

NAVAL POSTGRADUATE SCHOOL

Monterey, California



S DTIC
ELECTE
JUN 06 1989
D *eg* **D**

THESIS

AD-A208 410

RAMIFICATIONS OF ILLEGAL U.S. ARMS EXPORTS

by

Charles Gail Roller

and

Dorothy May Major

March 1989

Thesis Advisor: Edward J. Laurance

Approved for public release; distribution is unlimited

89 6 05 125

UNCLASSIFIED

SECURITY CLASSIFICATION

REPORT DOCUMENTATION PAGE

1a REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b RESTRICTIVE MARKINGS		
2a SECURITY CLASSIFICATION AUTHORITY			3 DISTRIBUTION AVAILABILITY OF REPORT Approved for public release; distribution is unlimited		
2b DECLASSIFICATION/DOWNGRADING SCHEDULE					
4 PERFORMING ORGANIZATION REPORT NUMBER(S)			5 MONITORING ORGANIZATION REPORT NUMBER(S)		
6a NAME OF PERFORMING ORGANIZATION Naval Postgraduate School		6b OFFICE SYMBOL (If applicable) Code 54	7a NAME OF MONITORING ORGANIZATION Naval Postgraduate School		
6c ADDRESS (City, State, and ZIP Code) Monterey, California 93943-5000			7b ADDRESS (City, State, and ZIP Code) Monterey, California 93943-5000		
8a NAME OF FUNDING SPONSORING ORGANIZATION		8b OFFICE SYMBOL (If applicable)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c ADDRESS (City, State, and ZIP Code)			10 SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO	PROJECT NO	TASK NO
			WORK UNIT ACCESSION NO		
11 TITLE (Include Security Classification) RAMIFICATIONS OF ILLEGAL U.S. ARMS EXPORTS					
12 PERSONAL AUTHOR(S) Roller, Charles G. and Major, Dorothy M.					
13a TYPE OF REPORT Master's Thesis		13b TIME COVERED FROM _____ TO _____		14 DATE OF REPORT (Year, Month, Day) 1989, March	15 PAGE COUNT 151
16 SUPPLEMENTARY NOTATION The views expressed in this thesis are those of the authors and do not reflect the official policy or position of the Department of Defense or the U.S. Government.					
17 COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Illegal Arms Transfers; Illegal U.S. Arms Exports, Thesis. (SDU) &		
19 ABSTRACT (Continue on reverse if necessary and identify by block number) This thesis examines the impact of illegal U.S. arms transfers upon recipient nations' war fighting capabilities and upon the American national security. Data were gathered primarily from U.S. District Court records and interviews with U.S. governmental officials from intelligence services and the Departments of Commerce, Justice and State. An investigation of the illicit arms transfers to Iran formed the basis of conclusions reached. Additionally, policy recommendations are provided to enhance the governmental detection and investigation of illegal export violations. The viability of utilizing court documents as intelligence tools for measuring military capabilities is assessed. <i>Keywords:</i>					
20 DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21 ABSTRACT SECURITY CLASSIFICATION Unclassified		
22a NAME OF RESPONSIBLE INDIVIDUAL Prof. Edward J. Laurance			22b TELEPHONE (Include Area Code) (408) 646-2831	22c OFFICE SYMBOL Code 56Lk	

DD FORM 1473, 84 MAR

83 APR edition may be used until exhausted

All other editions are obsolete

SECURITY CLASSIFICATION OF THIS PAGE

U.S. Government Printing Office: 1986-006 24.

UNCLASSIFIED

Approved for public release; distribution is unlimited

Ramifications of Illegal U.S. Arms Exports

by

Charles Gail Roller
Lieutenant Commander, United States Navy
B.S., Lamar University, 1972
M.Div., Southwestern Baptist Theological Seminary, 1975

and

Dorothy May Major
Lieutenant, U.S. Navy
B.S., Ohio State University, 1979
M.S., University of Arkansas, 1983

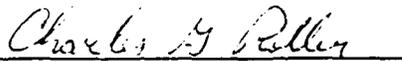
Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

from the

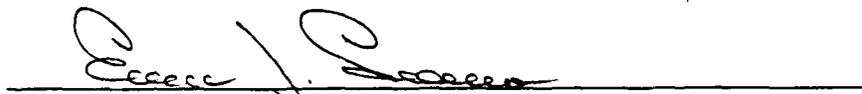
NAVAL POSTGRADUATE SCHOOL
March 1989

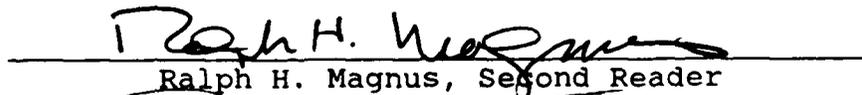
Authors:


Charles G. Roller

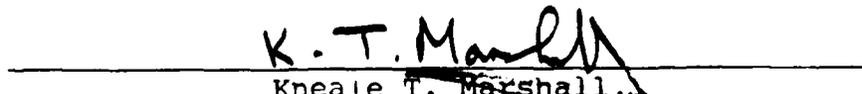

Dorothy M. Major

Approved by:


Edward J. Laurance, Thesis Advisor


Ralph H. Magnus, Second Reader


James J. Tritten, Chairman
Department of National Security Affairs


Kneale T. Marshall,
Dean of Information and Policy Sciences

ABSTRACT

This thesis examines the impact of illegal U.S. arms transfers upon recipient nations' war fighting capabilities and upon the American national security. Data were gathered primarily from U.S. District Court records and interviews with U.S. governmental officials from intelligence services and the Departments of Commerce, Justice and State. An investigation of the illicit arms transfers to Iran formed the basis of conclusions reached.

Additionally, policy recommendations are provided to enhance the governmental detection and investigation of illegal export violations. The viability of utilizing court documents as intelligence tools for measuring military capabilities is assessed.



Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

TABLE OF CONTENTS

I.	ILLEGAL ARMS EXPORTS FROM THE U.S.: RATIONALE AND RESEARCH METHODS -----	1
A.	INTRODUCTION -----	1
B.	IMPORTANCE OF THE PHENOMENON -----	3
C.	RESEARCH QUESTIONS AND METHODOLOGICAL OBSTACLES -----	6
D.	HYPOTHESES -----	18
E.	DATA -----	20
F.	SELECTION OF IRAN AS A POLICY RELEVANT SAMPLE -----	25
II.	CHRONOLOGY OF IRAN-IRAQ WAR, IRANIAN ARMS ACQUISITION PATTERNS, ILLEGAL ARMS SALES AND LEGAL ARMS ACQUISITION -----	28
A.	CHRONOLOGY OF WAR -----	28
B.	IRANIAN ARMS ACQUISITION PATTERNS -----	32
C.	ILLEGAL ARMS SALES -----	35
D.	LEGAL ARMS ACQUISITIONS -----	37
III.	METHODS USED TO ILLEGALLY TRANSFER MILITARY EQUIPMENT TO IRAN -----	42
A.	SOURCES OF DATA -----	42
B.	SAMPLE CASES -----	43
C.	DEFINITION OF INDICTMENT COUNTS -----	44
D.	A REVIEW OF THE CASES -----	46
E.	COMMON CHARACTERISTICS AND TRENDS FOR THE FUTURE -----	56
IV.	EFFECTS OF ILLEGAL ARMS SHIPMENTS TO IRAN -----	64
A.	FREQUENCY OF ILLEGAL EXPORT ATTEMPTS -----	64

B.	INCREASED OPERATIONAL STATUS OF IRANIAN WEAPONS SYSTEMS -----	65
C.	EXPLOITING FOREIGN TECHNICAL EXPERTISE -----	68
D.	ILLEGAL ARMS IMPORTS AND WAR PLANS -----	71
E.	IMPACT ON U.S. NATIONAL SECURITY -----	74
V.	SUMMARY OF FINDINGS, INTELLIGENCE APPLICATIONS, AND POLICY RECOMMENDATIONS -----	79
A.	SUMMARY OF FINDINGS -----	79
B.	INTELLIGENCE APPLICATIONS -----	80
C.	POLICY RECOMMENDATIONS -----	83
D.	FUTURE RESEARCH AGENDA -----	87
APPENDIX A:	SUMMARY OF INTERVIEWS WITH U.S. GOVERNMENT OFFICIALS -----	92
APPENDIX B:	SAMPLE COURT DOCUMENT -----	126
APPENDIX C:	COMPLICATIONS IN LEGAL CASE STUDY -----	132
APPENDIX D:	STOLEN PARTS LISTED IN THE INANLOU INDICTMENT -----	136
	LIST OF REFERENCES -----	139
	INITIAL DISTRIBUTION LIST -----	142

I. ILLEGAL ARMS EXPORTS FROM THE U.S.:
RATIONALE AND RESEARCH METHODS

A. INTRODUCTION

An anonymous letter was received by the FBI in March 1983, alleging that a small cadre consisting of an insurance salesman, his wife and brother, a DoD civilian, two U.S. Navy sailors and an Iranian businessman were stealing government property for illegal export and sale to Iran.

In December of 1984, after months of inter-agency jurisdictional squabbling between the FBI, U.S. Customs, and the Naval Investigative Service (NIS), Customs finally uncovered the first substantial piece of evidence to corroborate the accusation. Within a month, two shipments of military hardware, valued at \$186,000 and concealed in crates marked "auto parts," were intercepted.

The details of the conspiracy soon became apparent. The sailors, Cayabyab and Rodriguez, stole the parts from the Navy supply system and the Agustins (Edgardo, Franklin and Julie) exported the components to Saeid Inanlou in London, who forwarded them to Iran.

The theft ring did not employ sophisticated methods or take elaborate lengths to cover their activities. The Agustins personally carried boxes of embargoed parts to the freight shipping company, used their own address for the mailing, used their personal bank accounts for transactions

involving other conspirators, and spoke openly on their telephones about the operation. Yet their illegal exporting operation was not stopped until years after its start, and even this delayed action was made possible only by the submission of anonymous letters correctly describing the entire operation of the ring. [Refs. 1:p. 1; 2:p. 1; 3:p. 17; 4:p. 4; 5:p. 1; 6:p. 1]

Government sources document 26 "known" shipments of military materials illegally exported to Iran by the Agustin theft ring. But Customs investigators were only able to search eight shipments, which yielded the recovery of more than \$2.5 million worth of military equipment. [Ref. 1:p. 1] An extensive probe by Navy supply officers, maintenance facility and base commanders, NIS agents, Customs officials, FBI agents, and State Department personnel has failed to determine the full extent of this conspiracy's activities.

This story represents a new phenomenon in the world of international arms trading, illegal arms transactions directly related to U.S. national security. While clandestine munitions exports have presumably occurred since export laws were established in the 1930s, the magnitude of this black market has reached unprecedented proportions in the last decade. In this particular case, the DoD supply system was penetrated to obtain the exported components. A review of a representative sample of the most significant illegal export cases, presented later in this study, will

show that it is part of a larger pattern which has continued throughout the 1980s.

