I.A.S. No. 1700, at 19, 55 U.N.T.S. 194, 212 [hereinafter GATT] (allowing contracting parties to protect their domestic economies where threat of material injury to established industry or where threat of materially retarding establishment of domestic industry).

17. *See* Edward C. Luck, *Interstate Organizations: Current Scholarship, Analysis, and Practice*, in *APPROACHES TO PEACE: AN INTELLECTUAL MAP* 173, 179 (W. Scott Thompson & Kenneth M. Jensen eds., 1991); David A. Koplow & Philip G. Schrag, *Carrying A Big Carrot: Linking Multilateral Disarmament And Development Assistance*, 91 COLUM. L. REV. 993, 1058 (1991). Until recently, the East-West dynamic has dominated the international political consciousness.

[F]or a generation, security leaders have taught us to think that the principal functions of national defense expenditures are to deter bilateral nuclear war We need now to shift to a more complicated, sophisticated understanding that the dangers of the modern world come in all sorts of forms and from diverse locations . . . we are now compelled to adopt very different strategies and policies to support it.

Id. (citations omitted).

18. *See* MOYER & MABRY, *supra* note 3, at 158-61 (defining purposes of using controls on multilateral basis only); BMWI 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 10 (stating that only when all important exporting countries apply similar control standards can reform of German export controls reach its goal of preventing transfer of dangerous exports to unstable regions of world); *cf.* ROBERT O. KEOHANE, *AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY* 98 (1984) (stating that "[d]ecentralized enforcement of regime rules . . . is neither swift nor certain").

19. *Cf.* KEOHANE, *supra* note 18, at 98 ("International regimes are decentralized institutions . . . [which] mean[s] that any sanctions for violation of regime principles or rules have to be enacted by the individual members . . .").

1. The Primary International Organization Concerned with the Export Controls of Industrialized Nations

Export controls are designed to deal with both international and domestic concerns in exports.²⁰ The international concerns about dangerous exports are largely shared by the FRG's allies, and the Coordinating Committee for Multilateral Exports ("CoCom"), as a body, primarily addresses these concerns.²¹ At the initiative of the United States, this intergovernmental group was formed during the cold war to coordinate embargo politics, in which its primary function was to limit the export of strategically relevant goods to communist countries.²² To accomplish this function, CoCom establishes a list of embargo goods,²³ and CoCom consistently revises its list to conform to technological advances and particular political concerns.²⁴ The members of CoCom collectively construct these resolutions, and enforce the controls independently; however, CoCom has no binding authority.²⁵ Additionally, CoCom's recommendations are officially secret.²⁶

2. The International Coordination of Certain Categorical Exports

In addition to participation in CoCom, the FRG is a party to other various international agreements and structures designed to limit certain categories of exports of deadly know-how and wares.²⁷ Each of these agreements has a discrete control function. The most prominent weapons-technology con-

20. See, e.g., MOYER & MABRY, *supra* note 3, at 2-3, 119, 156-57.

21. See MICHAEL P. MALLOY, ECONOMIC SANCTIONS AND U.S. TRADE 274-76 (1990); see also HOCKE COMMENTARY, *supra* note 6, Hauptteil II, § 5 AWV Anm., at 1-4, § 17 AWV Anm., at 2, § 29b AWV Anm., at 1; ADELHEID PUTTLER, VÖLKERRECHTLICHE GRENZEN VON EXPORT- UND REEXPORTVERBOTEN 40-41 (1989).

22. See ELMAR M. HUCKO, AUßENWIRTSCHAFTSRECHT 13 (2d ed. 1990); MALLOY, *supra* note 21, at 274.

23. See MALLOY, *supra* note 21, at 275.

24. See *id.* at 276.

25. See *id.* at 274-75. The current members of CoCom are Australia, Belgium, Canada, Denmark, France, FRG, Greece, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, Spain, Turkey, the United Kingdom, and the United States. *Id.* at 274 n.7 (citing 15 C.F.R. § 770.2).

26. See *id.*

27. For a current discussion of these multilateral control regimes and others, see Peter Rudolf, *Non-Proliferation and International Export Controls*, 42 AUSSENPOLITIK 390, 393-99 (Eng. ed. 1991).

trol arrangements in this area include the Nuclear Non-Proliferation Treaty ("NPT"),²⁸ the Missile Technology Control Regime ("MTCR"),²⁹ and the Australia Group.³⁰

The NPT is an attempt to limit the circle of nations possessing nuclear weapons capabilities.³¹ Under the NPT, non-nuclear weapons states³² agreed not to import or produce nuclear-explosive products.³³ The nuclear-capable states agreed not to transfer nuclear weapons technology or to participate in its development with other states.³⁴ The International Atomic Energy Agency ("IAEA"), a U.N.-sponsored organization, administers verification of the terms of the NPT.³⁵ Under the NPT, nuclear-capable states agreed to support the development of nuclear power plants as energy sources in non-nuclear states.³⁶ The IAEA is responsible for inspection to assure that signatories do not divert nuclear technology and facilities from civilian use to military application.³⁷ To accomplish this goal, the IAEA conducts on-site inspections of nuclear facilities.³⁸ The NPT, however, does not require any IAEA safeguards of its member nuclear-capable states. The safeguards in place are mainly informational ones, providing for record-keeping of location, quantities, form, and movement of nuclear materials.³⁹ As a corollary to the NPT, but outside of the IAEA framework,

28. Treaty on the Non-Proliferation of Nuclear Weapons, July 1, 1968, 21 U.S.T. 483, 729 U.N.T.S. 161 [hereinafter NPT].

29. Agreement on Guidelines for the Transfer of Equipment and Technology Related to Missiles, Apr. 16, 1987 [hereinafter MTCR], *reprinted in* 26 I.L.M. 599 (1987).

30. See Raymond Cohen, *The Proposed Solution, in IS IT FEASIBLE TO NEGOTIATE CHEMICAL AND BIOLOGICAL WEAPONS CONTROL?* 19, 20 (Kenneth M. Jensen & David Wurmser eds., 1990). The Australia Group is an informal association that meets periodically to exchange information on the spread of chemical weapons products and technology. *Id.*

31. NPT, *supra* note 28, pmb., 21 U.S.T. at 485-86, 729 U.N.T.S. at 170-71, 173.

32. NPT, *supra* note 28, art. IX, § 3, 21 U.S.T. at 492-93, 729 U.N.T.S. at 174-75.

33. NPT, *supra* note 28, art. II, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

34. NPT, *supra* note 28, art. I, 21 U.S.T. at 487, 729 U.N.T.S. at 171.

35. NPT, *supra* note 28, art. III, § 4, 21 U.S.T. at 489, 729 U.N.T.S. at 172. The Statute of the International Atomic Energy Agency created the International Atomic Energy Agency ("IAEA") on October 26, 1956, 8 U.S.T. 1093, 276 U.N.T.S. 3.

36. NPT, *supra* note 28, art. IV, 21 U.S.T. at 489-90, 729 U.N.T.S. at 172-73.

37. NPT, *supra* note 28, art. III, § 1, 21 U.S.T. at 487-88, 729 U.N.T.S. at 172.

38. *Id.*

39. See Rudolf, *supra* note 27, at 393-99.

seven major nuclear-capable countries interested in strengthening their national nuclear-export policies formed the Nuclear Suppliers Group.⁴⁰

Seven industrialized nations formed the MTCR to enact similar national controls to regulate the export of nuclear-capable missile systems and technologies.⁴¹ The MTCR applies to missile systems with payload capacities of 500 kilograms and a reach of 300 kilometers.⁴² As the MTCR has no coordinating body, the implementation of controls is left to individual member states.⁴³ The specific rules of the MTCR have been subject to interpretative differences.⁴⁴

Following the Iran-Iraq war of 1980-1988, ten industrialized countries founded the Australia Group to address the export control issues of chemical weapons in the absence of an international treaty totally banning the use of chemical weapons.⁴⁵ In an attempt to contain the proliferation of chemical

40. See, e.g., Nuclear Suppliers Group: Guidelines for Nuclear Transfers, Feb. 1978, I.A.E.A. Doc. INFCIRC/254, reprinted in 17 I.L.M. 220 (1978); see also Rudolf, *supra* note 27, at 394. The founding members of the Nuclear Suppliers Group ("NSG") were the United States, the Soviet Union, the FRG, the United Kingdom, France, Canada, and Japan. *Id.* The NSG, initially formed after India exploded its first nuclear bomb, reconvened after the Persian Gulf war to reassess the changed needs of international control of nuclear technology. William J. Broad, *27 Countries Sign New Atom Accord*, N.Y. TIMES, May 3, 1992, at 15. A group of 27 nations signed an accord detailing international rules to limit the sale of machines and materials used in civilian and military nuclear products. *Id.* The accord, however, does not include such suppliers as China, Brazil, or Argentina. *Id.* "The accord is voluntary and has no enforcement mechanism other than the pressure of participating states, which have a common interest in maintaining a level playing field among high-tech exporters around the world." *Id.*

41. MTCR, *supra* note 29, reprinted in 26 I.L.M. at 599-601; see Rudolf, *supra* note 27, at 396. Canada, France, the FRG, Italy, Japan, the United Kingdom, and the United States founded the MTCR in 1987. *Id.* Australia, Austria, the Benelux countries, Denmark, Norway, New Zealand, and Spain subsequently joined the MTCR. *Id.*; see also Koplów & Schrag, *supra* note 17, at 1056 n.252.

42. MTCR, *supra* note 29, reprinted in 26 I.L.M. at 601; see Rudolf, *supra* note 27, at 396. The threshold of 500 kilograms corresponds to the mass of a simple nuclear missile and the range of 300 kilometers allows "friendly states to acquire land-based tactical systems, air-to-air missiles or air defence systems." *Id.* at 397 n.17.

43. See Rudolf, *supra* note 27, at 397. The MTCR distinguishes between complete systems and their components, which may have both military and civilian uses. MTCR, *supra* note 29, reprinted in 26 I.L.M. at 601-02; see Rudolf, *supra* note 27, at 397. Control of the components is left to the discretion of the member states. *Id.* The variety of applications of the involved technologies has caused problems, particularly because they are similar to those used in civilian aircraft. *Id.* at 397-98.

44. See Rudolf, *supra* note 27, at 397-98.

45. See *id.* at 395. The Australia Group now consists of 20 countries, including

weapons, the Australia Group established a "warning list" of fifty chemicals that are susceptible to both military and civilian uses.⁴⁶ The FRG was one of the few member states to require official approval for the export of any of the fifty chemicals.⁴⁷ In future meetings, the Australia Group also intends to focus its attention on the non-proliferation of biological weapons.⁴⁸

B. The FRG Implements Its Foreign and Domestic Economic Policy Through National Foreign Trade Law

1. FRG Foreign Trade Law: The Foreign Trade Act and the Imposition of Trade Restrictions

German administration of the continually refined system of export controls is not unlike its international counterparts.⁴⁹ In fact, the German legislative design is relatively extensive and sophisticated compared to international standards.⁵⁰ The FRG statutory framework theoretically facilitates revision to adapt to sensitive political events.⁵¹ It controls the obvious categories of exports with its express prohibitions,⁵² and it has the authority to control ambiguous exports through its licensing scheme.⁵³ The Außenwirtschaftsgesetz ("Foreign Trade Act" or "AWG") of the FRG is the governing structure for

Australia, Austria, Canada, the European Community, Japan, New Zealand, Norway, Switzerland, and the United States. *Id.*; see Paul Lewis, *Chemical-Arms Ban Written; Fast Action Asked*, N.Y. TIMES, June 25, 1992, at A11; Cohen, *supra* note 30, at 20-21 (proposing establishment of formal central body to deal with controlling exports of chemical weapons technology and products).

46. See Rudolf, *supra* note 27, at 395. A core list of nine chemicals were to be subject to export restrictions in all member states. Members are to notify their domestic industries of the list and businesses are to refrain from transactions involving the chemical weapons programs of Iraq, Iran, Libya, and Syria. *Id.*

47. *Id.* After the Persian Gulf war, the member states agreed to make arrangements to subject all 50 chemicals to export controls for transfer outside of the Australia Group. *Id.*

48. *Id.* at 396.

49. See, e.g., Remien, *supra* note 9 (comparing and distinguishing export control systems of Germany, Austria, and United States, among others).

50. See Smith & Fisher, *supra* note 5 (quoting president of Germany's Federal Export Control Office).

51. See, e.g., EINUNDZWANZIGSTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1992 BAnz. 3277 (F.R.G.) (implementing embargo against Libya as provided by U.N. Security Council Resolution No. 748 of Apr. 15, 1992).

52. See AUßENWIRTSCHAFTSGESETZ [AWG] § 7, ¶ 2 (F.R.G.).

53. AWG § 3.

German export control⁵⁴ and, likewise, establishes the bases for strengthening these controls.⁵⁵ For example, in the FRG, the Foreign Trade Act incorporates CoCom positions on export and technology-transfer limitations⁵⁶ into an appendix ("Ausfuhrliste" or "Export List").⁵⁷ The statute, however, only defines a framework by providing for general guidelines for the range of German foreign trade.⁵⁸ As a primary concern, the Foreign Trade Act framework supports the single principle of liberalized trade and commerce.⁵⁹

Under this legislative rubric, the Bundestag implements the specific provisions of export control in the form of Rechtsverordnungen ("Legal Regulations").⁶⁰ The coordinate operational legislation of the Foreign Trade Act is the Außenwirtschaftsverordnung ("Foreign Trade Regulation" or "AWV").⁶¹

54. AUßENWIRTSCHAFTSGESETZ [AWG], 1961 Bundesgesetzblatt, Teil I [BGBl. I] 481 (F.R.G.). "With the end of the occupation on May 5, 1955, the sovereignty of the FRG in the field of foreign exchange was established. On December 29, 1958 the free convertibility of the German currency, the *Deutsche Mark*, was finally declared." ULF R. SIEBEL, FOREIGN TRADE LAW OF THE FEDERAL REPUBLIC OF GERMANY 15 (1989). The AWG was introduced as a bill on October 15, 1959 and debated by a committee of experts in 16 meetings. The AWG was promulgated on April 28, 1961. See *id.* at 15-16; see also PUTTLER, *supra* note 21, at 28; Remien, *supra* note 9, at 440-41.

55. See PUTTLER, *supra* note 21, at 27.

56. AWG § 7; see BUNDESAMT FÜR WIRTSCHAFT, DIE AUSFUHR VON EM-BARGOWAREN 13-14 (3d ed. Nov. 1991); KLAUS W. EBERT, RECHTLICHE BESCHRÄNKUNGEN DES TECHNOLOGIE TRANSFERS IM AUßENWIRTSCHAFTSVERKEHR 111-27 (1986); HOCKE COMMENTARY, *supra* note 6, Hauptteil II, § 17 AWV Anm., at 2-3; ECKART PUTZIER, DIE ERMÄCHTIGUNGEN DES AUßENWIRTSCHAFTSGESETZES 62-63 (1987); Remien, *supra* note 9, at 443.

57. ANLAGE AL ZUR AUßENWIRTSCHAFTSVERORDNUNG [Ausfuhrliste or Export List]; see JÖRG F. F. VON FÜRSTENWERTH, ERMESSENSENTSCHEIDUNGEN IM AUßENWIRTSCHAFTSRECHT 50-51 (1985).