In this research we will attempt to illustrate the breadth of the illegal arms trade, the major effects it produces in both recipient and donor nations, and the benefits derived from usage of court documents as intelligence tools. The recent, widely publicized Iran-Iraq War has provided a well-documented sample of illegal arms export cases on which to base this study.

B. IMPORTANCE OF THE PHENOMENON

Why would officials from all branches of the government be interested in understanding and stopping the illegal theft and/or export of military parts and equipment to Iran? While such illegal activities may seem to be the responsibility of only the Justice Department, for prosecution, the ramifications of these actions touch all levels of government accountability. Thefts, and the simple illegal export of military components affects the ability of U.S. military supply departments to correctly monitor their equipment/parts inventory levels, of military units to maintain their equipment in an operational status, of armed forces commands to ensure their states of readiness, and of the Secretary of Defense to maintain an assured national security.

As an example, if parts for F-14 fighter aircraft are stolen from the Navy's supply warehouses, replacement orders

will not take place when the inventory reaches a predetermined level. Supply officers have an erroneous count of available parts. If several F-14s have simultaneous malfunctions of the stolen parts, there may not be enough remaining parts available to return all inoperable aircraft back to an operational status. The unexpected "downings" of several F-14s will lower the readiness of their parent squadrons, and likewise of their encompassing air wings. Should a need for fighter escort for U.S. sorties occur, and several needed F-14s are unavailable to provide this service, the overall national security may be endangered. All of these negative consequences can result from an inaccurate accounting of military parts inventories.

This example shows some possible impacts upon the United States from thefts of military parts, but the consequences for the recipient of these shipments are just as significant. Iran was a nation whose military was predominantly composed of U.S. equipment, unable to legally import parts from U.S. manufacturers, and desperately fighting a personnel and equipment-consuming war with her neighbor. The receipt of American parts through any means was essential to her war-fighting capabilities. Through normal attrition and combat losses, Iran's pre-war air force strength of about 400 planes--mostly F-4s, F-5s and F-14s--had plummeted by 1985 to approximately 70 to 90 usable

combat aircraft. Her best air defense system--the U.S.-built Hawk missile system--was by then out of commission due to lack of replacement parts. And Iran desperately wanted to buy 600 Sidewinder, 600 Sparrow and 30 Phoenix missiles for airborne use in air defense. [Ref. 7:p. 10] Most of these equipment failures were due to shortages of U.S. replacement parts. And the receipt of any U.S. parts would help to restore equipment into an operational status, allowing its return to combat action. Before the end of the war, several arms dealers argued that the United States had effectively managed to stop all new arms sales to Iran, through its embargo and "Operation Staunch." Operation Staunch is the on-going, American-sponsored world-wide effort to halt arms sales to Iran. The end result of this accomplishment was the preventing of the Iranian military from possessing the quantity or quality of weapons necessary to continue fighting the Iraqis. [Ref. 8:p. 7] But despite this embargo the Iranians were able to continue fighting the Iraqis until July 20, 1988, due in part to receipt of illegally exported U.S. parts.

Another possible result of Iran's receipt of illegally exported U.S. military parts was her enhanced prestige in the Middle Eastern world. This was achieved through her continued ability to project military power in spite of the coordinated efforts against her by a superpower. By receiving parts covertly shipped from the United States,

Iran frustrated the desires and efforts of the American government, and continued to be capable of waging war against Iraq until mid-1988.

By making even a casual investigation of the effects of illegal arms exports from the United States, an interested party discovers that the actions of a small network of larcenous individuals can influence the collective security of a nation, and can enable a warring nation to keep at least some of its sophisticated equipment operational in spite of officially sanctioned embargoes. Therefore the subject of illegal arms/parts exports is important for study.

C. RESEARCH QUESTIONS AND METHODOLOGICAL OBSTACLES

In the course of conducting this study some important questions served as the focus for research. A review of arms transfer publications revealed legal arms purchases and deliveries. Information concerning weapons sales are delivered by munitions corporations or by governments themselves to interested agencies--such as the Stockholm International Peace Research Institute (SIPRI)--which annually compile statistics into organized listings by nation.

The illegal arms sales are covert and therefore much more difficult to track. While U.S. Customs agents routinely inspect crates awaiting shipment at docks, their actions only contribute to about five percent of discovered

illegal export attempts. According to government officials, approximately 86 percent of discovered illegal export efforts are identified through the compliance of paid informants and cooperating (unpaid) industrial sources. All other discoveries are prompted by anonymous tips, referrals from other investigating government agencies, or export documentation reviews.¹

Because these illegal sales and transfers of arms are clandestine, no one is sure of the extent of the practice. It is unrealistic to believe that every illegal arms export attempt was exposed. Researchers are limited in discussing the magnitude of undiscovered illegal exports, because "one does not know what one does not know." Michael Klare, an authority on the subject of arms transfers, believes that the discovered attempts at illegal arms export were just "the tip of the iceberg," and that such arms deals occur every day, most being undetected. [Ref. 9:pp. 16-24] Michael Brzoska, a political scientist also specializing in arms transfers, notes that Iran made extensive use of illegal arms deals during her war with Iraq. [Ref. 10:pp. 42-45]²

1. Interview with U.S. Government officials, 02 February 1989.

2. For additional background on illegal U.S. arms exporting, see Edward J. Laurance's article: "The New Gunrunning," Orbis, Spring 1989, pp. 1-13. Stephanie G. Neuman provides a different perspective on the control of arms exports in her article: "Arms, Aid and the Superpowers," Foreign Affairs, Summer 1988, pp. 1044-1066.

In focusing our research of illegal arms exports on Iran, five questions directed the study.

1. What was the Frequency or Extent of Illegal U.S. Arms Traffic to Iran?

The very nature of this phenomenon makes this research question extremely challenging. Representatives of the U.S. Customs Department, the State Department, and the Justice Department all agreed that it was very difficult to accurately determine the extent of illegal exporting conducted to Iran from the United States. Officials were unsure whether to assume that no illegal exports occurred, which wouldn't provide any illegal shipments to detect, or to believe that some amount of illegal activity took place and officials simply failed to detect it.³ Government officials could attempt extrapolation of Iranian weapons systems' service lives with the known deliveries of replacement parts, and could then compare these expectations with the observed operational weapons systems. By utilizing this scheme, all weapons systems operational beyond their expected service lives could be assumed to have received undiscovered exports of replacement parts. This is a highly inaccurate and ineffective method of research.

3. Interviews with U.S. Government officials, 30 January 1989, 01 February 1989, 01-02 February 1989.

2. What were the Effects upon Iran's War Fighting Capability Caused by the Receipt of Illegally Exported Equipment?

To correctly determine the effect of illegally exported parts upon Iran's war performance, it was necessary to distinguish between parts that were received and quickly shipped to those units requiring them, and parts that were received but which languished in warehouses. It was rumored that some equipment, such as TOW missiles, was sent to units with the greatest visibility, and not to those which could have utilized the weapons for their intended functions.⁴

A vital question concerning the effect of illegally received U.S. parts on Iran's war fighting capabilities involved Iranian abilities to correctly install sophisticated parts after receiving them. If there existed a fully-trained organization of maintenance technicians skilled in the servicing of the most complicated U.S. weapons system possessed by Iran, then it may be assumed that almost every part received in Iran resulted in the upgrading of a weapon. However, if there existed only a few fully-trained Iranian technicians skilled in maintaining sophisticated weapons systems, due to a previous dependence upon Western maintenance technicians or because of wide-spread executions of Western-trained personnel following the first days of the Iranian Revolution, then possibly many U.S. parts were

4. Interviews with U.S. Government officials, 30 January and 03 February 1989.

received but were unable to be correctly installed in their intended systems.⁵

The question arose as to whether or not Iran utilized any foreign maintenance expertise in training their technicians or in directly repairing sophisticated weapons. While government officials concur that there were no Americans living in Iran after the release of the embassy hostages, specific details concerning Israeli and other foreign maintenance experts are unavailable.⁶

Information was not available concerning the Iranian maintenance personnel's percentage of successful repairs on highly technical systems as compared to low technical systems. To have known these figures would have allowed a statement concerning the degree of usage derived from receiving "low tech" parts compared to "high tech" ones. Knowing that the first months of the Iranian Revolution saw mass executions of Western trained and/or sympathetic individuals, and knowing that much of the military's maintenance force was included in this number, would suggest that Iran's "high tech" repair capabilities fell dramatically during this time period.⁷

5. Interviews with U.S. Government officials, 30 January and 03 February 1989.

6. Interviews with U.S. Government officials, 30 January 1989, 03 February 1989.

7. Interviews with U.S. Government officials, 30 January and 03 February 1989.

Most of these questions are of the sort that escape quantification by a nation that was more concerned with acquiring evasive and costly military parts than with maintaining accurate administrative inventories. Those circumstances made the job of an observer nation trying to ascertain current Iranian parts inventories doubly difficult.

The question of effects upon Iran's war fighting capability derived from illegally exported arms is directly related to at least three concepts: (1) the definition of military capability, (2) the means by which a nation acquires its weapons capabilities, and (3) the level of technology transferred. These concepts are the ideas around which this thesis was organized.

a. Definition of Military Capability

The study of effects derived from illegally exported arms is dependent upon the definition of "military capability." In order to determine if these arms and parts had any significant influence on Iran's war fighting capability--or her "military capability"--then an understanding of this term is required. The Department of Defense (DOD) defines "military capability" as the ability to achieve a specified wartime objective--for example, to win a battle or a war or to destroy a target. Because military capability is a broad term which cannot be readily

quantified, the DOD has divided capability into the following four subsets or pillars: [Ref. 11:p. 7]

- Readiness--the ability of the military forces, units, weapons systems, or equipment to deliver the output for which they were designed in peacetime and at the outbreak of hostilities. Readiness is measured in terms of manning, equipping, and training the force, and is defined to include the force's ability to mobilize, deploy, and employ their weapons systems without unacceptable delays.
- Sustainability--the staying power of military forces, or how long the forces can continue to fight. Sustainability involves the ability to resupply engaged forces during combat operations and is sometimes measured in terms of the estimated number of fighting days for which supplies are available.
- Modernization--the technical sophistication of forces, units, weapons systems, and equipment. Modernization can include new procurement and/or modifications, depending upon the service. Assessments of modernization may compare new types of equipment with the items that they replaced or may compare equipment in the U.S. inventory with that of potential adversary forces.
- Force Structure--the numbers, size, and composition of units constituting the military forces. Force structure is usually described as numbers of divisions, ships, or air wings.

In the discussion of Iranian military capability as related to the receipt of illegally exported U.S. parts, the principle focus will be on force structure, readiness and sustainability of forces. The capability of modernizing Iran's military weapons systems through illegally shipped parts was not feasible.

b. Means of Acquiring Military Capabilities

There are only three distinct ways in which a nation can acquire the weapons systems that make up its force structure. The most desirable means of obtaining

weapons is through domestic manufacture. This method will ensure availability of the arms unless the raw materials become unavailable or enemy attacks destroy the factories/supply lines. The second most favorable way of obtaining weapons is through purchasing them from foreign manufacturers. When relations between countries are friendly, this method is satisfactory for the acquisition of arms, but is not as economically favorable to the recipient nation. However, when relationships between countries become strained, as often occurs in times of war, the sale and delivery of arms is no longer certain. As a last resort in the acquisition of weapons, employed when the previous two options are not possible, a country can choose to illegally procure foreign weapons. This may be done by directly stealing the arms and smuggling them back to the home nation, or by recruiting other "agents" to obtain and illegally export the arms to the home nation.

The status of the Iranian military capability during the period of 1980-1988 will be discussed in order to determine the effects caused by illegally exported arms and parts. There are only three general scenarios that could describe a nation's military capability over an eight year period. First, a nation may grow in military strength over the observed period, ending in a more capable state than originally seen. Secondly, a nation may decline in military

strength over the observed period. Lastly, the nation may remain at the same level of strength.

Because Iran became ever more forced to illegally acquire its military spare parts as the war continued from 1980 until 1988, the assessment of its military capability over this period would indicate the effectiveness of its illegal acquisition program.

c. Level of Technology Transferred

A review of the level of Iranian technology is necessary to determine the usefulness of "high tech" versus "low tech" illegally exported parts received in Iran. If the Iranian technology level was high, then most "high tech" received parts could have been effectively utilized by technicians to repair equipment, and possibly could have been imitated and remanufactured in Iran. But if Iranian technology was operating at a low level of effectiveness, then only the "low tech" received parts could have been properly utilized and possibly remanufactured domestically. It was the common belief among officials from the U.S. State Department and Defense Investigative Agency that Iran did not possess an advanced level of technological expertise, and that her manufacturing of military items was restricted to the most simple products--such as small arms, artillery pieces, and ammunition.⁸

8. Interviews with U.S. Government officials, 31 January and 03 February 1989.

3. Did a Relationship Exist Between Illegal Exports to Iran and Future Iranian War Plans?

It is reasonable to expect a nation without the means to produce or buy sophisticated air defense and offensive missile systems to attempt illegal acquisition of these items substantially prior to planned offenses requiring these capabilities. If this assumption is true, then observers can discover the future war plans of nations having to illegally acquire their weapons through study of their parts requested. The same would hold true for other types of war plans.

4. To What Extent, if Any, Did Illegal Exports of U.S. Arms or Parts Damage U.S. National Security?

Illegally exported U.S. military equipment can have negative consequences for the national security of the United States. As mentioned earlier in this study, thefts of military parts and weapons cause undiscovered shortages in the military supply systems. This can become a serious liability when emergencies arise which require the issue of these parts, only to discover their absence. This shortage of parts can quickly impact upon readiness, as equipment failures experienced under combat conditions are unable to be repaired because of the lack of parts thought to exist in the supply system. Even the secret "Irangate" arms transactions left the U.S. parts supply in a particularly vulnerable position. According to news accounts, these "sanctioned" but secret deals adversely affected the U.S.

inventories of 46 out of the 234 parts making up the AN/MPQ-46 Hawk missile system radar. Of the sales of these 46 parts, 15 totally depleted the U.S. inventory, 11 reduced it by one-half, and the remaining 20 had a lesser but still significant effect. [Ref. 12:p. 1]

Not only did the illegally exported parts adversely affect the U.S. military supply inventories, but they were used to repair the weapons systems of a determined enemy capable of utilizing these systems against American forces deployed in the Persian Gulf. American lives and military equipment were facing increased danger in the Persian Gulf due to the Iranian arms repairs made by utilizing illegally exported U.S. parts.⁹

5. Could Court Records or U.S. Customs Indictments be Useful as Tools for Intelligence Gathering?

The final research question concerns the intelligence data available from researching court records and U.S. Customs indictments. While the nation's intelligence gathering organizations utilize all sorts of "open" unclassified documents such as shipping schedules and bills of lading to determine cargoes being shipped to other nations, there are broad areas of missing knowledge by using

9. For a further discussion on the effects of illegal arms exports see Edward J. Laurance's article: "The New Gunrunning," *Orbis*, Spring 1989, pp. 8-12. Dr. Laurance lists the following as consequences of illegal exports: arming adversaries, complicating military planning and threat analysis, frustrating conflict control, penetrating the military supply system, reducing the readiness of U.S. forces, and harming foreign relations.

only these sources. Human contacts in other ships and reconnaissance aircraft along ships' routes can take photographs of deck loadings, and compare these with the deck configurations upon sailing, to determine what equipment has been off-loaded. And by noting the displacement of the ship before and after leaving port, observers can get an accurate estimate of the weight of cargo off-loaded or on-loaded. But these methods, as effective as they are, do not provide all of the information that intelligence analysts would desire. Officials from both the Navy Operational Intelligence Center and the Defense Investigative Agency agreed that the study of court records and U.S. Customs indictments could provide information concerning trends of parts smuggling. Such trends might include common sailing routes of ships smuggling equipment, and the use of certain ports as middle destinations from which parts could be diverted to a prohibited country.¹⁰ Another previously unutilized source of intelligence found in court records are the transcripts from verbatim wire taps. Relationships and data discovered in these recorded conversations can provide substantial background information not previously known. By identifying these trends in the illegal exporting of arms and parts, U.S. Customs agents and other interested governmental

10. Interviews with U.S. Government officials, 30 January 1989, 03 February 1989.

agencies could more effectively discover and stop this practice that is so damaging to national security.

D. HYPOTHESES

The five general research questions generated six hypotheses. They are tested in regard to illegal arms exports bound for Iran, but may have a more universal application. First to be considered is the proposition that illegal arms exports are mainly motivated through monetary greed. While a broad range of human characteristics could potentially inspire these illegal actions, it appears that a desire for monetary gain was the nearly unanimous cause of those discovered export violators.

Secondly, it is hypothesized that the recipient benefits from illegal exports are minimal due to the low volume and infrequent shipments of arms. The value of the parts and arms may be considerable, but because of the high consumption rate of parts experienced in wartime, overall receipts would be too small in number to matter significantly.

Thirdly, a nation's future war plans are indicated by their illegal arms/parts requests. Stated differently, an interested nation can determine another nation's future war plans through study of their efforts to illegally acquire arms and parts. This appears to be true in spite of the very limited success rates that are generally achieved in illegal arms export attempts.

Fourthly, as the exported technology level becomes lower, the chances for its successful use become greater. Again, stated differently, the lower the exported technology level, the higher is the chance for its effective use. Technologically simple parts and equipment withstand the rigors of shipment better than do more sophisticated gear, and simple arms require less technical training for the users than do more complicated ones. Both types of technology were illegally shipped to Iran during the period in question.

Fifthly, as the received equipment becomes more technical, a greater dependence upon foreign maintenance is required. Similar to the previous hypothesis, simple arms require less technical training for the maintainers than do complicated ones. While it is relatively commonplace for any nation to have technicians with expertise in repairing personal rifles and sidearms, it is not to be expected that a nation possesses skilled maintainers of Phoenix missiles or Hawk air defense systems.

Lastly, the national security impact derived from illegally exported arms and parts varies with the ease of countermeasures development. For example, in the Persian Gulf American aviation forces faced the potential challenge of evading Hawk air defense system missiles, if they conducted air strikes against mainland Iran. However, the United States had not earlier considered the need for

countermeasures to this U.S. system, and it was not until the final portion of the war that any countermeasures to this system were formulated.¹¹ Until that time, there existed a threat to the American national security because Navy strike aircraft had no effective plans for evading the Hawk threat. Contrarily, the existence of TOW missiles in Iran did not pose a national security concern because there were no American-manned tanks in Iran--the target of TOW missiles.¹²

E. DATA

One of the major objectives of this research is the development of new sources of data on this recent and under-researched phenomenon. The data for this thesis were gathered from a variety of sources. So much has been published in journals, news magazines, and daily newspapers concerning illegal arms exports to Iran that it was difficult to sort through all material that was available. Several recent books dealing with Iran and Iraq proved helpful in understanding Iran's in-place weapons systems and her need for spare parts. But certainly the daily news articles found in national newspapers were the most timely

11. Interviews with U.S. Government officials, 30 January 1989, 03 February 1989.

12. Interview with U.S. Government official, 03 February 1989.

and usually accurate sources of information on all aspects of U.S.-Iranian relations.

An invaluable source of information not readily available to most researchers on this subject was the personal views of industrial arms manufacturers and governmental experts in the areas of the Middle East and Iran. Officials from the Defense Intelligence Agency, Navy Operational Intelligence Center, U.S. Customs Service, U.S. Department of Justice, U.S. Department of State, and the Varian Corporation, revealed many insights not discussed in other sources. These individuals were the "key players" that maintained a watchful eye against any illegal arms exports during the period of the embargo against Iran, and the ones that kept track of U.S. successes and failures in this arena. While most of their comments were unclassified and suitable for printing in a daily newscast, many of their comments revealed points of view not previously expressed in print or on televised newscasts.

Important data were obtained through the review of court records. Thorough histories of the background events leading to illegal arms export attempts were documented. Again, the normal volume of materials available for perusal on any case proved to be a hindrance, because great amounts of time were required in sorting through legal terminology to arrive at pertinent aspects of the records. However, once the appropriate portions of the court records were

discovered, a wealth of detail concerning the history of the alleged offense was provided.

Lastly, much data were obtained through the reading of U.S. Customs indictments and other case documents. Although the indictments generally outlined only the legal charges against defendants, some of the supporting Customs documents provided great detail into specific circumstances of the case.

While there were many sources which provided data for this study, there were a number of hindrances and inconveniences that made information-gathering frustrating. A seeming benefit that was to prove disconcerting was the volume of newspaper articles dealing with at least some aspect of this topic. Every day's newspaper, each week's news magazines, and each month's journals would offer usually several articles on Iran and/or illegal arms exports.

While much was written concerning illegal arms exports to Iran, there was not a lot of detail concerning this subject, since only the discovered exports could be reported upon. No one was ever sure as to the extent of the problem, nor of what equipment actually was received in Iran. And the effects of the received illegal exports were not generally reported, because details of Iran's military

capability were classified, and disputed among the various governmental branches.¹³

There was a great difficulty in obtaining copies of U.S. Customs documents, and even in obtaining permission to speak with applicable officials involved with aspects of this study. Most U.S. Customs receptionists were not used to offering any assistance in the research of cases. The unavailability of official documents was sometimes understandable due to the ongoing nature of cases and their appeals, which required both privacy for the individuals involved and protection of the arguments and evidence to be presented later by U.S. Customs officials. Some of the records were unavailable due to their relationship to other ongoing cases. And lastly, some documents were classified due to their revelations of U.S. Customs' investigative methods and contacts. However difficult it may have been to penetrate these bureaucratic and administrative hurdles, the sincere interest and selfless efforts of the interviewed Customs officials were refreshing and an invaluable source of previously undiscovered information.