58. See HOCKE COMMENTARY, *supra* note 6, Vorbem. § 2 AWG; HUCKO, *supra* note 22, at 10; SIEBEL, *supra* note 54, at 15; VON FÜRSTENWERTH, *supra* note 57, at 46. Restrictions in foreign trade are instituted pursuant to AWG § 21, ¶ 1 through implementing ordinances. See SIEBEL, *supra* note 54, at 15.

59. See SIEBEL, *supra* note 54, at 12, 30. "In principle, trade and commerce in goods and services, and capital payments as well as other business transactions with Foreign Economic Areas [outside the FRG] are free . . ." AWG § 1, translated in SIEBEL, *supra* note 54, at 30. This legislation ushered the FRG into the international free market system from the sheltered post-war economy. See BT-DR. 3/1285, at 230, 233; see also SIEBEL, *supra* note 54, at 15-16; VON FÜRSTENWERTH, *supra* note 57, at 45; Remien, *supra* note 9, at 442-43.

60. AWG § 27.

61. AUßENWIRTSCHAFTSVERORDNUNG [AWV], 1986 BGBl. I 2671 (F.R.G.) [originally AWV, 1961 BGBl. I 1381 (F.R.G.)]. The AWV implements the AWG. Before 1986, the AWV was developed through 59 amendments and revisions. It was, there-

This tiered approach provides legislative flexibility in allowing for efficient response to changing economic and political circumstances through the Foreign Trade Regulation.⁶² This legislative process is facilitated through the use of amendments and revisions.⁶³ The concept of freedom inherent in the Foreign Trade Act is immutable and can not be negated by subsequent amendments.⁶⁴ The Foreign Trade Act, nonetheless, allows for limitations on exports for foreign policy and security reasons.⁶⁵

Although the Foreign Trade Act establishes the right to the greatest possible freedom of action in international trans-

fore, reintroduced on December 18, 1986 and implemented on January 1, 1987, replacing the original. It continues to be revised. See SIEBEL, *supra* note 54, at 15.

62. AWG § 27. The official basis for AWG § 27 [formerly AWG § 26] was that the economy was dependent on external political factors and needed to be able to adjust accordingly: "Rechtsverordnungen aufgrund des Außenwirtschaftsgesetzes können von erheblicher Bedeutung für die gesamte Volkswirtschaft sein. Sie haben außerdem oftmals Auswirkungen in anderen, insbesondere politischen Bereichen." BT-Dr. 3/1285, at 250; see VON FÜRSTENWERTH, *supra* note 57, at 50 (enumerating international political crises that effects domestic economy).

63. See SIEBEL, *supra* note 54, at 15. The Außenwirtschaftsverordnung has been revised 16 times from 1986-1991. The revisions include AWV, 1986 BGBl. I 2671 (F.R.G.); ERSTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1987 BGBl. I 2626 (F.R.G.); ZWEITE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1989 BGBl. I 341 (F.R.G.); DRITTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1989 BGBl. I 535 (F.R.G.); VIERTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1989 BGBl. I 1134 (F.R.G.); FÜNFTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1989 BGBl. I 1749 (F.R.G.); SECHSTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BGBl. I 554 (F.R.G.); SIEBTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BGBl. I 1121 (F.R.G.); ACHTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BGBl. I 1510 (F.R.G.); NEUNTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BAnz. 4013 (F.R.G.); ZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BAnz. 4065 (F.R.G.); ELFTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BAnz. 5261 (F.R.G.); ZWÖLFTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BAnz. 6637 (F.R.G.); DREIZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1990 BAnz. 6757 (F.R.G.); VIERZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1991 BAnz. 1725 (F.R.G.); FÜNFZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1991 BAnz. 2069 (F.R.G.); SECHZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AWV, 1991 BAnz. 4741 (F.R.G.).

64. BT-Dr. 3/1285, at 231; see HOCKE COMMENTARY, *supra* note 6, Hauptteil I, § 1 AWG Anm., at 1-2. The Federal Administrative Court of the FRG stated that [t]he power given to the administration to introduce restrictions must be limited and precise in such a way that it can be predicted in which cases and for which aim and purpose such power will be made use of and which content the measures decreed on the strength of such power conferred will have.

SIEBEL, *supra* note 54, at 26.

65. AWG §§ 5, 7; see PUTTLER, *supra* note 21, at 28; see also Remien, *supra* note 9, at 443.

actions,⁶⁶ it also provides the capacity to restrict trade.⁶⁷ Any limitation on the freedom accorded international transactions, however, must be specifically prescribed by law⁶⁸ and kept to an absolute minimum.⁶⁹ Accordingly, exemptions to export restrictions should be liberally administered.⁷⁰

The Bundestag, however, generally has authority to impose certain limitations and restrictions on foreign trade in two circumstances. First, the power to restrict exports arises in the maintenance of the orderly development of the domestic economy,⁷¹ and, second, the power arises in the prevention of the disruption of countries' peaceful relations.⁷² Limitations or restrictions on the transfers of dangerous technologies fall securely under the latter category.⁷³

66. See Remien, *supra* note 9, at 446 (defining "international transactions" as transactions between FRG residents and non-residents or regarding foreign assets).

67. See SIEBEL, *supra* note 54, at 30. In contrast, in the United States export is a privilege and not a right. See BARRY E. CARTER, INTERNATIONAL ECONOMIC SANCTIONS: IMPROVING THE HAPHAZARD U.S. LEGAL REGIME 64 (1988).

68. AWG §§ 1-3.

69. AWG § 2, ¶¶ 2-3. The relevant portion thereof states that

[r]estrictions are to be limited as to character and extent to the minimum necessary to achieve the purpose stipulated in the empowering legislation. They are to be formulated in such a way as to interfere as little as possible with the freedom of economic activity. Restrictions may affect existing contracts only if the purpose to be achieved would otherwise be substantially jeopardized. Furthermore, restrictions have to be abolished as soon and insofar as the reasons necessitating their introduction are no longer relevant.

Id., translated in SIEBEL, *supra* note 54, at 31.

70. AWG § 3, ¶ 2. This section states, in part, that

[i]f in accordance with the purpose of the restrictive provision authorisations can only be given within certain limits then such authorisations should be granted in such a way that the existing possibilities could best be made use of under general economic points of view. Preference may be given to residents who as a consequence of the restrictions particularly suffer in their normal business activities.

Id., translated in SIEBEL, *supra* note 54, at 31.

71. See AWG §§ 6, 8-24. These must be specific economic reasons, regulated by AWG §§ 6, 8-24; the purpose is largely to protect the strength of the domestic currency, the balance of payments, and avert any domestic crises. See EBERT, *supra* note 56, at 94; PUTZIER, *supra* note 56, at 64-108.

72. See AWG §§ 5, 7. Primarily political motivations are covered. *Id.* These laws allow for the protection of the security and foreign policy interests of the FRG and allow for the fulfillment of bilateral or multilateral agreements. See EBERT, *supra* note 56, at 95; Remien, *supra* note 9, at 443; PUTZIER, *supra* note 56, at 58-63. These concerns are largely based on constitutional considerations of GG art. 80(I). See PUTTLER, *supra* note 21, at 32-36.

73. See EBERT, *supra* note 56, at 95. The other set of restriction sections deals

a. The General Restriction of Exports

The General Restrictions portion of the Foreign Trade Act⁷⁴ protects obligations of the FRG that arise from international treaties and supranational organizations.⁷⁵ In addition, it protects obligations that arise from German security and foreign policy interests.⁷⁶ Each of these obligations or interests implicates the authority to prohibit or interdict military or strategic exports.⁷⁷ In restricting trade, the FRG foreign trade law expressly distinguishes between specifically prohibited transactions and transactions restricted by the authorization process.⁷⁸ These restrictions may apply generally or in particular cases.⁷⁹

Furthermore, the legislation categorizes international arrangements⁸⁰ by whether they require domestic promulgation by the German legislature, or whether they have the force of law, i.e., enacted by the competent bodies of supranational organizations to whom the FRG has surrendered certain sovereign rights.⁸¹ Either type of international legislation has

principally with traditional economic trade issues, as opposed to foreign affairs issues. *See id.* For example, the only general restriction possibility with economic motives is found in AWG § 6, which establishes standards to protect against foreign obstacles to German trade. *See EBERT, supra* note 56, at 95. The main purpose of export control under AWG § 8 is to secure the life-necessity goods of the internal market in times of crisis when restricting exports would be in the public interest. *See id.* at 96. The contractual control in AWG § 9 sets requirements against the dangers of underpricing in export (i.e., antidumping measures). *See id.*

74. AWG §§ 5-7; AWV §§ 5-6.

75. AWG § 5.

76. AWG § 7.

77. AWG § 7.

78. *See SIEBEL, supra* note 54, at 33.

79. *Id.*

80. *See* AWG § 1, ¶ 2 (drawing distinction between sources of legislation).

81. *See* GG art. 24, ¶ 1. The article states, in its entirety, that

(1) The Federation may by legislation transfer sovereign powers to inter-governmental institutions.

(2) For the maintenance of peace, the Federation may enter a system of mutual collective security; in doing so it will consent to such limitations upon its rights of sovereignty as will bring about and secure a peaceful and lasting order in Europe and among the nations of the world.

(3) For the settlement of disputes between states, the Federation will accede to agreements concerning international arbitration of a general, comprehensive and obligatory nature.

GG art. 24, *translated in* BASIC LAW OF THE FRG, *supra* note 14, at 24.

means of effect under FRG foreign trade law.⁸² International treaties, ratified by the Bundestag,⁸³ requiring that signatories take certain measures to restrict transactions, may be implemented through Legal Regulations that enable the FRG to fulfill its obligations thereunder.⁸⁴ These measures apply to cases where a treaty contains an express obligation to enact legislation, rather than merely allowing for it.⁸⁵ Additionally, the FRG has entered into a great number of bilateral treaties that contain provisions relating to foreign trade law.⁸⁶ These treaties are typically friendship, commerce, and navigation treaties that stipulate nondiscriminatory treatment of the residents of contracting parties,⁸⁷ which the Foreign Trade Act handles similarly.⁸⁸

As an economic matter of national concern, public international law provides a legal basis for restricting exports domestically.⁸⁹ Under commonly accepted notions of public international law, each state has the right to protect its own

82. See SIEBEL, *supra* note 54, at 12. Currently, however, the FRG has aggressive legislation by European Community standards, and German industry is lobbying to raise European Community requirements to its level. See Marcus Kabel, *German Industry Says Tougher Export Rules Hurt Competitiveness*, REUTERS, Apr. 9, 1991, available in LEXIS, Nexis Library, Wires File; see also BMWI 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 10.

83. See GG art. 59, ¶ 2. The second paragraph of this article states, in part, that [t]reaties which regulate the political relations of the Federation or relate to matters of federal legislation shall require the consent or participation, in the form of a federal law, of the bodies competent in any specific case for such federal legislation.

Id., translated in BASIC LAW OF THE FRG, *supra* note 14, at 38.

84. See SIEBEL, *supra* note 54, at 20-21, 33-34. However, AWG §§ 1 and 5 do not cover the case of recommendations issued by different international organizations to which the FRG is a member, as such recommendations do not have the force of law. See *id.* This status also applies to codes and recommendations passed by the United Nations and its suborganizations. *Id.*

85. AWG § 5; see SIEBEL, *supra* note 54, at 20-21, 33-34. For example, the FRG could support an embargo as a member state of the United Nations. See PUTTLER, *supra* note 21, at 31. AWG § 5 comes into consideration when dealing with human rights efforts requiring export limitations. For example, the FRG used this construction to officially support a U.N. embargo of South Africa. See S.C. Res. 418, U.N. SCOR, 32d Sess., Res. and Dec. Supp., at 5, U.N. Doc. S/INF/33 (1977), reprinted in 16 I.L.M. 1547, 1548 (1977). This action constituted a weapons embargo against South Africa under Article 7 of the U.N. Charter. See PUTTLER, *supra* note 21, at 31.

86. See SIEBEL, *supra* note 54, at 23-24.

87. See *id.*

88. AWG §§ 1, 5.

89. See SIEBEL, *supra* note 54, at 34.

economy.⁹⁰ Accordingly, the sovereign state has the right to restrict transactions with residents of other states where it is necessary to protect its economy.⁹¹ In the FRG, the Foreign Trade Act allows restriction of foreign trade transactions in order to prevent or counteract detrimental effects on the FRG by foreign systems with different economic orders.⁹²

With a view to political concerns, the Foreign Trade Act acknowledges the possibility of export restrictions under three constitutionally-derived precepts:⁹³ first, the preservation of national security; second, the prevention of disturbing foreign relations; and third, the preservation of international peace.⁹⁴ The Foreign Trade Act additionally allows for banning the export of arms or other war materials, as well as pertinent patents.⁹⁵ Because these restrictions are purely political, it follows that the discretion involved may be politically motivated.⁹⁶

b. The Specific Restriction of Exports

Whereas the general restrictions comprise cases of governmental obligations,⁹⁷ the specific restrictions allow the FRG

90. *See id.* at 23-24. This principle includes the right of retaliation, to counteract measures taken by another state that would have a damaging effect on the domestic economy. *See id.*; *see also* PUTZIER, *supra* note 56, at 51-57; Remien, *supra* note 9, at 434.

91. AWG § 6.

92. *See* SIEBEL, *supra* note 54, at 34.

93. *See id.* These precepts derive from GG art. 26, ¶ 1, which declares unconstitutional any intentional act that could result in a risk to the maintenance of peaceful community of peoples. *Id.*

94. AWG § 7, ¶ 1. For a discussion of its official use during the Iraq Embargo, see Löffler, *supra* note 7, at 121. *Compare* BT-DR. 11/7658, at 2 *and* BT-DR. 11/7694, at 6. Interestingly, the Rhodesia Embargo led to a discussion of whether such action could be taken under AWG § 7, ¶ 1, as constitutional questions existed. The question was presented whether AWG § 7, ¶ 1 met the requirements of GG art. 89, ¶ 1. To avoid potential problems, the enabling order was strengthened in connection with AWG § 2, ¶ 1 and § 27, ¶ 1, sent. 2. *See* PUTTLER, *supra* note 21, at 32.

95. AWG § 7, ¶ 2.

96. *See* EBERT, *supra* note 56, at 167. The language of AWG § 2, ¶ 2 limits the type and degree of restrictions expressly according to the standards set in AWG §§ 5 and 7. The statutory language deals with the legally discernible standards. Unlike the restrictions set forth in AWG §§ 6, 8-24, the cases of AWG §§ 5 and 7 are not primarily concerned with economic protections. *See* EBERT, *supra* note 56, at 167. Formulating export restrictions inevitably involves setting both political and economic legal standards, the overlap of which can create problems. *Id.*

97. *See* SIEBEL, *supra* note 54, at 43-44.

to restrict particular types of transactions.⁹⁸ The Foreign Trade Act divides the specific restrictions into four legal sub-groups:⁹⁹ the trading of goods,¹⁰⁰ the performance of services,¹⁰¹ capital transactions,¹⁰² and gold transactions.¹⁰³ Notably, the same limitations on German exports used to safeguard the security of the FRG¹⁰⁴ may function as specific restrictions to prevent the possible economic dangers that may arise from domestic market forces.¹⁰⁵ In practice, three concerns typically invoke specific restrictions on German export transactions.¹⁰⁶ First, in setting specific export restrictions, the Foreign Trade Act seeks to preserve, as a primary aim, the orderly flow of the vital supply of goods in the FRG, or regions of it, and to prevent the jeopardization thereof.¹⁰⁷ At stake in this case is the overall interest in avoiding any economic crisis in the domestic market. Second, the Foreign Trade Act may also limit or prohibit the export of agricultural or food products if they are of inferior quality and such export would negatively impact on other German exports.¹⁰⁸ Principally, such measures are only taken where the FRG perceives negative repercussions to the hallmark "Made in Germany."¹⁰⁹ Last, the Foreign Trade Act allows for the restriction of the re-export of goods imported to the FRG.¹¹⁰

Additionally, the Foreign Trade Act regulates specific con-

98. AWG §§ 8-24.

99. See SIEBEL, *supra* note 54, at 44. Correspondingly, under the AWV, Chapter II is on exports; Chapter III on imports; Chapter IV on transit; Chapter V on services; Chapter VI on capital transactions; and Chapter VII on payments. The two statutes must be read together. See *id.*

100. AWG §§ 8-14.

101. AWG §§ 15-22.

102. AWG §§ 22-23.

103. AWG § 24.

104. AWG § 7.

105. AWG § 8.

106. *Id.*; see SIEBEL, *supra* note 54, at 44.