It was also difficult to obtain trial transcripts for applicable export cases. The court cases are transcribed in a six-key "shorthand" that was not always available upon request. Court stenographers transcribe their "shorthand"

13. Interviews with U.S. Government officials, 30-31 January, 1989, 01 February 1989, and 03 February 1989.

into the readable court records as time permits, and they face a seemingly inexhaustible arrival of court cases demanding their attention. In addition to the occasions when court records were not available due to stenographer backlogging, records were sometimes unavailable due to use by the court. Because the availability of records could not be determined by telephone before traveling to the court, and because the retrieval of records could not be performed by court clerks for the interested parties, wasted days of travel occurred in the attempt to research records being updated by judges. But even more frustrating than the occasional absence of a court record is the great geographical distances separating the nation's court cases. Cases are maintained at the court where they were tried, and at no other court. Therefore, court cases dealing with illegal arms exports were housed in San Diego, Los Angeles, and San Francisco, California; Houston and Dallas, Texas; Baltimore, Maryland; and Boston, Massachusetts, among several other widely dispersed locations. Busy work schedules prevent any of the court secretaries from duplicating needed documents for the researcher. This inconvenience requires either personal visits to each of the courts possessing needed court records, or having colleagues/friends located nearby the courts visit the court libraries, spend the time to locate the required documents, and duplicate the needed information. This difficulty caused the greatest amount of

frustration in the thesis data collection. Much additional information for this study would have been available from court records, if only the nearby courts could have held copies of needed information contained only in courts located across the nation.

F. SELECTION OF IRAN AS A POLICY RELEVANT SAMPLE

The selection of Iran as the nation to be studied for effects resulting from illegal arms exports was dependent upon five factors. There were certainly more powerful nations than Iran that continually attempted to illegally export all types of American arms technology to their shores. But several factors exclusive to Iran resulted in its use as the universe of this study. First, at the beginning of the Iran-Iraq War, Iran was heavily dependent upon U.S. weapons systems. This need for U.S. spare parts, when combined with the American embargo, created a situation conducive for the illegal export of military equipment. Although some of her needed parts were available from sources outside of the United States, for example F-4 and F-5 components, as the American effort to prevent other nations from supplying Iran with defense materials gained momentum, Iran was forced to acquire her needed parts from U.S. sources.

Secondly, Iran was the sole-source recipient for one key American weapon system--the F-14 Tomcat. This meant that no other country had F-14 aircraft or its spare parts. Because

of this extremely rare circumstance, the only source that Iran had for acquiring additional F-14 spare parts--besides cannibalization--was through the U.S. Naval supply system or the Gruman Corporation.

Thirdly, Iran was chosen for study because of the history of U.S. military involvement within her borders. Until the Shah evacuated Iran in January 1979, United States advisers were stationed in that country and they set up a detailed supply system inventory and ordering system that allowed the Iranians to acquire any parts needed for their U.S. weapons systems. This relationship with the American military made the future illegal Iranian ordering of U.S. parts far easier than if they had not been instructed in the military supply system.

Fourth, primarily because of the presence of U.S. Naval forces in the Persian Gulf, the illegal export of U.S. arms to Iran posed an American national security risk. The very arms and spare parts being illegally received by Iran could have potentially been utilized against American military forces in the Persian Gulf.

Lastly, the Iranian example of illegal exporting of U.S. arms was a recent case that enjoyed thorough documentation and constant publicity. There was no difficulty in obtaining sufficient data for this study from the public press, from court indictments and cases, and from interviews with officials from diverse branches of the government.

Because of the widespread documentation of Iranian illegal arms exports, because of the critical Iranian need for U.S. weapons spare parts, and because of the danger this practice caused to the security of the United States, Iran was selected as the nation to study concerning illegal arms export effects.

II. CHRONOLOGY OF IRAN-IRAQ WAR, IRANIAN ARMS
ACQUISITION PATTERNS, ILLEGAL ARMS SALES
AND LEGAL ARMS ACQUISITION

A. CHRONOLOGY OF WAR

In order to properly understand the effects of illegal U.S. arms exports upon Iran's military capabilities during her war with Iraq, it is necessary to possess a good background knowledge of the history of the Iran-Iraq War, an understanding of how countries can obtain weapons and parts, an understanding of the American embargo against Iran and the definition of an illegal export. Additionally, the reader should know the general pattern of illegal arms sales, the nature of Iranian arms imports, and the Iranian usage of illegally exported U.S. parts in the prosecution of their war. Only with these supporting facts can the reader make accurate assessments of the true effects caused by illegal arms exports.

The Iran-Iraq War began in September 1980 and lasted longer than either World War or the Korean War. The world has not witnessed battles of such intensity or losses of such magnitude since the Korean War. This conflict resulted in more deaths and destruction than all of the Arab-Israeli wars combined. The strategic importance of Iran and Iraq, because of their location and oil reserves, made the conflict disconcerting to the Middle East and Persian Gulf

countries, the superpowers, and the rest of the world. The war brought about new political and military alignments in the region and created doubts about future relations between Arab nations, their neighbors, the superpowers and other countries. [Ref. 13:pp. 299-300]

There were a multitude of factors that contributed to the outbreak of hostilities between Iran and Iraq on 22 September 1980. With the success of the Iranian Revolution, Iraq was faced with a revisionist power determined to reshape the region in its own image. From June 1979 onwards the Iranian regime showed its deep hostility towards the Iraqi Ba'ath reign through anti-Ba'ath demonstrations including armed attacks on Iraqis and Iraqi-owned installations in Iran. These attacks were paralleled by a fierce media propaganda plan that urged the Iraqi people to rise up and overthrow the Ba'ath regime. Iran also resumed its support for the Iraqi Kurds in late 1979, provided material and moral support to underground Shi'ite movements in Iraq, and initiated terrorist attacks against prominent Iraqi officials. [Refs. 13:pp. 300-301; 14:pp. 11-12]

Iraq attempted to check these Iranian pressures by suppressing the Shi'ite underground organizations, expelling Iranian citizens, attempting to organize a united Arab front to oppose the export of the Iranian revolution, supporting Iranian separatist elements, and finally through accelerating its arms purchases. Unfortunately, none of

these Iraqi initiatives changed the motives of the Iranians. Ayatollah Khomeini on 8 April 1980 called on the Iraqi Shi'ites to overthrow the government of Iraq's President Saddam Hussein. Iran's president, Abol-Hassan Bani Sadr, warned Iraq that Iran would go to war if the military clashes along the two countries' borders escalated. Military skirmishes began along the two nations' frontier areas in April 1980 and continued intermittently until late August, when they escalated into heavy fighting involving artillery, tank duels and air strikes. [Ref. 14:p. 12]

It was Iran's subversive activities and the protracted and escalating border fighting that drove the Iraqi leadership to conclude that it had no choice but to contain the Iranian threat by resorting to arms. With a temporary tilting of the military balance of forces in its favor, Iraq wanted to take advantage of its momentary strategic superiority and face Iran with hard facts.

On 7 September 1980 Iraq accused Iran of shelling Iraqi border towns from territories that also belonged to Iraq, and demanded the immediate evacuation of Iranian forces from these areas. Shortly afterwards Iraq moved to "liberate" these disputed areas, resulting in a 20 September 1980 mobilization of Iranian reservists to meet this challenge. Iraq launched its invasion of Iran on 22 September 1980. [Refs. 13:pp. 300-301; 14:pp. 12-13]

After approximately one month of fighting, the Iranian city of Khurramshahr fell to the Iraqis. Having already sought a cease-fire and having been rejected, Iraq announced that it would hold the occupied territories but not advance further into Iran. Twice more in 1981 a cease-fire was requested by the Iraqis, both times resulting in rejection by the Iranians. In 1982 the Iranians continued the counteroffensives begun in May 1981, and the Iraqi forces were driven back to the border. The Iranians recaptured the city of Khurramshahr. The Iraqis announced a cease-fire and had offered to withdraw their forces from Iran if this action would have ended the war. The Iranians rejected this plea. Both 1983 and 1984 saw continued Iranian attempts to push into Iraqi territory, the most successful of which only advanced nine miles into Iraq and captured the garrison of Hajj Omran. The relative positions of both combatants remained the same in 1985 and 1986, with both Iran and Iraq mounting failed offensives, and each temporarily gaining and then losing the other's territory. [Refs. 13:pp. 300-302; 14:pp. 19-32; 15:pp. 304-306]

While Iraq repeatedly requested a cease-fire, Iran was consistent in its conditions for an end to the war, and these conditions were not acceptable to the Iraqi leadership. Iran's demands were: (1) that Iraq withdraw its troops from all Iranian soil, (2) that Iraq pay reparations for the damage done to Iran resulting from the invasion, and

(3) that Saddam Hussein either resign or be removed from office in Iraq. The Iraqis would not negotiate the removal of President Hussein, but even as Iran became increasingly war-weary in 1987, it was clear that they would not negotiate with the man who invaded Iran and caused so many Iranian deaths. [Ref. 15:p. 306]

Events began to rapidly change in the early months of 1988 as Iran started feeling the effects of declining oil revenues, war weariness and the successful American attempt at influencing world governments to embargo arms to Iran. By February 1988, the total amount of weaponry supplied to Iran by foreign sources had dropped dramatically. Concurrently, the Iraqis began a series of cross-border assaults and raids in February that recaptured the island of Fao and sometimes reached as far as 25 miles inside Iran. The Iraqis possessed a sizeable arsenal of modern aircraft, artillery and tanks, and had the ability to escalate the war without Iran having an appropriate way of responding. It appears that this arms imbalance was a primary factor in the 20 July 1988 Iranian decision to accept a United Nations-inspired cease-fire taking effect on 20 August 1988. [Ref. 8:p. 7]

B. IRANIAN ARMS ACQUISITION PATTERNS

The Iran-Iraq War began with Iran possessing mainly U.S. designed weapons. The earlier years of leadership by Reza Shah Pahlavi had seen a close alliance between the United

States and Iran, resulting in the Iranian purchase of between \$3.4 and \$10 billion worth of American arms to be delivered in the years 1975-1980. The Shah actually received 79 F-14 aircraft and ordered 160 F-16 fighter aircraft: six batteries of improved HAWK surface-to-air missiles; approximately 100 helicopters of various kinds; about 350 Sidewinder, 350 Sparrow, and 425 Phoenix air-to-air missiles; and unknown quantities of TOW and Dragon anti-tank missiles. [Refs. 14:p. 10; 15:pp. 208-209] While the United States and Iran were close allies, the U.S. parts system was open for Iranian use, and all of the stock numbers and descriptions of weapons systems parts were available to Iranian technicians. However, when the U.S. Embassy personnel were taken hostage by Iranian students on November 4, 1979, steps were initiated that led to a United States embargo of all defense related equipment bound to Iran. [Refs. 5:p. 1; 15:p. 295]¹ Therefore, since 28 November 1979, no exports to Iran of U.S. manufactured defense materials were authorized.

But because of the comparatively short lifetimes of parts for sophisticated weaponry, and due to the combat losses experienced in the first years of the war, Iran soon found herself needing additional replacement parts for her U.S. weapons systems. There are basically three ways that a

1. Interview with U.S. Government official, 30 January 1989.

nation can acquire weapons, parts, or other equipment. If their manufacturing capability is advanced, then a nation can often manufacture its needed equipment. This method provides employment for its people, keeps costs for the system at their lowest, and allows the best assurance of delivery of the items during wartime or periods of international stress. A second way to obtain equipment is through its purchase from other manufacturing nations. This method is less economically beneficial than the first, but it allows acquisition of needed materials as long as there exist willing sellers. As Stephanie Neuman, an expert on arms trade and other security issues, has repeatedly stated, in times of war or political disfavor, the buying nation may be refused contracts by the selling nation, and so delivery is not at all assured. [Ref. 16:pp. 1044-1066] A method of acquiring equipment that is similar to buying it from another country is the borrowing of equipment from allies. This method is similar to aid packages that are sometimes given by wealthier nations to needy countries, in that needed parts are supplied for a specified time period often in exchange for specified services or favors. A final method for obtaining needed equipment is through its theft from other countries. While Iran did utilize this method for the attempted acquisition of F-14 parts, she more often recruited agents to misrepresent the final destination of military supplies that were really bound for Iranian ports.

By hiring a U.S. citizen to purchase F-4 aircraft parts and state that they were bound for Britain, when they actually were traveling to Britain and then onward to Iran, Iranian arms buyers were able to illegally acquire their needed U.S. military parts. Iran was almost totally reduced to resorting to this last method of obtaining U.S. parts, since few nations would agree to sell her U.S. parts, since some parts were solely controlled by U.S. companies--as in the F-14 components--and since Iran possessed, at best, a rudimentary manufacturing capability.²

The one event that prohibited Iran from being allowed to legally purchase U.S. parts and military equipment was the American embargo of defense items bound for Iran. The United States suspended all licenses and approvals for export to Iran of defense articles on 28 November 1979--24 days after Iranian students took hostage the personnel of the American embassy in Teheran.³

C. ILLEGAL ARMS SALES

There are several export activities that would be defined as illegal processes. All of the following were attempted by Iranian arms purchasers or their agents. All exports of defense materials from the United States required

2. Interview with U.S. Government officials, 03 February 1989.

3. Interview with U.S. Government official, 31 January 1989.

a license that was issued by the Department of Commerce. The Department of Defense reviewed some of these licenses for dual-use products. But no licenses were issued for military equipment destined for Iran after 28 November 1979. Any attempted exports of these items without a license was an illegal export. Anyone even conspiring to ship arms without applying for and acquiring a license was guilty of breaking the law, without the actual shipment of any arms. Exporters sometimes misrepresented the contents of their shipments so as to disguise military equipment as common civilian-use parts. This misrepresentation constituted an illegal export. Some Iranian agents would misrepresent the "end-user" declaration, which stated in which nation the shipment was going to be received. By listing a nation that was not prohibited from receiving military parts as the end-user, a valid license could sometimes be obtained. After the shipment of arms arrived in the declared country, the shipper would off load the equipment onto a vessel bound for Iran, and thereby defeat the American export laws. Such actions were illegal exports. [Ref. 17:p. 1]

In earlier sections of this paper various ways of violating the U.S. Arms Export Control Act were discussed. Iran utilized all of these plans in her attempts to acquire American spare parts. But the Iranian responsibility in these crimes did not begin with the falsifying of an export shipment's contents or final destination, or with a theft of

F-14 parts from the U.S. Navy's supply system. Officials in Iran originated "shopping lists" of the war materials that they needed and were willing to purchase from any supplier. These officials placed several "procurers" principally in a heavily guarded London office building near Parliament and Westminster Abbey to distribute their war materials "shopping lists" and to coordinate purchases from any interested arms or parts merchants. These procurers would either simply receive telephone calls from interested merchants and deals would be made, or the procurers would themselves contact known arms merchants/manufacturers. It was the problem of these merchants/manufacturers, or their agents, to devise the means for getting the illegal exports secretly past U.S. Customs agents. It was in this manner that most of the illegal U.S. arms exports were conducted. [Ref. 18:p. 1]⁴

D. LEGAL ARMS ACQUISITIONS

When considering which arms Iran caused to be illegally exported into her country, it is helpful to know exactly what she legally acquired during the same time frame. The following list of arms received by Iran includes only those items delivered after the start of the Iran-Iraq War in

4. Interviews with U.S. Government officials, 21 January 1989, 01 February 1989.

September 1979, and is compiled from the applicable volumes of SIPRI YEARBOOKS:

<u>SUPPLIER</u>	<u>EQUIPMENT</u>	<u>YEAR OF DELIVERY</u>	<u>NUMBER DELIVERED</u>
France	Patrol Boats	1981	3
Libya	Main Battle Tanks	1981	190 (Est.)
Netherlands	Transport Ship	1981	2
China	Fighter Aircraft	1982	50 (Est.)
China	Main Battle Tanks	1982	100 (Est.)
China	Tank Guns	1982	100 (Est.)
North Korea	Main Battle Tanks	1982	75 (Est.)
Syria	Main Battle Tanks	1982	220 (Est.)
United Kingdom	Support Ship	1982	1
Argentina	Main Tanks	1983	25 (Est.)
China	Fighter Aircraft	1983	50 (Est.)
China	Main Battle Tanks	1983	100 (Est.)
China	Tank Guns	1983	100 (Est.)
North Korea	Main Battle Tanks	1983	75 (Est.)
South Africa	Field Guns	1983	12 (Est.)
Switzerland	Trainer Aircraft	1983	6 (Est.)
China	Fighter Aircraft	1984	20 (Est.)
China	Main Battle Tanks	1984	100 (Est.)
China	Tank Guns	1984	100 (Est.)
Switzerland	Trainer Aircraft	1984	35 (Est.)
Syria	Surf-Surf Missile	1984	40 (Est.)
United Kingdom	Landing Ship	1984	1
China	Fighter Aircraft	1985	23 (Est.)
China	Main Battle Tanks	1985	100 (Est.)
China	Tank Guns	1985	100 (Est.)
China	Surf-Air Missile	1985	218 (Est.)
Israel	Air-Air Missile	1985	150 (Est.)
North Korea	Surf-Air Missile	1985	60 (Est.)
Syria	Surf-Surf Missile	1985	48 (Est.)
United Kingdom	Landing Ship	1985	1
United Kingdom	Support Ship	1985	1
China	Fighter Aircraft	1986	29 (Est.)
China	Main Battle Tanks	1986	100 (Est.)
China	Tank Guns	1986	100 (Est.)
China	Surf-Air Missile	1986	218 (Est.)
Israel	Air-Air Missile	1986	150 (Est.)
North Korea	Fighter Aircraft	1986	30 (Est.)
South Korea	Landing Ship	1986	3
Libya	Surf-Surf Missile	1986	12 (Est.)
Syria	Surf-Surf Missile	1986	48 (Est.)

<u>SUPPLIER</u>	<u>EQUIPMENT</u>	<u>YEAR OF DELIVERY</u>	<u>NUMBER DELIVERED</u>
United States	Anti-Tank Missile	1986	2008 (Est.)
United States	Surf-Air Missile	1986	235 (Est.)
Afghanistan	Surf-Air Missile	1987	9 (Est.)
China	Fighter Aircraft	1987	19 (Est.)
China	Main Battle Tanks	1987	120 (Est.)
China	Ship-Ship Missile	1987	212 (Est.)
China	Anti-tank Missile	1982-87	5000 (Est.)
China	Surf-Air Missile	1987	300 (Est.)
Czechoslovakia	Armored Pers Carr	1987	400 (Est.)
Libya	Surf-Surf Missile	1987	12 (Est.)
North Korea	Tank Guns	1983-87	360 (Est.)
North Korea	Surf-Surf Missile	1987	6 (Est.)
North Korea	Ship-Ship Missile	1988	7 (Est.)

[Refs. 19:p. 14 ; 20:p. 224; 21:p. 216; 22:p. 317; 23:p. 241; 24:p. 400; 25:pp. 381-382; 26:pp. 249-250; 27: pp. 231-232]

While the above-listed numbers of received arms are the best estimates of Stockholm International Peace Research Institute researchers, U.S. government officials dispute the deliveries of any fighter aircraft to Iran.⁵ And it is noted that no F-4/5/14 parts or entire aircraft are mentioned in this listing. The only American-manufactured equipment mentioned includes the I-HAWK and TOW missiles delivered to Iran in 1986 as part of the "Irangate" arms-for-hostages plan that continues to cause such turmoil even at this date. [Refs. 15:pp. 1-2; 28:pp. 1,4] This lack of markets for spare parts to their U.S.-made equipment forced Iran to cannibalize their equipment for parts, and to mount an aggressive illegal exporting effort. While it is impossible to know what illegal exports went undetected by

5. Interview with U.S. Government officials, 30 January 1989.

U.S. Customs agents on to Iran, most U.S. government sources do not think that any sizeable quantities of items reached Iran. But it was well known that Iran was desperate to acquire F-4/5/14 parts, Varian tubes and other delicate components for her radar systems, TOW and HAWK missiles, all varieties of U.S. air-to-air missiles, and tank parts. Her success at obtaining these items was less than she desired, since Iran was unable to keep enough military spares on hand to continue her war effort effectively by February 1988.

[Refs. 7:p. 10; 29:pp. 86-87; 30:p. 2; 31:p. 4]⁶

In summary, Iran had mainly U.S.-manufactured weapons systems upon her entry into the war with Iraq. Although she initially had sufficient spare parts to maintain these systems, the consequences of war and normal obsolescence of equipment caused Iran to need resupply of military arms spare parts by 1981 or 1982. Iran did not have a highly developed manufacturing capability and could not produce her own spare parts for sophisticated weapons systems. Other nations began refusing to sell her parts and equipment after watching her revolution unfold and the illegal hostage taking of American embassy workers by revolutionary students. Therefore Iran was forced to steal and illegally export parts from the United States for her U.S. weapons systems. It is generally believed that only small shipments

6. Interviews with U.S. Government official, 30-31 January, 1989, 01 February 1989, 03 February 1989.

of U.S. parts reached Iran, and that these at best only delayed the inevitable collapse of her war machine. While Iran was always able to keep at least a few F-4s, F-5s, and F-14s flying, and while she could always put tanks in the field for her offenses, the overall numbers of operational combat aircraft, tanks, and missile systems continued to drop throughout the war. It was, in part, this continued decline in military capability that forced Iran to accept the U.N.-inspired cease fire effective on 20 August 1988.