107. AWG § 8, ¶ 1; see SIEBEL, *supra* note 54, at 44-45. This provision must be read in conjunction with the relevant provisions of the WIRTSCHAFTSSICHERSTELLUNGSGESETZ ("Act of Safeguarding the Economy"). *Id.*

108. See SIEBEL, *supra* note 54, at 45.

109. *Id.* at 45. "This purpose has clearly been stated by the respective committee of parliament dealing with the bill of the AWG." *Id.*

110. AWG § 8, ¶ 3. This section reflects the FRG's responsibilities under interstate agreements or under supra national organizations that may prohibit the FRG from exporting goods that it was permitted to import by agreement. See SIEBEL, *supra* note 54, at 45.

ditions in export agreements.¹¹¹ For example, if the terms regarding the payment and delivery of products to non-residents are inconsistent with standard trade practices, they can be subject to regulation.¹¹² This measure has the power to prevent unfair trade practices.¹¹³

2. The Authorization Process as a Means to Provide Exemption from Restriction

The statutory restrictions may require that, when executing certain transactions, the legal party must obtain general or specific permits from the appropriate authorities.¹¹⁴ This administrative review amounts to a discretionary control. The governing principles remain, first, the greatest possible freedom of international trade,¹¹⁵ and, second, the constitutional right to equal treatment.¹¹⁶ As the Foreign Trade Act limits the allowable restrictions on trade,¹¹⁷ the permits exempting the applicant from a restriction should be liberally granted.¹¹⁸ The Foreign Trade Act provides direction to those authorities that issue exemptions.¹¹⁹ The authorities grant licenses where they can expect that the purpose of such restrictive provision

111. AWG § 9. Procedural matters, such as customs declarations, are also regulated. AWG §§ 8-14.

112. See SIEBEL, *supra* note 54, at 46. This eventuality occurs when a transaction's terms, set by a resident exporter, undercut usual terms and could or might result in serious disruption to German exports to the respective importing country. *Id.* AWG § 9, ¶ 1 allows the prohibitions of the foreign trade law to include an export agreement with such conditions. *Id.* The section further provides that the resident exporter should fix his or her price in a reasonable manner to avoid detrimental effects. *Id.*; cf. GATT, *supra* note 16, art. VI., T.I.A.S. No. 1700, at 19, 55 U.N.T.S. at 212.

113. See SIEBEL, *supra* note 54, at 46.

114. See AWG § 3. In practice, a set of working appendices, the Ausfuhrliste ("Export List" or "AL") and the Landliste ("Nations List" or "LL"), operate in conjunction with the restrictions set up in the AWV, establishing which goods have authorization or notification requirements. See Hucko, *supra* note 22, at 12. For example, Part I consists of weapons, munitions and military materials and other distinctive technologies, including those for constructing chemical and biological materials. See *id.*

115. AWG § 1.

116. GG art. 3.

117. AWG § 2, ¶ 2; § 3.

118. AWG § 3, ¶ 2. The practice of handling such authorities is dealt with in AWG §§ 3, 28 and 30, as well as in AWV §§ 1-3.

119. AWG § 3. These authorities are mentioned in AWG § 28. Further details about the contents of authorizations are found in AWG § 30.

would not or would be endangered only insignificantly by the execution of such transaction or deal.¹²⁰ Again, great liberty is involved in issuing licenses. To that end, the respective authorities have additional latitude if the general economic interest in the execution of such transaction or deal outweighs any impairment to the purpose of the limitation stipulated.¹²¹ The authorities may also consider the degree of economic hardship that a restriction consequently imposes on residents' businesses.¹²² Authorizations may be granted conditionally.¹²³ In addition, the appropriate authorities may impose time limits or reserve the right of revocation to assure compliance with any preconditions.¹²⁴ The authorities may revoke fraudulently or illegally obtained authorizations.¹²⁵

The authorization exempting the exporter from restriction may be either specific or general.¹²⁶ Logically, the specific permit is limited to a particular transaction.¹²⁷ A general authorization¹²⁸ provides for engaging repeatedly in a form of transaction.¹²⁹ General authorizations, however, may be time-restricted.¹³⁰ In addition, the Foreign Trade Act requires a direct or indirect participant in a foreign economic transaction to provide certain relevant transactional information to the government¹³¹ to facilitate the enforcement of foreign trade

120. AWG § 3, ¶ 1; see SIEBEL, *supra* note 54, at 59.

121. AWG § 3, ¶ 1; see SIEBEL, *supra* note 54, at 59. AWG § 30, ¶ 2 provides that the "authorization, [and the turning down of an application] must be in writing. The decision must contain the reasons for it, pointing out possible legal remedies in case it might be contested." AWG § 30, ¶ 2, translated in SIEBEL, *supra* note 54, at 60. Further, AWG § 30, ¶ 1, sent. 2 provides that an authorization is only transferable if such transferability is expressly provided for in the authorization. Additionally, the recipient of an authorization may or may not use it. See SIEBEL, *supra* note 54, at 60.

122. AWG § 3, ¶ 2; see SIEBEL, *supra* note 54, at 59.

123. AWG § 3, ¶ 2.

124. *Id.* § 30, ¶ 1. "The revocation is only allowed insofar as this is necessary to safeguard the aims protected by the Law." SIEBEL, *supra* note 54, at 60.

125. See SIEBEL, *supra* note 54, at 60.

126. See *id.*

127. See *id.*

128. AWV § 2.

129. See SIEBEL, *supra* note 54, at 60-61.

130. *Id.* at 61.

131. AWG § 44, ¶ 2. The main body of the reporting obligations are contained in AWV §§ 9-18. In each case, the duty to report lies with the resident who is party to the respective transaction, AWV § 58, or the respective resident enterprise, AWV § 58b. Claims against or obligations towards non-residents have to be reported to the Bundesbank on a monthly basis. AWV §§ 62-63; see SIEBEL, *supra* note 54, at 63.

law.¹³² The customs officials have the right to inspect and search exports where duties arise under the Foreign Trade Act.¹³³ The Foreign Trade Act requires that the resident prepare and submit reports for foreign trade transactions.¹³⁴ This duty is, however, limited¹³⁵ to ensure the overall liberal aspect of the foreign trade law.¹³⁶

3. The Penalties under the Foreign Trade Law

The Foreign Trade Act and the Foreign Trade Regulation contain penalties for their contravention.¹³⁷ The Foreign Trade Act, in its apportionment of penalty, differentiates between minor offenses¹³⁸ and criminal offenses.¹³⁹ Criminal offenses are punishable with prison terms of up to five years¹⁴⁰ and considerable fines.¹⁴¹ Additionally, the Foreign Trade Act gives customs officials special powers.¹⁴² By including the dis-

132. See SIEBEL, *supra* note 54, at 63.

133. *Id.*

134. AWG § 26, ¶¶ 2-4. The basic rule on such reports is, however, limited. *Id.* "The details are fixed by way of ordinance in accordance with Section 26 AWG allowing to request the submission on 'legal transactions and deals within the scope of Foreign Economic Transactions, in particular on claims and obligations arising therefrom as well as investments and the making or receiving of payments, indicating their legal basis.'" SIEBEL, *supra* note 54, at 62 (quoting AWG § 26).

135. AWG § 26, ¶ 2.

136. *Id.* § 26, ¶ 4. "[T]ype and extent of the reporting duties are to be limited to what is necessary in order to fulfill the specific targets as laid down in [¶] 2 and [¶] 3." AWG § 26, ¶ 4, translated in SIEBEL, *supra* note 54, at 63.

137. AWG §§ 33-46; AWV § 70.

138. AWG § 33; see AWV § 70 (listing possible minor offenses against the AWV); SIEBEL, *supra* note 54, at 64.

139. AWG § 34 (punishing contraventions where legal constructs of AWG § 7 are sufficiently disturbed); see SIEBEL, *supra* note 54, at 65.

140. AWG § 34, ¶ 1. Prior to the reform of the AWG, the term was three years, and legislative attempts were made to increase this term. *E.g.*, BT-Dr. 12/289 (introducing bill providing for five years although ultimately not passed for other political reasons). The recent reform measures increased the term to five years. See SIEBTES GESETZ ZUR ÄNDERUNG DES AWG § 34, 1992 BGBl. I 372 (F.R.G.).

141. AWG §§ 33-34; see Günther Dahloff, *Der neue § 34 AWG*, 1991 NEUE JURISTISCHE WOCHENSCHRIFT 208, 208. Under the revised AWG § 33, such contraventions can be punished with fines of up to DM 1,000,000 against the actor as well as the company for which he worked. In addition, further financial penalty may be levied to the extent of transactional profit. *Id.* See GESETZ ÜBER ORDNUNGSWIDRIGKEITEN [OWiG] §§ 29a and 17, ¶ 4, 1987 BGBl. I 602 (F.R.G.) (as amended by ÄNDERUNG DES OWiG, 1992 BGBl. I 375 (F.R.G.)). For a discussion of penalties, see also Löffler, *supra* note 7, at 122.

142. AWG § 42; see SIEBEL, *supra* note 54, at 65.

inction in offenses,¹⁴³ the statutory intention is to induce proper compliance.¹⁴⁴ Both of these statutory offenses concern particular contraventions,¹⁴⁵ which again are where the security of the FRG is endangered, where the peaceful coexistence of nations or peoples is disturbed, or where the foreign relations of the FRG are seriously affected.¹⁴⁶

4. FRG Legislation Supplementing the Foreign Trade Law

Certain designated exports or categories of exports are regulated by narrowly constructed export control laws.¹⁴⁷ The AtomGesetz ("Atomic Materials Act" or "AtG")¹⁴⁸ governs the authorization procedures for the export of radioactive materials.¹⁴⁹ The additional regulation effectively doubles the export review process as a matter of law, requiring compliance separately under both the Foreign Trade Act and the Atomic Materials Act.¹⁵⁰ Naturally, the handling of uniquely sensitive materials includes additional safety factors.¹⁵¹ The Atomic Materials Act authorization process exclusively serves the achievement of these particular purposes, as well as related export policy concerns.¹⁵²

The export of military weapons is regulated by the Kriegswaffenkontrollgesetz ("Weapons of War Act" or "KWKG").¹⁵³ The Weapons of War Act, however, is not formally part of foreign trade law.¹⁵⁴ The Weapons of War Act corresponds to constitutional provisions regarding military weaponry.¹⁵⁵ An appendix thereto establishes the relevant

143. AWG § 33, ¶ 1. AWG § 34 provides for particularly egregious cases. See HUCKO, *supra* note 22, at 12.

144. See HUCKO, *supra* note 22, at 11. Statutory contraventions include negligent handling as well as intended contravention under AWG § 33, ¶ 6. See Löffler, *supra* note 7, at 122.

145. AWG § 33, ¶ 1.

146. *Id.* § 7; see SIEBEL, *supra* note 54, at 65; Dahloff, *supra* note 141, at 208.

147. See HUCKO, *supra* note 22, at 11-14.

148. GESETZ ÜBER DIE FRIEDLICHE VERWENDUNG DER KERNENERGIE UND DEN SCHUTZ GEGEN IHRE GEFAHREN (ATOMGESETZ) [AtG], 1959 BGBl. I 814 (F.R.G.).

149. AtG § 3, ¶ 1.

150. See *id.* §§ 3, 22.

151. See *id.* § 1, ¶ 2.

152. See *id.* § 1.

153. AUSFÜHRUNGSGESETZ ZU ARTIKEL 26 ABS. 2 DES GRUNDGESETZES (GESETZ ÜBER DIE KONTROLLE VON KRIEGSWAFFEN) [KWKG], 1961 BGBl. I 444 (F.R.G.).

154. See HUCKO, *supra* note 22, at 14.

155. See KWKG § 1, ¶ 1. This law implements the constitutional requirements

classes or categories of goods falling under the law. Most aspects of the weapons trade are regulated,¹⁵⁶ as well as penalized, under the Weapons of War Act.¹⁵⁷ The Weapons of War Act establishes distinct requirements for authorization to export weapons in addition to the Foreign Trade Act.¹⁵⁸

II. GERMAN EXPORT CONTROLS HAVE FAILED ON A PRACTICAL LEVEL

A. A Decade of Dangerous Exports to the Third World

Violation or circumvention of German export controls has contributed to the supplying of volatile regions of the world with destructive technology.¹⁵⁹ Developing countries continue to obtain chemical¹⁶⁰ and nuclear¹⁶¹ technology, and the FRG

that "[w]eapons designed for warfare may not be manufactured, transported or marketed except with the permission of the Federal Government. Details shall be regulated by a federal law." GG art. 26, ¶ 2, *translated in* BASIC LAW OF THE FRG, *supra* note 14, at 24-25.

156. *E.g.*, KWKG § 3, ¶¶ 1-2. The promotion of military weapons requires authorization; pursuant to KWKG § 3, ¶ 3, exports are only permissible if the method of transport has been approved. Also, KWKG § 2 regulates authorization for the production and introduction of military weapons to any market.

157. *Id.* § 22, ¶ 1, No. 4.

158. *See* PUTTLER, *supra* note 21, at 28.

159. *See supra* note 1 and accompanying text (recounting German transfers of dangerous technologies to Third World).

160. *See* Adams, *supra* note 10, at 38. Chemical weapons goods and technology continue to proliferate in the Third World.

Twelve developing countries—Burma, China, Egypt, Ethiopia, Iran, Iraq, Israel, Libya, North Korea, Syria, Taiwan, and Vietnam—are now believed to have chemical weapons programs. Nineteen other countries—Afghanistan, Angola, Argentina, Chad, Chile, Cuba, El Salvador, Guatemala, India, Indonesia, Laos, Mozambique, Nicaragua, Pakistan, Peru, the Philippines, South Africa, South Korea, and Thailand—have been trying to obtain chemical weapons and may have succeeded. The developing countries have in general had to acquire their chemical weapons capability on their own, usually illegally but frequently with the complicity of Western companies and governments who turn a blind eye because they have found a useful source of export earnings.

Id. For a similar breakdown of developing countries' degree of chemical capabilities, see Rudolf, *supra* note 27, at 391.

161. *See* Adams, *supra* note 10, at 47. For example, Israel, India, Pakistan, Brazil, and Argentina have refused to ratify the NPT. *Id.* However, ratification provides no absolute assurances.

Iraq [an NPT signatory] pursued an aggressive twenty-year program to obtain nuclear weapons, with much Western help, notably from Germany. India developed a nuclear capability in the early 1970s and has actually tested

has been a consistent supplier of this technology.¹⁶² For example, German business with Pakistan apparently involved the sale of heavy water and other various resources for construction of atomic weaponry,¹⁶³ and a German submarine manufacturer provided South Africa with designs for an advanced submarine, violating a U.N. embargo.¹⁶⁴

FRG industry also apparently was involved intimately in the production of a chemical weapons plant in Rabta, Libya.¹⁶⁵ For example, in 1985, Imhausen Chemie, one of the German chemical companies involved, contracted with Libya to design and produce a chemical weapons plant.¹⁶⁶ Imhausen arranged for the participation of Salzgitter Steel Company, which was owned by the German government.¹⁶⁷ Imhausen, however, informed Salzgitter that the work was for a pharmaceutical plant in Hong Kong.¹⁶⁸ By 1988, the plant was producing nerve-gas

a nuclear device. Pakistan, after more than fifteen years of trying to develop nuclear weapons, has either succeeded or is on the brink.

Id. For a similar breakdown of developing countries' nuclear capabilities, see also Rudolf, *supra* note 27, at 391.

Additionally, in a meeting with Bundestag member Alfred Dregger, Iranian Foreign Minister Ali Albar Welajati expressed his country's intention to become a nuclear power in order to counter its neighbors' capabilities. *Deutsche Hilfe für Koreas Bombe*, DER SPIEGEL, Nov. 4, 1991, at 17.

162. See *supra* note 1 and accompanying text (recounting German transfers of dangerous technologies to Third World).

163. See KOPPE & KOCH, *supra* note 4, at 17-32; see also Mark Hibbs, *German Court Convicts Three for Nuclear Exports to Pakistan*, NUCLEONICS WK., Nov. 1, 1990, at 5; Mark Hibbs, *German Court Says Officials Encouraged Transfers to Pakistan*, NUCLEAR FUEL, Nov. 12, 1990, at 14 (reporting that officials told license applicant to avoid using word "tritium" to ensure approval).

164. See BT-Pr. 11/232, at 18431-54; Hoffmann *Alles ohne Kontrolle*, *supra* note 1.

165. See *Deckname ZR*, DER SPIEGEL, Dec. 23, 1991, at 76 (reporting that FRG intelligence knew about German involvement in chemical weapons production in Libya); "Der Hinweis traf ins Schwarze," DER SPIEGEL, Aug. 27, 1990, at 118 (charting numerous German companies that supplied Rabta plant with chemical weapons products, plans, and services).

166. See *Deckname ZR*, *supra* note 165, at 77. Jürgen Hippensteil-Imhausen of Imhausen Chemie later received a five-year sentence for his part in producing a poisonous-gas facility in Libya, but was able to retain his DM 60,100,000 profit. See "Der Hinweis traf ins Schwarze," *supra* note 165, at 116.

167. See "24 Grad nördlicher Breite," DER SPIEGEL, July 2, 1990, at 64; *Deckname ZR*, *supra* note 165, at 77.

168. See "24 Grad nördlicher Breite," *supra* note 167. By professional standards, Salzgitter reportedly should have known that the products were to be used with highly poisonous materials and, according to reported conversations, the Libyan connection and desert location should have been apparent. See *id.* at 65.

casings.¹⁶⁹ Germans also supplied steel for this production.¹⁷⁰ British and American intelligence reported that the completed plant would be capable of producing 22,000 to 84,000 pounds of nerve agents a day.¹⁷¹

The most reliable customer of German exports, however, has been Iraq.¹⁷² Over the past decade, German firms reportedly supplied Iraq with the know-how to produce atomic weapons and nerve gas, and to enhance missile capability.¹⁷³ The export of these products occurred despite multilateral agreements to the contrary and appropriate export control mechanisms. German companies apparently supplied Iraq with DM 1,000,000,000 worth of goods with potential military application.¹⁷⁴

A well-known example of dangerous transfers eluding German export control is the construction of the Taji complex in Iraq.¹⁷⁵ With the assistance of German companies, Iraq built a heavy industrial complex specially designed and equipped to handle metal processes from smelting to end-production in order to build one of the most modern and comprehensive weapons facilities in the world.¹⁷⁶ Although the Taji complex had been designed to produce artillery barrels, rocket casings, and other large scale military metal products, the Bundesamt für Wirtschaft ("Federal Office of Economics" or

169. *See id.*

170. *See id.*

171. *See id.*

172. *See* LEYENDECKER & RICKELMANN, *supra* note 4, at 16-17; *Schlimmer als die Pest*, DER SPIEGEL, Aug. 6, 1990, at 80 (charting extensive network of nuclear and chemical transactions between Iraq and FRG).

173. *See* LEYENDECKER & RICKELMANN, *supra* note 4, at 16-17.

174. *See* Donkin et al., *supra* note 5, at 20; *see also* THE DEATH LOBBY, *supra* note 4, at 310. In an exposé on Iraq's weapons capabilities, one journalist remarks that Germany's understanding of Iraq's special needs shone through clearly. The Federal Republic sold [US]\$826 million worth of high technology products to Iraq in 1988, more than double the sales of the year before. In 1989, West German high-tech exports would roar past the [US]\$1 billion mark. The vast majority of these Iraqi purchases were going into known weapons plants, such as Taji, Badr, Saad 16, the Al Fallujah and Karbala missile works, and the al-Hillah rocket fuel and explosives plant.

Id.

175. *See* THE DEATH LOBBY, *supra* note 4, at 323. Although the transfers would have been denied to the former Soviet Union under CoCom or MTCR, Iraq was able to import the relevant military technology. *See id.* at 208-09.

176. *See id.*

“BAW”) approved exports by well-known German industrial concerns for a general metal plant.¹⁷⁷ Indications show that Ferrostaal, the lead German contractor, initially knew that the intended use of its parts was for the production of cannon barrels.¹⁷⁸

A similar evasion of German export control was also evident in the construction of the Saad 16 Project in Iraq.¹⁷⁹ The Saad 16 Project was a laboratory complex in which the Iraqis supposedly developed military missiles, planes, and other military wares.¹⁸⁰ The German company Gildemeister was the general contractor for the project, and the most important German supplier was the company MBB.¹⁸¹ The BAW issued export licenses for the Saad 16 Project from 1985 to 1987 for dual-use goods, since officially the project was run under the auspices of the University of Mosul.¹⁸² In May 1989, when the plant’s character was internationally obvious, the FRG revoked the licenses to prevent further German participation in the technologically relevant work.¹⁸³ Indications that smaller German companies were participating in an Iraqi project to enhance their Russian-made Scud missiles also existed.¹⁸⁴ The German navigation and launching technology enabled the

177. *See id.* at 209, 323. “The Germans . . . were so easygoing that the Iraqis dropped all pretense concerning this project and in the license applications they declared that the computers, machine tools, and controllers were to be used ‘for general military applications such as jet engine repair, rocket cases, etc.’” *Id.* at 209.

178. *See id.* “German prosecutors seized 750 cases of documents at Ferrostaal headquarters, including complete blueprints of the artillery pieces to be manufactured at Taji . . .” *Id.* at 324.

179. *See id.* at 157-60.

180. *See id.* at 157-58.

181. *See id.* at 157-58, 160, 204.

182. *See id.* at 157-58, 160. In a published work on Western technology assistance to Iraq, one journalist reports that

[t]o disguise the military nature of the project, Gildemeister dressed it up as a “university research” complex. In documents submitted to export licensing authorities, Gildemeister insisted that Saad 16 comprised “laboratories and workshops comparable to facilities at universities, technical education establishments, and testing institutes—that is to say, facilities which are not specifically built for military purposes.” But had any official in the West German government wanted to know what it was all about, they had only to ask Gildemeister for a more complete identification of the Iraqi purchaser.

Id. at 157-58 (citation omitted).

183. *See id.* at 362.

184. *See id.* at 248-55.

Iraqis to double the missiles' reach.¹⁸⁵ Other German mechanical refinements facilitated the passage of deadly substances.¹⁸⁶ The German companies probably were not the managers of the project; instead they were largely involved in individual deliveries of technology.¹⁸⁷ The exports appear to have been legal under German law.¹⁸⁸

In addition, German companies allegedly were involved in Iraqi efforts to develop nuclear weapons capability.¹⁸⁹ German participation is evident in the construction and design of centrifuges.¹⁹⁰ The employees of MAN Technologieng GmbH of Munich ("MAN") allegedly played an important role in this project.¹⁹¹ These employees had access to construction plans of various centrifuge designs.¹⁹² In 1988 and 1989, after their departure from MAN, they spent considerable time in Iraq.¹⁹³ The Bundesanwaltschaft ("Federal Attorney") and the Bundeskriminalamt ("Federal Crime Bureau"), however, were unable to produce any tangible evidence of an illegal technology transfer.¹⁹⁴

185. See *Eine fast deutsche Rakete*, DER SPIEGEL, Nov. 18, 1991, at 44.

186. See *id.*

187. See THE DEATH LOBBY, *supra* note 4, at 248-55.

188. See *id.* at 160. In a comprehensive review of the arming of Iraq, one journalist reports that

[i]ncredibly, Gildemeister applied for, and received, a blanket permit to export whatever it desired to Saad 16, with no further licensing requirements. Building a ballistic missile design and testing technology center was ruled to be a legitimate business project for German companies, according to the Federal Economic Agency, which supplied permit number 48422 to Gildemeister [T]he permit state[d] that "according to current rules, machinery, electrical equipment, regulation, measuring, and testing instruments for a research, development, and training institute with eight main sections, name: Project Saad 16, do not need an export permission." It was a license to build Saddam's death machine.

Id. at 160.

189. See Paul Lewis, *Iraq Admits Buying German Materials to Make A-Bombs*, N.Y. TIMES, Jan. 15, 1992, at A1. German officials notified U.N. inspectors that prior to the Persian Gulf war, German companies had sold Iraq parts needed to build up to 10,000 uranium gas centrifuges capable of producing enough highly enriched uranium for use in four to five nuclear weapons per year. *Id.* at A12. German officials added that "it was unclear whether [the companies] had knowingly violated German export controls." *Id.*; see also *Berechtigte Skepsis*, DER SPIEGEL, Aug. 13, 1990, at 98.

190. See THE DEATH LOBBY, *supra* note 4, at 316-17.

191. See *id.*

192. See *id.*

193. See *id.*

194. See *id.*

The firm H&H Metalform, which was half Iraqi-owned, delivered relevant machinery, including centrifuge parts, and provided nuclear technology expertise to Iraq.¹⁹⁵ The BAW authorized these exports as the export application stated civil purposes.¹⁹⁶ The German export officials did not challenge these statements of purpose.¹⁹⁷ Later, officials' doubts about the Iraqi customer provoked an investigation.¹⁹⁸ An initial investigation did not produce any evidence of Foreign Trade Act violations.¹⁹⁹ U.N. inspectors have confirmed that the application of the machinery was indeed military.²⁰⁰

In January 1984, the U.S. government informed the FRG that it had reliable information that Iraq bought equipment for the production of nerve gas from the German firm Kolb.²⁰¹ An investigation revealed that Kolb had business relations with Iraq since 1979, and also had delivered two so-called experimental facilities made of glass, supposedly for the production of pesticides.²⁰² Once more, the examination by the BAW at that time did not produce any determinable violation of foreign trade law requirements by Kolb and its subsidiary Pilot Plant.²⁰³

The United States and Israel, however, were convinced that the firm was participating in the production of poisonous

195. See THE DEATH LOBBY, *supra* note 4, at 280, 318. In fact, "three spinning machines purchased from H+H Metalform went into production at Taji. Each one could turn out one hundred rotors a week. By a conservative estimate, it was enough to equip three complete production cascades in a year, each capable of enriching enough uranium for one—and perhaps several—atomic bombs per year." *Id.* at 280. Cf. Smith & Fisher, *supra* note 5; *Berechtigte Skepsis*, *supra* note 189, at 99.

196. See Smith & Fisher, *supra* note 5; *Schlimmer als die Pest*, *supra* note 172, at 84.

197. See Smith & Fisher, *supra* note 5. In reviewing export licenses, customs officials have given industry the benefit of the doubt where the potential for civilian use was reported. See *Schlimmer als die Pest*, *supra* note 172, at 84.

198. See Smith & Fisher, *supra* note 5.

199. See *Berechtigte Skepsis*, *supra* note 189, at 99. Due to subsequent findings, two owners of H&H Metalform are now being held pending legal action. See Smith & Fisher, *supra* note 5.

200. See *Berechtigte Skepsis*, *supra* note 189, at 99.

201. See *Teures Schweigen*; *Die Exporteure von Giftgasanlagen an den Irak kommen möglicherweise glimpflich davon—dank jahrelanger juristischer Schlamperien im Bonner Kabinett*, DER SPIEGEL, Sept. 23, 1991, at 68 [hereinafter *Teures Schweigen*]; see also KOPPE & KOCH, *supra* note 4, at 230-31; Smith & Fisher, *supra* note 5.

202. See *Teures Schweigen*, *supra* note 201, at 68-72.

203. See *id.* German press reports have made clear that Kolb and Pilot Plant had for years delivered poisonous-gas products to Iraq. See *Schlimmer als die Pest*, *supra* note 172, at 84.

gas for Iraq and requested action by the German government.²⁰⁴ Thus, the executive branch, the Bundesregierung ("Federal Government"), introduced and successfully lobbied for passage of additions to the working appendix of the Foreign Trade Regulation. These additions provided that exporting facilities or their parts that are appropriate for the production of poisonous gas first must be approved before export.²⁰⁵

In October 1984, two German chemical experts, sent by the Federal Government, visited the chemical facility in Samarra.²⁰⁶ These experts concluded that the production of military substances in the facility they visited was improbable or only possible at great risk.²⁰⁷ Since November 1987, the State Attorney pursued the firms Kolb and Pilot Plant, as well as the companies WET and Preussag, for improper export, based on the suspicion of illegal exports for the Iraqi military substances program.²⁰⁸ By the end of 1986, there were sufficient findings to begin criminal proceedings.²⁰⁹

B. Recent Reforms of FRG Foreign Trade Law

1. The 1989-1990 Reform: A Response to Rabta

With the increasing public awareness that certain developing countries were employing German know-how to produce atomic, biological, and chemical ("ABC") weapons, the Federal Government took additional legislative steps. After publication in 1989 of German participation in the production of poisonous gas in Libya and Iraq, international pressure for stronger export controls increased.²¹⁰ As a result, the Federal Government presented its three definitive bills to the Bundestag²¹¹ to strengthen the foundations of foreign trade

204. See *Teures Schweigen*, *supra* note 201, at 72; see also LEYENDECKER & RICK-ELMANN, *supra* note 4, at 28; *Schlimmer als die Pest*, *supra* note 172, at 84.