[Ref. 8:p. 7]⁷

7. Interviews with U.S. Government officials, 30 January 1989 and 03 February 1989.

III. METHODS USED TO ILLEGALLY TRANSFER MILITARY EQUIPMENT TO IRAN

A. SOURCES OF DATA

One of the objectives of this research is to improve upon the ability to analyze the phenomenon of illegal arms exports. In this chapter we explore the methods uncovered through the court cases occurring to this point. Information gleaned from court records when assimilated with data collected by other sources may illuminate common characteristics or patterns of illegal exports which may impede U.S. national security interests, complicate threat analyses and arm current/potential adversaries.

To appreciate the scope, character, and impact of the illegal arms traffic...one must begin virtually from scratch, building an analysis of the trade through examining those transactions that for whatever reason have been intercepted by government officials or have otherwise come to public attention. [Ref. 9:p. 18]

Since 1981, the Justice Department has defined 45 cases as significant export control violations in which Iran was to be the ultimate destination of military hardware. Over half of the illicit shipments consisted of aircraft and/or related components; or missiles and/or related components. Other categories included: tank parts, radios, protective suits, propellants and mustard gas chemicals.

The litigation chosen for case study is a sample of cases which occurred throughout the embargo period. The

cases describe illegal exports from 1979 to the present. The type of weaponry depicted in the court cases reflects the two primary categories, tank and aircraft parts, with one case involving general military hardware.

With the exception of the summary section, where an interview with a special agent of U.S. Customs Service provided additional material, the data in this chapter are taken from court records.¹ By examining a representative sample of the U.S. Department of Justice Export Control Enforcement Unit's significant export control cases it will become apparent that characteristics and similarities can be obtained. Of 37 cases involving the illegal export of munitions to Iran during the period January 1, 1981 to April 26, 1988, five cases will be cited. Difficulties obtaining additional case data is explained at Appendix C.

B. SAMPLE CASES

<u>Date</u> <u>Indicted</u>	<u>Cases</u>	<u>Charges</u>	<u>Invest.</u> <u>Agency</u>
11/84	U.S. v. Hanley, et al. Arms Export Con- trol Act Southern District of California	Attempting to export radar tubes to Iran without the required license and various fraud counts.	Cus

1. In order to maintain authenticity and convey the type of format and verbiage used in court documents, little literary interpretation was employed in the writing of the case studies. An example of a court document is at Appendix B.

<u>Date Indicted</u>	<u>Cases</u>	<u>Charges</u>	<u>Invest. Agency</u>
6/85	U.S. v. Kazem Zamani Arms Export Control Act District of Maryland	Conspiracy to export military equipment-- aircraft and tank parts.	Cus
7/85	U.S. v. Saeid Asefi Inanlou, et al. Arms Export Control Act Theft of Gov't Property ITSP Wire Fraud Souther District of California	Sixty-one count indictment charging that group exported stolen F-14 parts through England to Iran. Parts valued at \$650,000 seized by Customs, over \$10 million worth of parts stolen and illegally exported.	Cus
4/86	U.S. v. Hassan Kangarloo, et al. Arms Export Control Act Central District of California	Conspiracy to export large quantity of military hardware to Iran and export of \$180,000 worth of radio control devices intended for Iran which were seized by British authorities.	Cus
1/89	U.S. v. Ken Park, aka Kwan Park Arms Export Control Act Northern District of California	Unlicensed export of aircraft, missile, and tank parts to Iran in 1988. Fraudulent statements.	Cus

C. DEFINITION OF INDICTMENT COUNTS

In order to fully understand the allegations of the cases and thoroughly acknowledge the implications of the crimes represented, one must be cognizant of the legal interpretation of the violations. The definitions of the

two primary counts, illegal export and conspiracy, are taken from the judge's instructions to the jury in the Zamani case. [Ref. 33] The judge described illegal export as the export or attempt to export items on the United States Munitions List: (1) without first obtaining a license for such export or (2) otherwise in violation of law. The Government must also prove that the items referred to in the indictment were on the United States Munitions List.² In order to be included on the Munitions List an item must fit into one of the following categories: [Ref. 33]

- Electronic equipment assigned a military designation;
- Components, parts, accessories, attachments, and associated equipment specifically designed for use or currently used with electronic equipment assigned a military designation;
- Components, parts, accessories, attachments, and associated equipment specifically designed for use or currently used with tracking, imaging, or moving target indication radar systems assigned a military designation or specifically designed, modified, or configured for military application;
- Aircraft, including helicopters, designed, modified, or equipped for military purposes, including but not limited to the following: gunnery, bombing, rocket or missile launching, reconnaissance;
- Military aircraft engines specifically designed or modified for such aircraft.

2. For additional information on the establishment, types and contents of export lists, see U.S. Military Sales and Assistance Programs: Laws, Regulations, and Procedures, Report Prepared for the Subcommittee on Arms Control, International Security and Science of the Committee on Foreign Affairs, U.S. House of Representatives, Congressional Research Service, Library of Congress, July 23, 1985, p. 5.

If items fall only within the second or third category above and are in normal commercial use, no license is required for export.

The judge defined "export" as the sending or taking of defense goods or items out of the United States in any manner.

In order to prove conspiracy the judge explained that the Government must prove that the defendant and at least one co-conspirator knew the conspirators' plans to export items on the Munitions list would, if successful, violate some law of the United States. The participants must be intentional not merely spectators to the criminal activity.

D. A REVIEW OF THE CASES

1. U.S. v. Hanley, et al., November 1984 [Ref. 34]

Iranian by birth, Yasser Shooshtary is a resident alien of the U.S. Prior to coming to the U.S., he lived in England, where, while working as a banker, he met a wealthy Iranian named Amir Mansour who wanted to buy weapons for Iran. Mansour's shopping list included radar equipment, nuclear weapons and bombs. Knowing Shooshtary was intending to immigrate to the U.S., Mansour wanted him to negotiate the purchase of weapons for export to Iran and other countries (including Iraq).

Upon arriving in the U.S. in September of 1983, Shooshtary briefly owned a San Diego firm, Border Software. He retained the company for only six months before selling

at a loss. After a short visit to England, Shooshtary tried to buy radar tubes from the new owner of Border Software for illegal export. Shooshtary provided the proprietor with model and stock numbers of the items he wished to acquire. A British holding company was the intended recipient of the exported components. A third party notified the Federal Bureau of Investigation of the attempted purchase. The FBI told U.S. Customs of the allegations, who proceeded with the investigations.

Customs placed a video-recorder in the business in order to film Shooshtary asking for the specified parts. Shooshtary was to receive \$5,000 for the delivery of the components which were to be sold to Iran for an estimated \$90,000.

A Customs agent, Dan Supneck, went "undercover" to further implicate the remainder of the conspirators. At this point Hanley, as an employee of T.M.G. Hanley, Ltd, the British holding firm, made an urgent request for tank and vehicle parts and two new radar tubes to be sold to Iran. These tubes were to be sold to Iran for \$294,000. He told the undercover Customs agent (who assumed the alias Dan Stern) that the equipment was to be exported to a "safe" country in Europe for diversion to Iran. Within two weeks Stern received a written order for the radar tube and a list of four freight forwarders in Europe who worked with and were approved by the Iranians for the diversion. Stern's

initial payoff was to take place upon delivery in Europe, with the balance forwarded upon the shipment reaching Iran.

Hanley told Stern to ship the components via Intrarsco Transport and Speditions, GmbH, a West German freight company; however, in an exhibit of a telephone conversation with Stern, Hanley also mentioned Switzerland as a possible route. Additionally, Stern was instructed to label the crates as x-ray tubes or desalinization equipment, neither of which would require a license or likely be inspected by Customs.

During this time Stern received from Hanley a 32-page shopping list of required spare parts for subsequent delivery to Iran. Concurrently, Hanley offered the use of his company for the "laundering" of any money at Stern's discretion.

Stern persuaded Hanley to come to the U.S. to pay him \$10,000 in "good faith" money. At this time Hanley was arrested for conspiring to illegally export items on the Munitions List and various fraud counts.

2. U.S. v. Kazem Zamani, June 1985

The U.S. Government contends that Zamani and co-conspirators attempted to export items on the Munitions List in violation of current statutes. Allegations drawn from the judge's instructions to the jury indicate the Zamani plotted to export goods from the state of Maryland to England from April 5, 1984 to November, 1984. [Ref. 33]

A memorandum offered during an application for an order authorizing the interception of Telex communications details the accounts which led to Zamani's indictment. [Ref. 33] In this official document, the Assistant Attorney General delineates the reasons for the solicited interception by describing the suspected circumstances of the case. Working undercover, Customs agents, with the help of a confidential source, were asked by Zamani to supply military hardware for shipment to Iran through London. This shipment would transpire without export licenses, which Zamani was aware would be needed for the export of such items. The memorandum further states that Zamani regularly receives telex messages from his principals in London.

Further data can be drawn from an affidavit by Thomas D. Baumgardner, Senior Special Agent of the U.S. Customs Service assigned to the Baltimore Office of Investigations. [Ref. 33] This affidavit was supplied to the court in regards to authorization to intercept telex communications. In the record Agent Baumgardner offers these facts of the case:

- On April 9, 1984, the FBI advised Customs that an Iranian named Kazem Zamani approached a confidential source on April 5, 1984. Zamani gave the source a six-page list of various electronic parts that he wanted as soon as possible.
- On April 6, 1984, the source learned that a VA145E is a Varian Corporation electron tube used for the TPS43 ground-based radar system manufactured by Westinghouse, and that most of the electronics parts listed are for use on Cobra attack helicopters.

- On April 7, 1984, Zamani informed the source that these parts were to be sent to a man in London who intends to transship the articles to Iran.
- On April 12, 1984, Customs Agent George Lacey contacted Customs Service, Operations Exodus Command Center and requested Department of State and Department of Commerce export license determinations on the parts requested by Zamani.
- On April 17, 1984, Operations Exodus Command Center responded to Lacey's inquiry by stating that the radar tubes were a component on the Munitions List; however, the helicopter parts' status would depend upon their application, which could not be determined.
- On April 17, 1984, Lacey, operating undercover and wearing a concealed radio transmitter, met with Zamani. During this meeting and subsequent encounters, Zamani was made aware of the licensing requirements for the export of military hardware. Zamani stated that no license would be obtained and offered suggestions to circumvent detection by Customs, such as false invoicing of the items and hiring a private aircraft or boat to transport the items to London. Zamani further suggested that small items be placed in suitcases and then carried out of the U.S. He further reiterated that the items he wanted were to eventually be delivered to Iran. He also informed the undercover agent of his business associates in London and of his telex and telephonic communications with them. His confederates would supply him with the shopping lists and the necessary funds at time of purchase.
- On June 7, 1984, Zamani informed Lacey of a misunderstanding with the buyers in London and his decision to seek a new purchaser in Iran.
- On June 26, 1984, Zamani informed Lacey of a new buyer in Iran and that he had received a telex message from Iran requesting a list of items.
- On June 27, 1984, Lacey met with Zamani. At this time Zamani told him to supply the parts that could fit in suitcases and not to do anything with the larger parts.
- On July 6, 1984, Lacey mailed to Zamani a list of the military equipment that he could furnish.
- On August 8, 1984, Zamani met with agents Lacey and Knutter and stated that he had set up a small company in London to transship the items to Iran.