205. See *Teures Schweigen*, *supra* note 201, at 72.

206. See *Teures Schweigen*, *supra* note 201; see also "Der Hinweis traf ins Schwarze," *supra* note 165, at 114.

207. See *Teures Schweigen*, *supra* note 201; see also "Der Hinweis traf ins Schwarze," *supra* note 165, at 114.

208. See *Teures Schweigen*, *supra* note 201, at 69, 72.

209. See *id.*

210. See HUCKO, *supra* note 22, at 15.

211. BT-DR. 11/4230 (introducing *Gesetzentwurf der Bundesregierung: Entwurf eines Fünften Gesetzes zur Änderung des AWG*); BT-DR. 11/4568 (introducing *Gesetzentwurf der Bundesregierung: Entwurf eines Sechsten Gesetzes zur Änderung des AWG*); BT-DR. 11/4609

and military weapon control laws in order to recognize and eliminate the effects of German production of ABC weapons.²¹²

The revisions focused on forbidding the production and, therefore, the export of ABC weapons.²¹³ Previously, the production of ABC weapons was legal.²¹⁴ Although the production of these weapons was allowed if authorized, in practice authorities would not grant such authorization.²¹⁵ However, this legal status had presented jurisdictional problems, as German companies were involved in ABC production abroad.²¹⁶ Furthermore, only the manufacturers could be charged with committing these crimes because they were the legal persons officially lacking authorization for the exports.²¹⁷ For example, the controls did not directly address the engineers and others necessary to the production processes, and, therefore, these persons were not punishable under the previous law.²¹⁸

Legislators claimed that the control failure was a consequence of these loopholes.²¹⁹ Commentators, however, have remarked that controlling only the export of goods or technology is insufficient.²²⁰ The transfer of knowledge, such as the dangerous technology in the abstract, i.e., not yet in tangible-product form, must also be controlled.²²¹

In conjunction therewith, the revised Weapons of War Act

(introducing *Geszentwurf der Bundesregierung: Entwurf eines Gesetzes zur Verbesserung der Überwachung des AWG und zum Verbot von Atomwaffen, biologischen und chemischen Waffen*); see Klaus-Peter Ricke, *Aktuelle Stand der Novellierung des Außenwirtschaftsrechts-voraussichtliche Auswirkungen*, 66 ZEITSCHRIFT FÜR ZÖLLE & VERBRAUCHSTEUERN 278, 279 (1990). A cabinet resolution of February 15, 1989 expressed the will of the Federal Government that the intended legislative revisions would be brought through during 1989 and made effective on January 1, 1990. *Id.* However, these revisions were not made effective until Summer 1990. *See id.*

212. *See* BT-DR. 11/3995 (introducing *Bericht der Bundesregierung an den Deutschen Bundestag über eine mögliche Beteiligung deutscher Firmen an einer C-Waffen-Produktion in Libyen*).

213. *See* HUCKO, *supra* note 22, at 15.

214. *See id.*

215. *See id.*

216. *See id.* (explaining difficulties in prosecuting Germans abroad).

217. *See id.*

218. *See id.*

219. *See id.*

220. *See* BMWI 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at

3.

221. *See* Ricke, *supra* note 211, at 282.

prohibits the domestic production of ABC weapons.²²² As a result, the formal authorization process was eliminated.²²³ New penal regulations address all participants in the production of ABC weapons, including employees of the manufacturer.²²⁴ The scope of the new penal measures now extends to German actors abroad.²²⁵

The amended Foreign Trade Act, revised in 1990 ("1990 Reform"), also included new penal provisions.²²⁶ The former provision was, in practice, rarely applied, because a violation was nearly impossible to prove.²²⁷ It required evidence of concrete injury to the interests of the Foreign Trade Act, which are the security of the FRG, the peaceful coexistence of peoples, or foreign relations.²²⁸ The revision substituted the lesser standard of showing potential endangerment to these legal precepts.²²⁹ Thus, it is now sufficient that the act in question is potentially dangerous to these legal constructs.²³⁰ The 1990 Reform increased the terms of punishment as well.²³¹ As a further control, the 1990 Reform included, as stated above, the statutory capacity to restrict the business of Germans abroad.²³² Ostensibly, the German government had greater power to curb the possible use of German assistance in the production of deadly technology.²³³

222. See HUCKO, *supra* note 22, at 15.

223. KWKG §§ 17-18.

224. KWKG § 21.

225. KWKG § 21; *cf.* Remien, *supra* note 9, at 446-49. Some commentators, comparing the measures to those of other Western industrialized countries, claim the measure is extensive. See HUCKO, *supra* note 22, at 16.

226. FÜNFTES GESETZ ZUR ÄNDERUNG DES AWG, 1990 BGBl. I 1457 (F.R.G.); see Dahloff, *supra* note 141, at 208.

227. See HUCKO, *supra* note 22, at 16. Despite the growing number of discovered cases—the responsible officers were occupied with 200 cases of illegal exports—only the rare case met the threshold of the statute. See Dahloff, *supra* note 141, at 208. The legal standard did not serve its preventative function. See *id.* During the period of 1983-1989, only 20 cases were tried under the AWG resulting in eight convictions. See STATISTISCHEN BUNDESAMT WIESBADEN, FACHSERIE RECHTSPFLEGE, Reihe 3 (eds. 1983-89).

228. See Dahloff, *supra* note 141, at 208.

229. AWG § 34; see BT-Dr. 11/4230; Dahloff, *supra* note 141, at 208.

230. See HUCKO, *supra* note 22, at 16.

231. See *id.*

232. AWG § 7, ¶ 3; *cf.* Remien, *supra* note 9, at 446-49.

233. See HUCKO, *supra* note 22, at 16. The Reform brought these powers into effect practically. See *id.* Additionally, the AWG reform contained provisions for a notice requirement that concerns itself with the legal business and trade in ABC

The 1990 Reform also incorporated administrative changes.²³⁴ These changes included the introduction of a nationwide database available to customs officials.²³⁵ The computer system KOBRA ("Kontrollen bei der Ausfuhr" or "Control of Exports") is now operating in 200 customs offices. The KOBRA system provides operators with information on exporters, including past authorization applications.²³⁶ The purpose of this system is to expose possible or potential offenders.²³⁷

Unfortunately, the implementation of the system has apparently met with numerous practical problems and little federal support.²³⁸ The continuing reform ultimately did not achieve the intended goal. The embarrassing export of dangerous military technology to developing countries continued.²³⁹ In fact, further exports followed in the face of the 1990 U.N. embargo against Iraq.²⁴⁰ More recent developments indicate further breaches of export controls. German companies reportedly have participated in the nuclear advancement of

weapons. AWG § 26. The BMWi needs to know which companies are involved in this activity in order to monitor them accordingly. See HUCKO, *supra* note 22, at 16.

234. *See id.*

235. *See id.*

236. *See id.*

237. *See id.*

238. *See* Georg Escher, *Germany's Customs Service: A Kobra's teething troubles causing illness, headaches*, NÜRNBERGER NACHRICHTEN, reprinted in GERMAN TRIB., Aug. 18, 1991, at 8 (reporting on administrative problems, such as lack of qualified personnel and coordination of data entry).

239. *See* Donkin et al., *supra* note 5, at 20.

240. *Id.*; *see* Monterey Institute of International Studies, *Emerging Nuclear Suppliers & Proliferation Project*, reprinted in Release of Rep. Fortney H. (Pete) Stark, *Stop Western Companies From Selling Nuclear Weapons Technology To The Next Saddam*, Sept. 13, 1991. Iraq managed to secure willing and able German exporters. German companies that reportedly sold nuclear weapons technologies to Iraq included employees of MAN Technologieng (centrifuge design); Export-Union, H&H Metalform, and Leybold (vacuum pumps and valves); Kavo (power supply); Invako and H&H Metalform (magnetic bearings). *Id.* These exports occurred despite indications that the Federal Government was aware of the activity. Poisonous gas materials, for example, continued to cross borders, although the secret service and the Federal Government had been warned. *See* LEYENDECKER & RICKELMANN, *supra* note 4, at 17. Although the traditional mechanisms were in place, a sufficient quantity of supplies and a sufficient quality of information made its way to Iraq. *See* Kenneth R. Timmerman, *Surprise! We Gave Hussein the Bomb*, N.Y. TIMES, Oct. 25, 1991, at A33 ("More than 450 Western companies helped build Mr. Hussein's nuclear machine, sending thousands of technicians into Iraqi weapons facilities on lucrative commercial contracts.").

North Korea.²⁴¹

2. The 1992 Reform: A Response to Samarra

The Federal Government, in completing its reform of FRG export controls, introduced and the Bundestag enacted a variety of new measures in February 1992 ("1992 Reform").²⁴² The 1992 Reform considerably increased penalties and sanctions for violations, added both additional restrictions and enforcement means, and strengthened the administrative apparatus of export controls.²⁴³ The 1992 Reform furthered the reach of the FRG foreign trade law, as it broadened the prosecutorial reach to include German technicians abroad active in the production of ABC technology. The 1992 Reform attempted to remove the economic incentive connected to illegal exports by creating the authority to reach all proceeds, and established a concept of individual accountability for company procedures.²⁴⁴

In order to prevent illegal exports, the Federal Government has taken additional steps to discover and halt these ille-

241. See, e.g., *Deutsche Hilfe für Koreas Bombe*, *supra* note 161, at 16-17. According to an exposed BND report to the Chancellor's office, German companies have also participated in building atomic weapons for North Korea. *Id.* North Korea, an NPT signatory, has refused to allow inspection of its Yongbyon site. David E. Sanger, *Data Raise Fears of Nuclear Moves by North Koreans*, N.Y. TIMES, Nov. 10, 1991, at 1. Intelligence information suggests that ongoing outfitting of the nuclear complex is nearing completion. *Id.* The facility reportedly includes a suspected reprocessing plant capable of producing hundreds of pounds of weapons-grade plutonium. *Id.* Other indications suggest other nuclear complexes under construction, even underground, around the country. *Id.* North Korea maintains that the reactor is part of a peaceful research project. *Id.* The U.S. government fined the Frankfurt-based Degussa A.G. for re-exporting a shipment of American zirconium, useful in the manufacturing of uranium fuel rods, to Pyongyang. *Id.* at 10. The German press charges that in early 1991, the Berlin company Leis Engineering GmbH delivered a specialized steel alloy capable of containing radioactive materials to Pyongyang; these were reportedly produced by the Duisburg company VDM Nickel-Technology. *Deutsche Hilfe für Koreas Bombe*, *supra* note 161, at 16-17. The purported use of the parts was for a fertilizer plant. *Id.* These descriptions were uncontested at the customs site. *Id.* The BND reported that other secret service agencies estimated that North Korea would have enough materials by the mid-nineties to build at least two or three atomic bombs. *Id.*

242. See BT-DR. 12/2350, at 1-2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 2.

243. See SIEBTES GESETZ ZUR ÄNDERUNG DES AWG, 1992 BGBl. I 372 (F.R.G.); BT-DR. 12/2350, at 2-3; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 2.

244. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 3-4.

gal transfers in a timely fashion.²⁴⁵ Through the revised Foreign Trade Act, the Zollkriminalinstitut ("Customs Crime Office") acquired the right, only after the first indications of an intent to commit an export crime are apparent and upon approval of the court and under the supervision of the Bundestag, to invade the basic right to privacy of mail and telephone transmissions.²⁴⁶ The Federal Government admits that such surveillance may trespass upon the classic freedoms that all Western constitutions recognize.²⁴⁷ The Federal Government, however, has decided that preventing life- and peace-threatening exports that are used for weapons of mass destruction is of greater importance than the individual freedoms in question.²⁴⁸ According to the Federal Government, past experience has shown that the FRG can not efficiently control exports on the basis of reports from abroad.²⁴⁹ Rather, the Federal Government has opted for stronger preventative measures nationally.²⁵⁰

The Federal Government has added additional authorization requirements for goods that can be used militarily.²⁵¹ The review process is in effect for machine tools and other types of machines,²⁵² flat-bed cars suitable for transporting tanks,²⁵³ industrial units with potential for rocket technology applications and uranium enrichment,²⁵⁴ all elements designated by the

245. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 4.

246. See SIEBTES GESETZ ZUR ÄNDERUNG DES AWG § 39-41, 1992 BGBl. I 372 (F.R.G.); BT-DR. 12/2350, at 3; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

247. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

248. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

249. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

250. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

251. See BT-DR. 12/2350, at 2-3; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

252. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

253. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 5.

254. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6.

Australia Group as usable in chemical weapons,²⁵⁵ and civilian apparatuses capable of being engaged for the production of chemical or biological weapons.²⁵⁶ Additionally, a catch-all clause includes all goods under the authorization requirements when the exporter has knowledge of their impending employment in weapons production in the receiving country.²⁵⁷ At the same time, the Federal Government has compiled a list of countries to which it will apply stricter controls.²⁵⁸ As a result, the Federal Government hopes that it will produce a warning effect and efficiently concentrate the review of exports to sensitive locations.²⁵⁹

To support administratively the increased legislative control of exports, the Federal Government intends to reinforce its corps of civil servants and to improve its computer system that processes export data.²⁶⁰ The FRG intends to nearly double employment in this area.²⁶¹ Further, the 1992 Reform establishes the legal basis for organizing a federal export office.²⁶² This approach has enabled the Federal Government to increase and enhance its inspection of exports and exporting companies.²⁶³ The effect of the 1992 Reform on the FRG's

255. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6.

256. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6.

257. See BT-DR. 12/2350, at 2; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6.

258. SIEBZEHNTE VERORDNUNG ZUR ÄNDERUNG DER AWW art. I, 1992 BAnz. 513 (F.R.G.). The countries include Egypt, Afghanistan, Albania, Algeria, Angola, Argentina, Brazil, Bulgaria, Burma, Cambodia, China, Cuba, India, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Mauritania, Mozambique, North Korea, Pakistan, Romania, Saudi Arabia, Somalia, South Africa, Syria, Taiwan, Vietnam, Qatar, Yemen, and the former Yugoslavia. *Id.* See RUNDERLAß AUßENWIRTSCHAFT No. 7/92, 1992 BAnz. 514 (F.R.G.).

259. See BT-DR. 12/2350, at 3; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6.

260. See BT-DR. 12/2350, at 3; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6.

261. See BT-DR. 12/2350, at 3; BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6. Prior to the reform, 70 persons were responsible for approving export licenses upon legal and technical examination. *Id.* At the beginning of 1992, that number increased to 228 personnel. *Id.* The Federal Government expects to hire an additional 202 employees. *Id.*

262. See GESETZ ÜBER DIE ERRICHTUNG EINES BUNDESAUSFUHRAMTES, 1992 BGBl. I 376 (F.R.G.).

263. See BT-DR. 12/2350, at 3; BMWi 1992 REPORT ON REFORM OF EXPORT CON-

ability to control exports remains to be seen.

III. *THE PRACTICAL FAILURE OF GERMAN EXPORT CONTROLS ILLUSTRATES THE DIFFICULTY IN REGULATING MODERN TRADE DOMESTICALLY AND DEMONSTRATES THE NEED FOR VIGOROUS INTERNATIONAL COORDINATION*

In the recent past, German export controls have failed to prevent the export of products usable in dangerous weapons, as they have not been able to screen adequately those technologies and goods with deadly potential. A reassessment of the current legal approach, as well as its implementation, is necessary. The process of developing a scheme of export controls should include the reworking of existing domestic and international controls as well as initiating legal innovations.²⁶⁴ Accordingly, regulating exports in order to minimize transfers of dangerous technology should involve a set of clearly defined national controls that operate within a comprehensive system of international coordination.²⁶⁵ Increased progress toward responsible sharing of global power in response to unprecedented interdependence and interaction is, arguably, inevitable.²⁶⁶ As purely national controls will not suffice in this con-

TROLS, *supra* note 6, at 6 (stating that Federal Government enforcement has increased from 405 inspections in 1989 to 1051 inspections in 1991).

264. Cf. Myres S. McDougal, *Law and Peace*, in *APPROACHES TO PEACE: AN INTELLECTUAL MAP* 131, 154 (W. Scott Thompson & Kenneth M. Jensen eds., 1991). Developing a legal scheme to order international activity requires considering the lessons of the past and developing new approaches.

Law is interested in the past and the present in aid of inventing and making the future. Even in relation to a problem as difficult as that of establishing and maintaining a stable minimum world public order, the projection of possible futures, when inspired and disciplined by knowledge of past trends in achievement and their conditioning factors, may serve to stimulate creativity in the invention and evaluation of improved alternatives in decision.

Id.

265. Cf. BMWi 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 10 (calling for international harmonization of export control laws).

266. See McDougal, *supra* note 264, at 155 (stating that this construct considers "that the contemporary largely parochial identifications of peoples may, despite recurrent phases of fragmentation, expand toward recognition, not merely of common humanity, but of shared community"); see also Thomas L. Friedman, *U.S. and Russia Seek New Arms Accord for a July Summit*, N.Y. TIMES, Feb. 19, 1992, at A1 (reporting that United States and Russia reached understanding to cooperate in maintaining defense system in jointly establishing ballistic missile early-warning system and sharing Strategic Defense Initiative technology).

text, a truly centralized legal order should supplement local efforts.²⁶⁷

A. *Domestic Regulation of Modern Trade Must Be Changed Structurally*

1. Selective Controls Should Be Eliminated

Modern exports present great challenges to traditional export control schemes. German legislators have relied on conventional mechanisms to little avail. The present use of discretionary controls has often failed, most notably in the forms of fraudulent export declarations, dual-use products, and exports to third countries.²⁶⁸ Expending more money and retaining more qualified personnel probably would not eliminate the problem as the defect lies more with the character of the discretionary control. The discretionary controls should be eliminated in favor of express controls imposed nationally with a flexible framework for revisions to accommodate political and economic events.

a. Selective Controls Cannot Adequately Control Dual-Use Goods

Export controls have been particularly vulnerable in the field of dual-use goods.²⁶⁹ Ultimately, dangerous machines can be built from non-dangerous substances.²⁷⁰ Controls based on an export's potential for danger ("Selective Controls") are more likely to fail,²⁷¹ as technology is increasingly

267. Cf. McDougal, *supra* note 264, at 156-57 ("The task of *highest priority*, for all who are genuinely committed to the goal values of a world public order of human dignity, would accordingly, appear to be that of creating in the peoples of the world the perspectives necessary for *accelerated movement toward a more effective global constitutive process of authoritative decision*," which would be capable of "more effective decision process and the making of more rational specific decisions about public order values.").

268. See Francine S. Kiefer, *Bonn to Tighten Export Controls*, CHRISTIAN SCI. MONITOR, Jan. 29, 1991, at 4; cf. Remien, *supra* note 9, at 451.

269. See Rudolf, *supra* note 27, at 392-93 (defining "dual-use" products as goods or technologies with both civilian and military applications).

270. *Id.* at 392 (stating that "every production technology has potentially civilian and military applications").

271. Cf. Professor Michael Malloy, Remarks at Meeting of the Intergovernmental Group (Aug. 31, 1990), in UNITED NATIONS CENTRE AGAINST APARTHEID: NOTES AND DOCUMENTS 48-49 (Apr. 1991) (stating that "effective sanctions almost inevitably involve broad sanctions").

less use-specific.²⁷² For the purposes of Selective Controls, basic FRG enforcement procedures and resources have been inadequate,²⁷³ possibly because the practical ability and the political will to screen exports on the necessary scale had not been realized.²⁷⁴ Insufficient resources and employee negligence at customs sites have been problems.²⁷⁵ Nonetheless, consistently accurate determinations under Selective Controls are impossible.²⁷⁶ This process amounts to making prophetic judgments on inherently neutral products. Moreover, the proper implementation of Selective Controls often depends on the sophistication in identifying uses of technology.²⁷⁷ Even low-range technology, however, can be susceptible to multiple uses, as steel pipes and furnaces, for example, become dangerous when misappropriated.²⁷⁸

Accepting the premise that Selective Controls are not a desirable means of control, the obvious alternatives are to deny certain categories of exports completely or allow their unrestricted flow. These approaches, regardless of desirability or feasibility, would at least match policy objectives,²⁷⁹ whereas the discriminating control, the Selective Control, irresolutely

272. See Smith & Fisher, *supra* note 5 (quoting department head of FRG Export Control Office: "Dual use is a nearly unsolvable problem. A plant's use can always be changed. The only absolute answer to it is total embargo."); see also John Markoff, *New Curbs on Exports Are Sought*, N.Y. TIMES, Sept. 11, 1991, at D1. The U.S. Defense Department recommended curbing exports of inexpensive, but powerful, computers that are readily accessible to American consumers. *Id.*

273. See Donkin et al., *supra* note 5, at 20. German trade officials have admitted that until recently they had no experts capable of interpreting much of the technical data submitted in export license applications. *Id.*

274. Cf. BMWI 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 6-7 (providing pre- and post-Reform data on administration of export controls).

275. See *Schlimmer als die Pest*, *supra* note 172, at 84.

276. See *Ungeahnter Nebeneffekt*, DER SPIEGEL, Sept. 16, 1991, at 131. Developing countries are still able to assemble the knowledge and parts to construct dangerous hardware. For example, the U.N. investigation of post-war Iraq uncovered atomic capability. *Id.*

277. See Bachmaier, *supra* note 5, at 10. This characteristic often applies to both lower and higher-end technologies. "Those [responsible] at [German] customs sites are incapable of telling the difference between harmless machine parts and deadly nuclear components." *Id.* (translation by Comment author).

278. See Timmermann, *supra* note 240.

279. Cf. Resolution of the Federal Government, *Politische Grundsätze der Bundesregierung für den Export von Kriegswaffen und sonstigen Rüstungsgütern*, Apr. 28, 1982, reprinted in DOKUMENTATION: RÜSTUNGSEXPORT-KONTROLLPOLITIK DER SPD 16-17 (Eckhard Fischer & Almut Bauer eds., 1991) (setting forth official policies of FRG relating to export of military weapons and related goods).

deploys international trade policy. The misplaced reliance on Selective Controls has had the convenient effect of circumventing the perception of costly or impolitic control measures. The consequences have been procedural anachronism,²⁸⁰ political delusion among allies,²⁸¹ and increased Third World tension.²⁸²

Where a product is of dual-use character, the only conclusive determination of an intended dangerous application is the inspection of the product's end-use. Realistically, this inspection on a continual and encompassing basis is unlikely under a national system of export controls, as even the available international systems have had difficulty with end-use inspection.²⁸³

280. See *supra* note 9 and accompanying text (regarding change in international political dynamic and outdated approach of export controls in this regard).

281. Cf. Michael Stroud, *Europe's Arms Exporters Pursue Own Agenda*, *INVESTOR'S DAILY*, Apr. 2, 1991, at 1 (quoting arms expert at Brookings Institution who proffered that "[i]t's hard to see that there is going to be much consensus [on multilateral export controls]" as allies are likely only willing to "preserve their national self-interest").

282. See Adams, *supra* note 10, at 36-38.

283. See Meisler, *Iraq Ends Siege of U.N. Nuclear Arms Inspectors*, *L.A. TIMES*, Sept. 28, 1991, at 1. Even in isolated cases the inspection of a product's end-use has proven burdensome. Sovereignty issues as well as simple cooperation stand as obvious impediments. For example, the U.S. delegation inspecting post-war Iraq was held hostage in an instance of global observance. *Id.* Although the team was eventually successful in locating imported atomic and chemical weapons and technology, the degree of pressure is probably not easily duplicated on a practical basis. See *id.*; see also John Tagliabue, *Iraqi Weapons Had Chemical Warheads*, *N.Y. TIMES*, Nov. 12, 1991, at A3.

Also, where a consensual apparatus is in place, success is not assured. The IAEA, observing internationally determined safeguards and armed with improved inspecting capability, regularly inspected the nuclear plants in Iraq, an NPT signatory. Adams, *supra* note 10, at 47. However, the centrifuge plants and facilities, used to enrich uranium and manufacture nuclear weapons, were never part of the inspection tours. *Id.*

Currently, such inspection regimes are being re-evaluated. Paul Lewis, *U.N.'s Nuclear Inquiry Exposes Treaties' Flaws*, *N.Y. TIMES*, Nov. 10, 1991, at A10. The IAEA director proposed strengthening its procedures, allowing for unilateral inspection by his agency, even on undeclared sites on NPT members' territories. *Id.* Others within the IAEA recognize that "[i]ntrusive inspections make some [NPT signatories] nervous" and may erode "political support." *Id.* In fact, the Bush Administration announced in Geneva in the summer of 1991 that it now favors a less intrusive inspection system than other countries advocate. *Id.* Apparently, the United States is concerned about protecting military secrets. *Id.* Many member countries are as well. North Korea, although an NPT signatory since 1985, has resisted inspection. *Id.*

For a discussion of possible reasons for the inadequate results of NPT regulations, see Koplów & Schrag, *supra* note 17, at 1033-35 (explaining that difficulties with NPT may be due to lack of legal commitment of and participation by developed

Ultimately, in the current complex network of trade and production the end-use and the end-user may not be easily discernible.²⁸⁴ Thus, only an international system that has the authority to track and inspect the use of exports could significantly deter dangerous transfers.

b. The Decisive Means of Control Are Categorical and Complete Controls

The more effective export controls are express controls.²⁸⁵ The explicit prohibition of all exports ("Complete Controls") or of categories of exports ("Categorical Controls") to certain nations should be somewhat easier to enforce domestically. Categorical and Complete Controls have the advantage of greater certainty. The capacity to clearly define controlled exports logically enhances the ability to do so.²⁸⁶ The Complete Control, which is not commodity- or category-specific, is a form of economic sanction.²⁸⁷ Similarly, achievement of policy goals under Categorical and Complete Controls is also dependent on rigorous national enforcement. However, the implementation of national controls is still far from one hundred percent efficient.²⁸⁸

nations in meeting proposed transfer of civilian technology to meet energy needs of developing nations as nuclear power became unfavorable energy source, and, thus non-nuclear states had little incentive to adhere to NPT).

284. See Promothee Project, *From Interdependence to Interconnection: Networks Reshaping Globalization Patterns*, PROJECT PROMOTHEE PERSPECTIVES: NETWORKD, Oct. 1989, at 93; see also Elaine Sciolino, *U.S. Was Aware the Iraqis Were Buying Technology*, N.Y. TIMES, July 22, 1992, at A10 (quoting American intelligence report regarding Iraqi procurement program: "We believe many entities are false end users, passing the materials acquired from foreign suppliers directly to state enterprises involved in military projects, including chemical and biological warfare programs.").

285. Cf. MOYER & MABRY, *supra* note 3, at 144 ("[S]anctions will have the greatest economic effect if they totally deprive the target country of some [particular] product, technology, or commodity that is crucial to an economically significant project.").

286. See Löffler, *supra* note 7, at 125. This approach also allows countries to provide, on a category basis, humanitarian aid or assistance to its own nationals abroad in circumstances where such would not impede the policy objectives of the controls. *Id.* The FRG has a constitutional duty to protect its nationals despite any attendant loosening of controls or sanction. *Id.*

287. Cf. MALLOY, *supra* note 21, at 7-19 (discussing scope of "economic sanctions").

288. Cf. GARY C. HUFBAUER & JEFFREY J. SCHOTT, *ECONOMIC SANCTIONS RECONSIDERED 79-81* (1985) (stating that by authors' calculations, current approach to sanctions has had 36 percent "success" rate).

Replacing Selective Controls with Categorical and Complete Controls takes into account the necessarily larger system within which these controls should operate. Replacing Selective Controls with Categorical or Complete Controls has decisive effects, one of which is categorically or completely stopping goods and technology at the border.

Regardless of that practicality, thorny policy questions arise.²⁸⁹ For example, stringent controls may impede technological competitiveness and, consequently, advancement.²⁹⁰ This transition also prevents developing countries from obtaining the necessary tools to compete effectively in the modern system of trade.²⁹¹ The international community recognizes the transfer of technology as an important policy goal.²⁹²

Fostering of Third World development, however, is implicitly at variance with the prevention of dangerous exports,²⁹³ a characterization that is increasingly a product of

289. See, e.g., David A. Wilson, *National Security Control of Technological Information*, 25 *JURIMETRICS J.* 109, 129 (1984-85).

290. See Ed Zschau, *Export Controls and America's Competitive Challenge*, 1 *HIGH TECH. L.J.* 1 (1986) (maintaining that overly cautious export controls on high technology have detrimental economic effects without achieving national security objectives).

291. See, e.g., NORTH-SOUTH: A PROGRAM FOR SURVIVAL; THE REPORT OF THE INDEPENDENT COMMISSION ON INTERNATIONAL DEVELOPMENT ISSUES UNDER THE CHAIRMANSHIP OF WILLY BRANDT 195-96 (1980).

292. See U.N. Conference on Trade & Development (UNCTAD), Draft International Code of Conduct on the Transfer of Technology, U.N. Doc. TD/CODE TOT/47 (1985) [hereinafter UNCTAD Technology Transfer Code]. One objective of the UNCTAD Technology Transfer Code is "[t]o facilitate and increase the international flow of . . . technology for strengthening the growth of the scientific and technological capabilities of all countries, in particular developing countries, so as to increase their participation in world production and trade." *Id.* at 3. However, the actual support for this policy by developed countries has been questionable, which is evidenced by the sharp disagreements in approach bracketed throughout the UNCTAD Technology Transfer Code. No conclusion has been reached in the extended rounds of drafting and negotiating. Cf. GERALD K. HELLEINER, *INTERNATIONAL ECONOMIC DISORDER: ESSAYS IN NORTH-SOUTH RELATIONS 189-90* (1981) (proposing changes in developed countries' trade policies to facilitate transfer of technology to developing countries); NORTH-SOUTH: A PROGRAM FOR SURVIVAL, *supra* note 291, at 10-12, 197-98 (proposing measures to increase transfer and development of technology necessary to developing countries); Surendra Patel, *The Technological Transformation of the Third World: Main Issues for Action*, in UNCTAD AND THE SOUTH-NORTH DIALOGUE: THE FIRST TWENTY YEARS 124 (Michael Z. Cutajar ed., 1985) (setting forth suggestions for strengthening technological capacity of Third World).

293. See Rudolf, *supra* note 27, at 392 ("Arms proliferation, especially the development of armament industries in the Third World, is inextricably linked with the more comprehensive process of the diffusion of advanced technologies—and thus of the know-how

use, rather than design.²⁹⁴ The product-bases of survival, which combat hunger, improve medical capability, and modernize any industrial activity, can be the same product-bases of destruction and death.²⁹⁵ The alternate option of permitting unrestricted categorical technology-transfers does not seem politically feasible at present. The need for effective export controls on the part of industrialized countries outweighs the desire for unsupervised imports of technology into Third World countries. Thwarting the unchecked dissemination of critical technologies represents an important security interest²⁹⁶ as the modern strategic edge may be more a degree of technological advantage than of sheer number of personnel. Those in possession of the technology presumably appreciate this fact, and these concerns should be incorporated into their promulgation and enforcement of export control laws.