3. U.S. v. Saeid Asefi Inanlou, et al., July 1985

This case, referred to earlier in this thesis, not only involves illegal export and conspiracy, but the penetration of the Department of Defense supply system. The following information on this case comes from the indictment, case number CR-85-000631, dated July 24, 1985, of the Southern District of California, San Diego. [Ref. 35]

Beginning at least as early as January 1981 and continuing until July 1985, the defendants and others conspired to steal and ship military aircraft equipment from the U.S. They illegally obtained U.S. Naval equipment, Defense Logistic Agency microfiche control indexes and pictures of F-14 combat aircraft.

As a warehouse worker at the San Diego Naval Fleet Avionics Logistics Support Center, Quito stole Government material. Rodriguez and Cayabyab were Naval personnel assigned to Belleau Wood and Kitty Hawk, respectively. They used their positions to penetrate Naval security in order to steal various aircraft armaments.

Inanlou and the Agustins transshipped the stolen parts from San Diego and Los Angeles to New York City, to be exported using the fictitious companies Pierre Walter, Ltd., and Ward International, allegedly located in California.

In order to conceal the illicit export, Inanlou and the Agustins falsified Shipper's Export Declarations (SED),

shipping documents, and other records by, among other things, understating the value of the stolen parts and be declaring them to be either "medical supplies" or "automobile parts."

Inanlou, an Iranian citizen residing in England, used his position as the corporate director of Security Aids International (SAI) to illegally obtain armaments and transship them to Iran via England. Inanlou also did business as Chandler Trading, also known as Chandler, Ltd and Chandler which was used in the conspiracy as a conduit for the stolen components.

Other items obtained and exported without a license by the conspiracy were: parametric amplifiers used to guide the Phoenix Missile System, gimbal assemblies for inertial navigation systems, gas turbine fuel controls, multi-plex filters, weapon indicator controls, power supplies, an infrared recorder which is a part of the Tactical Air Reconnaissance Pod System (TARPS) and signal data and angle of attack computers.

The following sequence of events was listed in the indictment.

- Approximately January 3, 1981, Rodriguez was telegraphed \$2,000 from Franklin Agustin.
- On April 14, 1981, Inanlou ordered aircraft parts from Franklin Agustin.
- Shipments of various weights, composed of stolen aircraft parts, were sent by the Agustins, utilizing the fictitious entity, P. Walter, to Chandler Trading, United Kingdom, on April 13, 1982; February 7, 1983;

September 9, 1983; February 14, 1984; and February 12, 1985. In addition to the above shipments, the Agustins shipped two cartons of stolen aircraft parts from San Diego to New York City under the name "Ward International" on December 18, 1984. All told there were 26 known shipments totalling \$2.5 million in value. Appendix D lists the specific thefts, value of items stolen, and the dates the items were allegedly exported without the necessary licenses to Iran via England. [Ref. 35]

- Additional indictments assert that on October 30, 1984, and December 11, 1984, the defendants falsified the SED by stating that the contents of the shipment were auto parts, when they actually were the stolen parts.
- Additional court documents indicate that the Government possessed approximately 15,000 pages of evidence for the trial of these defendants.

4, U.S. v. Hassan Kangarloo, et al., April 1986

The Government's Opposition to Defendant's Motion for New Trial; Memorandum; Declaration provided the basic facts of this case. [Ref. 36] The following information is solely from that document filed on December 5, 1986 by Robert C. Bonner, United States Attorney.

Hassan Kangarloo is an Iranian citizen with permanent legal resident status in the U.S. Throughout the period 1982 to 1985 he worked in association with an import-export company called General Commodity (B.C.) Ltd., which had offices in the U.S., Canada, England and Switzerland. In the context of General Commodity, Kangarloo served as a dealer of military equipment for sale to Iran.

It is documented that Kangarloo in his dealings with various clients often used aliases (e.g., Henry Ian), misrepresented his status (e.g., agent for the government of Austria), misrepresented the end-user of military articles

(e.g., West Germany), and used fictitious company names (e.g., Universal Electronics and Rubber Company).

On April 6, 1986, he was arrested as he and his wife attempted to enter the country from Canada under false pretenses.

Kangaroo thus served as a conduit for illegal exports. The suppliers of the military goods may not have known and/or cared where their wares would ultimately be delivered.

5. U.S. v. Ken Park, aka Kwan Park, January 1989

The following information is from an affidavit of David K. Harris, a criminal investigator with the U.S. Customs Service, filed pursuant to the indictment of this case. [Ref. 37] This particular case displays Iran's continuing desire for military parts although the conflict with Iraq has ended.

On June 16, 1988, Customs was contacted by the Contracts Administrator of Pacific Scientific Advanced Technology Group, HTL Division (HTL) of a suspicious sales order her company received. The order, from Ken H. Park of Ellin International, Sunnyvale, CA, was for 32 fire extinguishers designed for use on F-14 fighter aircraft. Park told HTL that the equipment was for export to Korea.

On June 28, 1988, Customs learned from HTL that Ellin International bought four bellows assemblies (components for the canopy seal regulator of F-14 aircraft)

on January 27, 1988. The purchase order stated the parts were for resale and export. In October, 1988, HTL informed Park of the need for an export license for the F-14 fire extinguishers. HTL reiterated the licensing requirement in December.

Further investigation revealed that as Director of Foreign Procurement for Universal Technology International, Ken Park requested a price quote for F-14 aircraft parts from Haskon Corporation, Taunton, MA, in 1985. The request for the quotation from Haskon originated from Cavanna PTE Ltd., in Singapore.

In a license determination dated August 10, 1988, the Office of Munitions Control licensing officer stated that the U.S. and Iran were the only two nations operating the F-14 aircraft, thus any export was probably going to Iran.

A study of Customs case files revealed that Ken Park, acting as the Export Manager of Universal Technology, was involved in illegal export of aircraft parts to South Korea in August, 1980. Universal Technology paid an administrative fine for the violation. Customs identified the same individual as the owner of Ellin International.

Using an electronic tracking device placed inside five boxes containing five F-14 fire extinguishers delivered to Ellin International, Customs was able to record the path taken by the parcels.

On January 10, 1989, Custom electronically scanned the Ellin warehouse for a positive reading of the hidden device, but received a negative reading.

A shipper's export declaration (SED) indicating that Ellin International exported drill twists, bit screw drives and parts and hardware for trucks and tractors was obtained by Customs on January 11, 1989. The goods were ultimately shipped via Japan Airlines to Cavanna PTE, Ltd., Singapore on January 8, 1989. The SED stated that the products are to be exported G-Dest., meaning they do not require a license to be exported. Further Customs review showed no exports by Ellin International to Korea.

Through a confidential informant, the Customs Attache in Singapore learned that the entire Ellin International shipment which had originated from San Francisco International airport was awaiting transshipment to Teheran, Iran.

On January 13, 1989, Ken Park admitted illegally exporting aircraft parts purchased from HTL.

This case not only shows Iran's continuing want and need of U.S. military hardware, but the shift from European intermediaries to those in the Far East.

E. COMMON CHARACTERISTICS AND TRENDS FOR THE FUTURE

One can readily identify some common entities of illegal arms transfers by a review of the sample cases: (1) parts, not entire weapons systems are the predominant illegally

exported items; (2) the violators are typically common, ordinary people, not prominent or well-known in the arms trade business; (3) an intermediate country is used as a conduit; (4) falsified documents are often used to facilitate export; (5) shipping cartons are mislabeled or goods are carried out in luggage to conceal fraudulent exports; and (6) offenders' sentences are relatively light.

However minute subtleties which are not reflected in court records may further illuminate the world of illicit arms dealings. An interview with a U.S. Customs Service Special Agent who asked to remain anonymous provides clarity and verifies conclusions drawn from case studie. [Ref. 38]

Each of the sample cases used an intermediate European nation to act as a conduit for transshipment to Iran. Europeans or Iranians residing in Europe have been the middlemen for the transactions. The Customs official related that initially Iranians dealt directly with U.S. firms or individuals, but later preferred to insulate themselves from possible prosecution. The Europeans are now becoming nervous, and it is believed that future transactions may center around Far Eastern countries. The recent indictment in which Ken Park allegedly illegally shipped parts of Sidewinder and Hawk missiles and fire extinguishers used on F-14 fighter planes to Singapore with an ultimate destination of Iran is a primary example of new intermediary countries.

Foreign nations are relatively safe havens for conspirators for many reasons. As most countries look upon illegal exports to embargoed nations as political conduct, not a violation of criminal law, extradition is not usually granted. In the same vein, these nations seldom prosecute those individuals or corporations which use their nation as a stepping stone to a third country. As evidenced in the Hanley case, certain countries, such as England, West Germany, Italy and Switzerland were considered "safer" than others.

A frequent defense of military suppliers is their professed ignorance of the final destination of their goods. When making deals they do not want to know where the military hardware is really going. In a San Diego case, the defendant, Floyd Stilwell, was indicted for trying to illegally export military equipment he purchased from Teledyne Corporation. As the president of Marsh Aviation, Stilwell attempted to export a military aircraft navigation system to Iran via West Germany. Although the Government claims he was aware of the transshipment to Iran, he asserted he did not know and did not want to know or ask about the end-user.

Misidentifying the end-user is but one way to falsify export documents. The Inanlou case is an example of claiming to export commercial-use products when in actuality defense items are shipped. Another way to circumvent export

laws is under-valuating the export. Declaring items of value less than \$1000 precludes licensing procedures.

Another common thread among the sample cases is the mislabeling of the shipping cartons. The Special Agent pointed out that an export inspector must know what he is looking at before he can determine the contents are not as documented. In his words "if you don't know what a truck part looks like how can you tell a truck part from an aircraft component." The Agent also readily admits that not all shipments are inspected. Those which seem to be innocent enough may get through unopened.