Categorical and Complete Controls are subject to a range of externalities and supra-border concerns. The success of these controls, therefore, particularly depends on multilateral cooperation.²⁹⁷ Complete, as well as Categorical, Controls ultimately do not achieve their intended effect when trading

needed to develop and manufacture military goods.”) (emphasis added); *see also Skandal von Morgen*, DER SPIEGEL, July 15, 1991, at 23. The conflict of development and technology control was evident in a widely publicized trip by the FRG Economics Minister in the summer of 1991 to encourage business with Iran, a formality which was the precursor to lucrative new contracts for FRG industry to build factories in the Middle Eastern country. *Id.*

294. *See* Rudolf, *supra* note 27, at 392-93. The United States has also had trouble legislating such matters.

[The President's proposed Enhanced Proliferation Control Initiative] greatly increased the number of . . . export controls and included criminal penalties for American citizens who violated the regulations. However, many of the chemicals on the list are used in making a wide range of products, such as plastics, pharmaceuticals, and fertilizers. Business interests argued that the initiative unfairly penalized American companies and opened the door to foreign competitors who did not suffer similar restrictions. For example, one of the chemicals on the list can be used to remove hair from hides before tanning, but with some modifications it can also be used to make nerve gas. Lobbyists argued that by restricting the export of such dual use chemicals, the United States was unfairly restricting American industry.

Adams, *supra* note 10, at 38.

295. *See* Adams, *supra* note 10, at 47. For example, “[g]enetic engineering holds both hopeful and terrifying potential for humanity. It offers the real possibility of reducing famine, infant mortality, and poverty, but it also allows the production of weapons that could radically alter the nature of war.” *Id.*

296. *See* FINDING COMMON GROUND, *supra* note 9, at 35.

297. *See* MOYER & MABRY, *supra* note 3, at 158.

partners do not have similar degrees of control.²⁹⁸

2. Technology in the Abstract May Elude All National Controls and Should Be Controlled at the International Level

The advanced transfer mechanisms are not controllable at national borders.²⁹⁹ Thus, the nature of modern technology exports gives greater force to the argument that the existing scheme of export control is outdated. Additionally, the mere expansion of national discretionary enforcement and control may offend democratic sensibilities. Thus, an apportionment of export control responsibility would control nationally what is reasonable without unnecessary disruption of citizens' activities.

As technology use has become ubiquitous, combatting or monitoring its flow may have more intrusive and invasive consequences.³⁰⁰ The only truly effective national control meas-

298. See *id.* at 145; Rudolf, *supra* note 27, at 390 (positing that "tighter national restrictions on the transfer of goods and technologies to the Third World are only effective and sustainable in the long run against economic opposition if all suppliers commit themselves to a common export control policy") (emphasis added).

299. See Anne W. Branscomb, *Global Governance of Global Networks: A Survey of Transborder Data Flow in Transition*, 36 *VAND. L. REV.* 985, 985 (1983) (stating that with combination of satellites and computers, "vast amounts of the world's accumulated knowledge" can be transferred in microseconds to users around world).

300. See Geza Feketekey, *Dealing with Trade in Services in the Uruguay Round*, in *STRATEGIC TRENDS IN SERVICES: AN INQUIRY INTO THE GLOBAL SERVICE ECONOMY* 189, 194-95 (Albert Bressand & Kalypso Nicolaïdis eds., 1989). The necessary rigor can easily be a dilemma for a democracy when controlling the invisible, such as trade in services. *Id.* These countries are left with the unattractive options of (i) extracting more information about the people, money, and information crossing the border; or (ii) control all goods, people, money, and information crossing the border. *Id.* Export policy represents serious democratic concerns: "[h]ow deeply should [the government] pry into the affairs of [its] citizens and to what extent should [it] control the free flow of information, people, and money?" *Id.* at 195.

For a perspective on a relevant American debate, compare James R. Ferguson, *Scientific and Technological Expression: A Problem in First Amendment Theory*, 16 *HARV. C.R.-C.L. L. REV.* 519 (1981) (refuting any use of intermediate standard of review, in favor of requiring compelling interest, which is highest form of constitutional speech protection) with Robert D. Kamenshine, *Embargoes on Exports of Ideas and Information: First Amendment Issues*, 26 *WM. & MARY L. REV.* 863, 867 (1985) (stating that "[n]o first amendment self-governance interest exists in informing foreign nationals").

For further discussion on American civil liberties and the international transfer of information, see also Mary M. Cheh, *Government Control of Private Ideas—Striking a Balance Between Scientific Freedom and National Security*, 23 *JURIMETRICS J.* 1 (1982-83); John L. Ellicott, *Trends in Export Regulation*, 38 *BUS. LAW.* 533, 540-42 (1983); Ruth

ures might be so cumbersome and invasive as not to merit their use. In this case, examination of end-use, where possible, on an international scale is preferable. Otherwise, where the export itself is use-neutral, evidence of criminal intent might be necessary to forestall a transfer. National controls of these exports would, as demonstrated by a recent Bundestag proposal, invite extensive wire-tapping, mail inspection and other far-reaching investigatory devices on the part of customs personnel.³⁰¹ Furthermore, where the export might be dangerous technology or information, the means of transfer are less likely to be tangible. Disturbingly enough, for example, oral exchanges with foreigners or transborder facsimiles would rise to inclusion in such a scheme, as they are potential transfers.³⁰² Interception would likely necessitate the most extensive and intrusive procedures. The requisite methodology, as well as the inclusive restrictions, would inevitably impinge on speech and other privacy concerns for any party with the minima of foreign contacts.³⁰³

Exports of information, services, education and persons can have potent impact—an impact equivalent to the traditional export of military hardware.³⁰⁴ High-technology weapons require advanced knowledge, skilled labor, and the appropriate materials. These variables may be collected separately

Greenstein, *National Security Controls on Scientific Information*, 23 JURIMETRICS J. 50 (1982-83); Kenneth Kalivoda, Note, *The Export Administration Act's Technical Data Regulations: Do They Violate the First Amendment?*, 11 GA. J. INT'L & COMP. L. 563 (1981).

301. See BT-DR. 12/104. The Christian Democratic Union, the controlling political party of the governing coalition, introduced a bill to provide such authority to the customs officials, independent of the established authority and procedures of the State Attorney. *Id.* It provided, in part, that when the customs authorities had suspicion of a planned contravention of the law, mail could be opened and telephones tapped. See BT-PR. 12/1203-54; see also Klaus Pokatzky, *Wanzen gegen Raketen; Der Gesetzgeber in Aktion: Lauschangriffe wie noch nie, Rüstungsgeschäfte wie zuvor*, DIE ZEIT, Apr. 5, 1991, at 11.

302. Cf. Commerce and Foreign Trade, 15 C.F.R. § 779.1(b) (1992) (regulating export of technical data and including oral exchanges of information as means of export).

303. Cf. Feketekuty, *supra* note 300, at 194-95 (expressing democratic concerns in regulating "invisible" trade).

304. See, e.g., BT-DR. 12/2350, at 3 ("Nach allen Erfahrungen ist der Export von 'Köpfen' nicht weniger gefährlich als der von Gütern und Technologien."); *Ungeahnter Nebeneffekt*, *supra* note 276, at 134 (reporting that FRG company in Bergisch Gladbach trained 22 Iraqi engineers and technicians in nuclear technology).

and assembled in other countries.³⁰⁵ Advanced knowledge, the key element, does not lend itself to convenient national control.³⁰⁶

A comprehensive set of international controls is necessary to regulate exports that evade national border control. Selective Controls cannot profess to monitor the flow of abstractions at physical check-points.³⁰⁷ As a result, the web of national export controls and legislation quickly becomes penetrable.³⁰⁸ Furthermore, presently there is little comprehensive national or international control over transnational corporations, which are the chief movers of data, goods, skills, and other technologies.³⁰⁹ The filters at the borders are not prepared to deal with the problem.³¹⁰ Because the modern manifestations of technology are no longer limited to concrete mechanical forms that cross physical borders,³¹¹ an interna-

305. See Feketekuty, *supra* note 300, at 194-95.

306. See *Das Recht auf die Bombe*, *supra* note 5, at 26. This characteristic has frustrated controllers. The BND, in an analysis reported in the German press, concluded that it would be realistically impossible to stop Iran's nuclear technology program, as the know-how transfer is impossible to prevent. *Id.*; see Thomas L. Friedman, *U.S. to Offer Plan to Keep Scientists at Work in Russia; Fears on Weapons; Project's Aim is to Keep Nuclear Experts from Selling Knowledge*, N.Y. TIMES, Feb. 8, 1992, at 1 (reporting that U.S. aim is to keep nuclear experts from selling knowledge of "really secret" information and nuclear bomb technology and "information of paramount importance in sophisticated technologies" to "hostile countries").

307. Moreover, the continued reign of the national border model of Selective Controls seems to be especially inappropriate given the extra-terrestrial dimension to commerce. See, e.g., Kai-Uwe Schrogl, "Space Benefits"—*A New Aspect of Global Politics*, 42 *AUSSENPOLITIK* 373 (Eng. ed. 1991).

308. See, e.g., Branscomb, *supra* note 299, at 986 ("Technological advances in transnational communications greatly enhance the ability of users to pursue both *both* *el*-eemosynary and criminal purposes.") (emphasis added).

309. See Peter Hansen & Victoria Aranda, *An Emerging International Framework for Transnational Corporations*, 14 *FORDHAM INT'L L.J.* 881 (1990-91) (describing efforts that are being made to address these control deficits).

310. See Branscomb, *supra* note 299, at 987 ("The coupling of computers with advanced communications systems can merge voice, image, text, and symbols to *render obsolete the customary legal distinctions . . . used to govern the delivery of information . . .*") (emphasis added).

311. Cf. EXPORT ADMINISTRATION ACT, 50 U.S.C. app. § 2415(4) (1988). The Export Administration Act defines the term "technology" as

the information and know-how (whether in tangible form, such as models, prototypes, drawings, sketches, diagrams, blueprints, or manuals, or in intangible form, such as training or technical services) that can be used to design, produce, manufacture, utilize, or reconstruct goods, including computer software and technical data, but not the goods themselves.

Id.

tional network of surveillance is an appropriate addition.

B. Vigorous International Coordination of Export Control Is in Order

An expansive approach to international export control is necessary for the successful implementation of Categorical and Complete Controls. A global actor with the standing of an invigorated United Nations should govern the enforcement of Categorical and Complete Controls. The current international approach does not adequately deal with the prevailing economic and political reality, as seen by the difficulties experienced by the FRG.³¹² The underlying premise of conventional trade alliances may no longer be valid.³¹³ According to current arguments, the reliance on the aforementioned traditional suppliers' cartels should be limited.³¹⁴ The newly industrialized countries have gained high-technology expertise that was once the singular domain of Western industrialized nations.³¹⁵ Furthermore, to avoid the difficult extra-territorial application of national export controls,³¹⁶ a supplemental coordinated international system of control is preferable. An inclusive multilateral consensus to determine what categories or levels of technologies may be exported to the developing world should ideally effect policy objectives. However, even these arrangements must be reconciled with overall North-South relations. Western industrialized countries, members of a much larger international community, must decide whether or not, and on what scale, to support development in these

312. See Koplów & Schrag, *supra* note 17, at 994 ("[T]he structural inadequacy of the world's usual political and legal institutions for dealing with issues of [proliferation of dangerous technologies in the developing world and the security threat of the development needs of this population] . . . confounds traditional efforts to create solutions through ordinary treaties or other international arrangements.").

313. See Lewis, *supra* note 283, at 10 (quoting chemical and biological weapons expert at Brookings Institution in Washington).

314. See, e.g., Lewis, *supra* note 283. Large multinational corporations have facilitated the transfer of technology, capital and skills from the developed countries to the newly industrialized countries. See SIMA LIEBERMANN, *THE ECONOMIC AND POLITICAL ROOTS OF THE NEW PROTECTIONISM* 129 (1988); see also David E. Sanger, *Overtures to Asia Pose Risk for U.S. Aerospace Industry*, N.Y. TIMES, Nov. 18, 1991, at D1 (reporting possible sale of large stake in McDonnell Douglas Corporation to consortium of Asian companies which would effectively transfer know-how of American high-technology industry).

315. See, e.g., Lewis, *supra* note 283.

316. See, e.g., Remien, *supra* note 9, at 433 nn.2-3, 454.

regions. In an inclusive international approach, industrialized nations could align their stated policies with a more realistic system of national export controls.

1. Reevaluating Traditional International Export Regimes

The current approach to international export control may be a useful deterrent, but ultimately foreign policy ends will be met only through extensive multilateral cooperation. Economically, there is little incentive to enforce strictly export controls nationally, absent a new international cooperation.³¹⁷ The theoretical underlying motivation for limiting certain exports to certain countries is moral and political responsibility.³¹⁸ The coordinated implementation of current multilateral controls, it seems, centers on a subscription to the belief that the practices of certain countries are inherently dangerous,³¹⁹ or that the modern weapons of war should be vested only in developed countries.³²⁰ Its predicate is the belief that there is some common culture of interest in countries with high-technology capacity.³²¹ The reality is that modern interests are increasingly

317. For a discussion of the economic costs of export controls to domestic industry, see MOYER & MABRY, *supra* note 3, at 149-56.

318. Cf. William Nelson, *Introduction: Moral Principles and Theory*, in *POLITICAL REALISM AND INTERNATIONAL MORALITY: ETHICS IN THE NUCLEAR AGE 2* (Kenneth Kipnis & Diana T. Meyer eds., 1987) ("The scale of the problems, the sophisticated technology, and the role of institutional structures and cultural and ideological conflict make common moral categories somehow irrelevant.").

319. Cf. *NORTH-SOUTH: A PROGRAM FOR SURVIVAL*, *supra* note 291, at 10-15 (expressing need for thorough rethinking to create new type of relationship that could accommodate all nations in single community).

320. Cf. *U.S. Nuclear Technology Tactics Vex Iran*, N.Y. TIMES, Nov. 18, 1991, at A9. Iranian President Hashemi Rafsanjani criticized the U.S. government's "utter insolence" in declaring "that Iran does not have the right to utilize nuclear technology even for non-military purposes." *Id.* Rafsanjani raised the political argument that "preserving [his country's] independence and survival in this unsuitable international climate is not possible without science, technology and the necessary tools." *Id.*; *Das Recht auf die Bombe*, *supra* note 5, at 27 (quoting Iranian Vice President Ayatollah Mohadscherami who justified Islamic world's right to nuclear military programs in light of suspected Israeli nuclear capabilities).

321. Cf. MARGARET P. DOXEY, *ECONOMIC SANCTIONS AND INTERNATIONAL ENFORCEMENT* 81 (2d ed. 1980). Considering the role of international interaction and cooperation in relation to interests, one commentator notes that

[a] system of international enforcement might function successfully in a genuinely international community with a cohesive social base where deviations from norms of accepted conduct were the exception rather than the rule. The weaker the system and the greater the diversity of values it contains, the more likely are doubts, hesitations and evasions.

less ideological and more economic.³²² Recent world events have debunked the contention that those possessing like-technologies have similar interests retaining such. Competing economic interests now dominate political alignment.³²³ Moreover, the number of possessors of critical technologies has increased dramatically.³²⁴ This amounts to a diffusion of economic and technological needs.³²⁵ The geopolitical scene is now dominated by a multi-polar trading dynamic rather than a single static ideological divide.³²⁶ In addition, the traditional national borders are obfuscated by transnational operations,³²⁷ and technology is unlikely to have a distinct nationality.³²⁸ Its possession is no longer intimate, but widespread and public.³²⁹

Id.

322. See Eric Schmitt, *U.S. Aides Worry About Spread of Arms From Sales by the Soviets*, N.Y. TIMES, Nov. 16, 1991, at 5. For example, the former Soviet Union's need for hard currency prompted it to open a virtual arms bazaar to the international buying public. *Id.* The Soviet sales drive included rocket engines, space stations, nuclear reactors and other parts of their space program much of which rivals or surpasses Western technology. *Id.* Additionally, some feared that economic incentive would lure many undercompensated or unemployed Soviet scientists and technicians to military programs in developing countries. *Id.*

323. Cf. Klaus W. Grewlich, *The Technology Race*, 42 AUSSENPOLITIK 383, 387 (Eng. ed. 1991). Noting the highly charged and competitive role of technology in the international arena, one author remarks that

[t]he vocabulary in the global discussion on high technology has assumed a distinctly military character. There is talk of strategy, alliances, the deployment of rivals, defence, holding action and attack, pincer movements, withdrawal positions and reserves. This belligerent language suggest [sic] that the competition which takes place on this basis could have an adverse effect on the quality of political relations.

Id.

324. Cf. FINDING COMMON GROUND, *supra* note 9, at 56-59 (addressing "steady diffusion of scientific knowledge, technical and engineering talent, and manufacturing ability in all areas of proliferation").

325. Cf. Grewlich, *supra* note 323, at 387 (defining relevant developments as transition to "global and interdependent world, in which power blocs become increasingly irrelevant").

326. Cf. FINDING COMMON GROUND, *supra* note 9, at 40-43.

327. See Promothee Project, *supra* note 284, at 93-113.

328. See *id.* at 98-100; cf. Elaine Sciolino & Dean Baquet, *An American Front Company Was Cog in Baghdad's Buildup*, N.Y. TIMES, July 26, 1992, at 1 (reporting that Iraq set up complex network of corporations internationally for specific purposes of illegally acquiring critical weapons technology in industrialized nations and charting Ohio company's connection to multilayered corporate structure).

329. FINDING COMMON GROUND, *supra* note 9, at 40-42. The various ways in which this development has unfolded in the international trade arena include (i) the changing structure of the global economy; (ii) the increasingly rapid global diffusion of technology; (iii) growing technological and manufacturing sophistication in the

Containment is made yet more difficult by the inevitable differences in interpretation among the trade consortia.³³⁰

The West's worst fears, however, often have been confirmed.³³¹ Political instability and recurring acts of violence encourage Western mistrust of dangerous technology in the possession of developing countries,³³² and the need for control becomes ostensibly greater. The FRG demonstrates this desperate tinkering and helpless reliance on bureaucratic cures. However, the implementation of minor national procedural obstacles possibly may be a device simply to make the inevitable course more tortuous. By making the acquisition of high technology considerably more expensive and somewhat more burdensome, developed countries may hope to keep a degree of advantage.³³³ A more effective approach, however,

newly industrialized countries; (iv) changing distribution of global economic and financial power; and (v) the growing importance of exports to economic vitality. *Id.*

330. *Cf.* John Markoff, *Soviet Fiber-Optic Deal Challenges U.S. Policy*, N.Y. TIMES, Nov. 21, 1991, at D2 (reporting that Germany sold high-speed fiber-optic cable to former Soviet Union despite contrary CoCom regulation, as there are "different interpretations of the complex issues").

331. *See, e.g., Arms Trade Booming*, ECONOMIST, June 20th-26th, 1992, at 34 (reporting that Third World countries are increasing spending on arms imports); Edward A. Gargan, *12 Are Killed as Pakistani Police Fire on Kashmiris Marching Toward Border*, N.Y. TIMES, Feb. 13, 1992, at A3 (reporting that Pakistan, alarmed over possibility of conflict with India, violently halted march by Kashmiri separatists); Edward A. Gargan, *Diplomats Are Edgy as India Stubbornly Builds Its Nuclear Arsenal*, N.Y. TIMES, Jan. 21, 1992, at A13; Paul Lewis, *Pakistan Tells of Its A-Bomb Capacity*, N.Y. TIMES, Feb. 8, 1992, at 5 (reporting that Pakistan Foreign Ministry official issued first formal acknowledgment of its capacity for making atomic bombs and stated impossibility of dismantling of program with presence of Indian nuclear program and that both countries have refused to sign NPT and open installations to international monitoring); Eric Schmitt, *North Korea Ship Delivers to Iran*, N.Y. TIMES, Mar. 18, 1992, at A12 (reporting delivery by vessel thought by United States to be carrying missiles).

332. *See* Koplou & Schrag, *supra* note 17, at 993, 995-1005; *cf.* FINDING COMMON GROUND, *supra* note 9, at 40 ("Many of these problems [involving regional violence] are driven or exacerbated by the proliferation of advanced munitions and dual use technologies related to nuclear, chemical, and biological weapons and to military delivery systems.").

333. *Cf.* Rudolf, *supra* note 27, at 393. Current export controls may limit to some degree undesired exports.

As a rule, export controls can increase the difficulties and costs of weapon projects and slow down their progress. At the same time, they serve as an early warning, since illegal exports and other practices are a major indication of the interest of certain states in acquiring arms. Export controls can also contribute towards regional arms control insofar as they help delay destabilising developments in this field.

Id.

would involve the FRG in an international system sharing responsibility for control and enforcement, which would be better able to comprehensively implement export policies.³³⁴ An inclusive, coordinated approach would not have the same temporary and limited effects.

2. Developing an Inclusive Approach to Expanded Multilateral Cooperation in Controlling Exports

There is a need for a global coordinating actor with the power to make and enforce laws concerning export control.³³⁵ This structural approach ties into the informal and disparate growing interaction and interdependence among nations.³³⁶ The international economic environment is advancing in this direction,³³⁷ and remedial construction of a parallel political structure to govern the dangerous exports within it is in order.³³⁸ Achieving a mutually beneficial and, thus, a workable balance³³⁹ should involve the trade-off of the international control of technology, that would deny certain countries the dangerous combinations of technology that endanger world peace, while promoting and supervising distinctly civilian tech-

334. Cf. BMWI 1992 REPORT ON REFORM OF EXPORT CONTROLS, *supra* note 6, at 9 (stating that necessary efficiency of FRG export controls depends on intensive international cooperation).

335. Cf. Yoshikazu Sakamoto, *Toward Global Identity*, in ON THE CREATION OF A JUST WORLD ORDER: PREFERRED WORLDS FOR THE 1990's 189, 193 (Saul H. Mendlovitz ed., 1975); Schachter, *supra* note 11, at 71 ("Law must . . . be accorded its own relative sphere of autonomy," although currently "[i]nternational law falls short of ensuring such autonomy" as the "application of law is left in large measure to the states concerned and, to some degree, the reactions of the larger community of states."); Koplow & Schrag, *supra* note 17, at 1013 (calling attention to need for stronger international legal institutions in context of arms control).

336. Cf. Sakamoto, *supra* note 335, at 194 (postulating that "organizational lag" is due to delay in formulating "new system of identification").

337. Cf. *id.* at 199. "The classic notion of the nation-state and national sovereignty is based on the presupposition or myth that the scope of the *national state* coincides with the scope of the *national economy* and *national culture* . . . [b]ut [the emergence and importance of the multinational corporation] indicates that the scope of economy has already surpassed, and will increasingly surpass, national boundaries." *Id.*

338. Cf. McDougal, *supra* note 264, at 136 (stating that "disparity between the demands of the peoples of the world and [the] responding community achievement . . . constitutes the most general problem in shaping a global legal process designed better to secure peace").

339. Cf. Schachter, *supra* note 11, at 68 ("Law, inescapably, is part of the broader political process . . . [a]lthough it sets normative limits, those limits are determined by political goals and they are applied in political contexts.").

nologies that assist these same nations with basic technical and welfare needs.³⁴⁰

As a matter of principle, reform of the present international coordination rests on the theories of normative convergence and dependency.³⁴¹ The challenge to true multilateral cooperation is to mobilize consensus.³⁴² First, normative convergence involves the recognition of interaction among groups.³⁴³ A key element of this concept is encouraging compromise.³⁴⁴ Compromise is naturally crucial to the global acceptance of a structure that governs the control of exports, as national sovereignty and economic identity and well-being are at issue.³⁴⁵ The structural ideal would attempt to simplify an otherwise complex, diverse, and interdependent set of relationships.³⁴⁶ Coordinating Western and Third World coun-

340. *Cf. id.* at 52-53; Koplów & Schrag, *supra* note 17, at 1026-42 (proposing trade-off of disarmament for development assistance).

341. *Cf.* Ali A. Mazrui, *The Search for Human Consensus*, in *ON THE CREATION OF A JUST WORLD ORDER: PREFERRED WORLDS FOR THE 1990's* 1, 3 (Saul H. Mendlovitz ed., 1975).

342. *Cf. id.*; McDougal, *supra* note 264, at 152 ("As the network or interaction and the perception of interdependence expand, more and more peoples may come to perceive that the assertion of special interest, against common interest, is not compatible with survival.").

343. *Cf.* Mazrui, *supra* note 341, at 7; McDougal, *supra* note 264, at 152. One scholar notes that

[t]he greatest contemporary failure in realism is in the lack of appreciation of the comprehensiveness and depth of the interdependences . . . of all peoples everywhere with regard to the shaping and sharing of all values Fortunately, the spread of new techniques of communication and modern education make it possible for individuals everywhere to acquire a new realism about the conditions, not merely of continued existence, but of improved public order.

Id.

344. *Cf.* Mazrui, *supra* note 341, at 7.

345. *See, e.g.*, Michael R. Gordon, *Iraq Won Its Point on U.N. Inspectors*, *Top U.S. Aides Say*, *N.Y. TIMES*, July 28, 1992, at A1 (reporting that although Persian Gulf war cease-fire terms accorded U.N. inspectors quick and unimpeded access to Iraqi installations, accord had to be reached on inspection of the Agriculture Ministry in Baghdad as Deputy Prime Minister Tariq Aziz announced that international inspectors could no longer enter buildings on their own terms); Paul Lewis, *U.N. Aide Quits Iraq After Failing to Gain Access for Arms Inquiry*, *N.Y. TIMES*, July 20, 1992, at A3 ("Iraq sent a senior United Nations envoy away empty-handed today, citing sovereignty and security as reasons for its latest refusal to allow United Nations arms inspectors into its Agriculture Ministry."); *cf.* Koplów & Schrag, *supra* note 17, at 1016 ("[F]uture arms control accords inexorably will expose many more hitherto private details about the parties' defense structures, military-industrial capacity, and private businesses.").

346. *Cf.* Mazrui, *supra* note 341, at 7 (setting forth stages in coordination and

tries requires the recognition of the current political, economic, and technological imbalances.³⁴⁷ A meaningful working relationship will need to be conditioned upon an assertive policy of inclusion,³⁴⁸ coupled with the promotion of individual accountability by the means of comprehensive enforcement and adjudication procedures.³⁴⁹ The issues in question encompass the institutional structure of international economic relationships, and, therefore, solutions cannot be founded on any single domestic regimen of economic policy.³⁵⁰

Although participation in such a model demands the relinquishment of a standard sovereign exercise, the regrouping may assist in minimizing extreme inequities and allow lesser industrialized countries to focus on more nationally relevant

convergence of world cultures); McDougal, *supra* note 237, at 134 ("The law relevant to peace cannot be confined to the coordination of the activities of nation-states . . . [a]n appropriate law extends, must be extended, to the whole global process of authoritative decision that guides and regulates human activities across nation-state boundaries.").

347. Cf. Koplou & Schrag, *supra* note 17, at 1008-12 (explaining that addressing need for development assistance to Third World is essential to formulating arms control arrangement); Mazrui, *supra* note 341, at 18; Schachter, *supra* note 11, at 71 ("[T]he proclaimed ideal of equality of the states under law is substantially qualified by the actual disparities in power[, but] . . . powerful states have a stake in maintaining a system that gives a necessary measure of stability to the existing order.").

348. Cf. Mazrui, *supra* note 341, at 19. In calling attention to structures of dependency, Mazrui states that a "major stumbling block in the way of Third World assertiveness is the absence of the political will for change. The absence of that political will is substantially attributable to normative and cultural conditioning." *Id.*

349. See, e.g., Barbara Crossette, *U.S.-North Korea Talks Planned on State of Nuclear Development*, N.Y. TIMES, Jan. 15, 1992, at A12 (reporting that North Korea, although an NPT signatory, was able to develop a nuclear weapons program as, according to expert testimony before Congress, it was questionable "whether the overstretched, underfinanced [IAEA] could be counted on to detect a weapons program in one of the world's most secretive countries"); Seth Faison, *Baghdad Agrees to U.N. Inspections; Long Impasse Ends*, N.Y. TIMES, July 27, 1992, at A1 (reporting that after threats of military action by United States and its allies, Iraq agreed to allow U.N. inspectors into a government building in Baghdad); cf. Stephen B. Cohen, *Conditioning U.S. Security Assistance on Human Rights Practices*, 76 AM. J. INT'L L. 246 (1982).

350. Cf. Sakamoto, *supra* note 335, at 199; Rajni Kothori, *World Politics and World Order: The Issue of Autonomy*, in ON THE CREATION OF A JUST WORLD ORDER: PREFERRED WORLDS FOR THE 1990's 39, 45 (Saul H. Mendlovitz ed., 1975) (stating that "one is faced by a scenario of growing fragmentation of political structures, a sharpening duality of the world in economic and technological terms and hence also in power positions, and a widespread sense of isolation and powerlessness among the more sensitives [sic] strata of the world"); Leslie H. Gelb, *More Arms, Less Aid*, N.Y. TIMES, May 8, 1992, at A31 (recommending that international banks that provide developing countries with economic assistance, such as I.M.F. and World Bank, press borrowers to curb military spending).

technology needs.³⁵¹ The proposed model provides advantages of greater security to developed nations and increased aid to developing nations. In addition, remaining outside of the internationally controlled network of trade may be economically unfeasible and, therefore, encourage participation and compliance. Setting global standards and enforcement mechanisms for the interconnected network of trade can bring the necessary pressure for more control over dangerous transfers.³⁵²

CONCLUSION

National Selective Controls are an imperfect science, and the promises of their significance are deceptive. The present means of transferring dangerous technology are not quite so easily reduced and require greater international surveillance and enforcement. National Categorical Controls coupled with an international coordination of responsibility would best effect the collective interest in a stable, peaceful, and inclusive world order.

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351. *Cf.* Kothori, *supra* note 350, at 46-47 (presenting counterargument that increased national autonomy will lead to more equality among states and raising relevant point that trend in technology could hurt poorer countries as it does not address their needs).

352. *Cf.* Schachter, *supra* note 11, at 69 (stating that "deficiencies [of an international legal system] . . . should not obscure the important fact that international law is observed most of the time . . . [and the] credibility of the violating government as a state that purports to honor its obligations will be at stake").

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