Requests for cost quotes are often sent from intermediaries in London or Dusseldorf to arms brokerage houses in the U.S. Iran had "wish lists," computer printouts of specific items, including model identification and part numbers. Unconcerned or uneducated individuals or companies would respond and ultimately ship the desired parts. Some corporations, aware of the potential for illicit exports, such as the Varian corporation in the Hanley case, alerted authorities when suspicious requests were received. The Customs agent maintained that 99 per cent of U.S. corporations know their product and their potential buyers and that when someone alien to them seeks a sensitive component or system the corporation can do one of three things: "tell him to take a hike," do business with him, or alert authorities. Most companies use the first approach. Yet as

profits dwindle due to Defense budget cut-backs and competition from Third World nations escalates, more companies may be willing to do some "questionable" dealings than previously.

An important aspect which court documents do not elucidate is the motive for the individuals involved in illicit arms trade. It can be surmised by the amount of unchallenged profits which this black market produces that greed is the primary determinant. The Iranian middlemen played on the capitalist dogma of profit at any expense. Many of the violators are now in jail, the Agent surmised, because greed ultimately outweighed common sense and a dumb action led to their downfall. It can be safely assumed that those Navy men convicted in the Inanlou case stole government property for personal gain, not to enhance Iran's war-fighting position.

Questions arise concerning the effects of the Iran-Contra affair on apprehension and prosecution of suspects. Little can be directly inferred from the sampled cases; however, the Customs agent had a few comments about the deleterious consequences upon litigation. Before a prosecutor will agree to try a case, uncontrovertible evidence must show that the defendant knew the Government was not involved. Such proof usually takes the form of a taped conversation or written acknowledgement. Prior to "Irangate" it was never questioned, it was taken for granted

that the government was not a participant in the scheme. In his request for an appeal, Kangaroo contends that his acts of illegal exports could not have negatively affected national security if the President authorized shipments to Iran. The U.S. Attorney answers this disagreement with the fact that the Arms Export Control Act, for which Kangaroo was convicted, is a regulatory act, and the failure to obtain a license prior to the export of U.S. Munitions List items is illegal, regardless of whether a license would have been granted if sought.

The concluding common aspect to the sample cases is the comparatively light sentences. The anonymous Customs agent feels this is due to the lack of infamy stolen parts elicits from the public. It does not appear as foreboding to illegally export parts as opposed to entire weapon systems. U.S. involvement in the Persian Gulf and the Iran-Contra affair has done little to change adjudication patterns. Table 1 demonstrates the sentencing patterns of the cases delineated in this chapter. These statistics are taken from the U.S. Department of Justice's Significant Export Control Case list. [Ref. 32:pp. 15,18,20,26]

The illegal export of military hardware is looked upon as a "white collar" criminal act, thus jail terms and sentencing remain relatively light in terms of the impact the criminal acts may generate, according to the Customs agent. Prosecutors are promoting heavier fines and stiffer

TABLE 1
DISPOSITIONS OF SAMPLE CASES

<u>Case</u>	<u>Defendant</u>	<u>Disposition</u>
U.S. v. Hanley, et al. imprisonment	Hanley	3 years imprisonment
	Shooshtary	18 months
	Young	Guilty pleas
	Helalat	Foreign National
	Levy	Foreign National
	Hanley, Ltd.	Foreign National
U.S. v. Zamani	Central Lloyds	Foreign National
	Intrarsco Transport	Foreign Defendant
	Zamani	18 months imprisonment
		work release program,
		and \$10,000 fine
U.S. v. Inanlou, et al.	Inanlou	Fugitive
	E. Agustin	18 years imprisonment
	F. Agustin	13 years imprisonment
	J. Agustin	5 years imprisonment
	G. Agustin	1 year imprisonment
	Quito	1 year imprisonment
	Rodriguez	5 years imprisonment
	Cayabyab	6 years imprisonment
	D. Wheeler	2 years imprisonment
	V. Wheeler	2 years imprisonment
	All plead guilty	
U.S. v. Kangaroo, et al.	Kangaroo	3 years imprisonment
		Guilty plea
U.S. v. Park	Park	Trial pending

jail sentences, yet the scope and possible repercussions from these criminal deeds have yet to stir public opinion, and thus influence legislators.

One may point out that many defendants in the Inanlou case received harsh punishment, but none received the maximum allowed under the law and none were fined. Considering the vast amount of property stolen and the combined value of the pilfered components, some may argue that the profit is well worth the risks incurred.

In conclusion, although each case has its own idiosyncracies, common traits readily emerge. Knowing these patterns may aid detection of illegal transfer, yet in the eyes of the Customs official, deterrence is essential if the number of unlawful exports is to be limited. Educating businessmen/women to these patterns and playing to their higher moral standards would nip this illegal activity in the bud. Criminologists suggest swift and sure punishment of offenders as the only true deterrent; this is where intelligence agencies can play a part. By providing law enforcement agencies with data gained from their expertise and unique capabilities, intelligence analysts can reap the benefits of their knowledge of what weaponry may have been delivered clandestinely to whom, where and how.

IV. EFFECTS OF ILLEGAL ARMS SHIPMENTS TO IRAN

A. FREQUENCY OF ILLEGAL EXPORT ATTEMPTS

It has been documented throughout this paper that Iranians were actively engaged in the illegal exporting of U.S. military arms and parts to Iran, directly and through paid agents. By 1988, over 100 cases of illegal arms exports to Iran were being investigated by the U.S. Customs Service. U.S. Customs on the average turned over 30 Iranian illegal export cases per year to the U.S. Justice Department for prosecution. [Refs. 29:pp. 86-87; 39:p. 10; 40:p. 1] Included in the U.S. Department of Justice's recent list of significant export control cases were 48 entries involving Iran out of a total number of 185 cases. All but four of these Iranian cases involved the illegal export of arms or military parts. [Ref. 32:pp. 1-39] Having documented a determined Iranian initiative to obtain illegally exported U.S. arms and parts, we now turn to the question of the effects of these illegal transfers of military equipment. It is obvious that the potential benefit was significant. If real benefits were not obtained, then the excessive monetary and political costs would have prohibited continued efforts at illegal export--but this was not evidenced.

This review of the effects resulting from Iran's receipt of illegally exported U.S. arms and parts will discuss four

varied categories of effects. These areas will include:
(1) increased operational periods for Iranian equipment/
prolonged capacity for Iran to wage war with Iraq, (2) the
general need for exploiting foreign technical expertise
concerning sophisticated weaponry, (3) the ability to
determine Iran's future war plans from her imports, and (4)
the threat to American national security.

B. INCREASED OPERATIONAL STATUS OF IRANIAN WEAPONS SYSTEMS

One of the less pleasant realities of high technology weapons systems is their continuing requirement for maintenance and an ample supply of spare parts. Weapons systems and their component parts, like all mechanical devices, have service lives that when exhausted, require parts replacement or else the system becomes non-operational. In a normal operational environment, there is a constant replenishment of spare parts to ensure that all equipment can remain in an operational status. The Iranian supply system was not a "normal" operational environment, because many of its required spare parts were available only from nations restricting their military sales to Iran. As a worst case example, F-14 spare parts were only available from the United States, and America had placed an embargo on all defense sales to Iran. With these restrictions on Iran's receipt of much needed spare parts, the Iranian response was to illegally import the needed items. What was the effect of these illegally received parts?

There are two basic ways in which parts can be provided for a non-operational piece of equipment: (1) the parts may be obtained from a manufacturer or seller, and (2) the parts may be "cannibalized" from another similar type of equipment for replacement on the non-operational gear. In the first case, any parts received will theoretically create an operational piece of gear from a non-operational one. In the second case, with cannabilization, an already non-operational piece of gear is further degraded through the loss of additional components to make a non-operational piece of gear operational. In a worse example, an operational piece of gear may be rendered non-operational in order to place another piece of equipment into an operational status. This situation could occur when operational equipment at one location is not expecting use, while non-operational equipment at another location is required for use. In this case the unused asset could give up its functioning parts to place the needed equipment into an operational status.

Iran was forced to utilize cannibalization to keep her U.S. military aircraft flying because not enough parts were received through either legal or illegal channels to satisfy all the needs. [Refs. 41 :p. 151; 42:p. 54] As mentioned previously, Iran was always able to maintain operational F-4/5/14 aircraft, tanks, and artillery. But because insufficient spares were arriving through illegal exports,

the continuation of the war saw a constant decline especially in the number of operational aircraft.¹ Because of the successful American embargo of Varian tubes, a vital component of the HAWK air defense system, government officials believe that most of this system became non-operational in 1982, with the remaining operational units being preserved in case of future massive air attacks.²

Therefore, in the case of Iran, not enough needed parts were delivered through illegal exports to maintain even a level inventory of operational aircraft and air defense units. But while their effect was not significant enough to maintain level inventories of arms, the receipt of these parts did raise some equipment from non-operational into an operational status. While this inadequate repair program could not create a war-winning weapons inventory, it did increase the operational status of Iranian equipment.

Iran was forced to consider a ceasefire because of her inability to receive adequate shipments of arms and replacement parts. [Ref. 8:p. 7] However, she persevered for nearly eight years in spite of an American embargo that prevented the legal export of defense materials. Most interviewed government officials agreed that illegally exported U.S. aircraft parts enabled Iran to keep her

1. Interview with U.S. Government officials, 03 February 1989.

2. Interview with U.S. Government official, 30 January 1989.

F-4/5/14 aircraft flying. Illegally received parts were essential for maintaining Iran's tanks during the war. Illegally exported U.S. TOW and air-to-air missiles were critical to Iran's anti-tank and anti-air warfare.³

The net effect of these illegal arms and parts exports was to allow Iran to fight longer than if she would not have received them. While the parts receipts were not sufficient to keep operational equipment inventories at even a non-declining level, they did give Iran an increased inventory of operational weapons systems over what she would have possessed without these received parts. These parts did not enable Iran to win her war, but they did allow her to fight a while longer.

C. EXPLOITING FOREIGN TECHNICAL EXPERTISE

The U.S. weapons systems purchased by Iran under the Shah's leadership were among the most technically sophisticated in existence at the time of their purchase. These arms contained delicate and exacting components that required precision placement and adjustments. Routine maintenance was required to ensure these "high tech" pieces of equipment would continue functioning in the intended manner. As it does with all legitimate purchasers of its equipment, the United States had sent teams of technicians

3. Interviews with U.S. Government officials, 31 January 1989, 03 February 1989.

to Iran to train the Iranian maintenance experts. However, initially having large numbers of Americans present to assist with aircraft, air defense, and missile system maintenance, the question arises as to Iran's ability to perform this "delicate" maintenance on sophisticated weapons systems after the Americans departed Iran. Iran's situation required experienced technicians because of the increased need for weapons' maintenance and repair due to combat losses. Also she quickly depleted her spare parts, making correct installations with the few available spare parts a necessity. If Iran would have enjoyed an unlimited availability of spare parts, she could have "experimented" with maintenance until her technicians learned to do the work properly.

The experience level of Iranian technicians was a difficult question to be confidently answered by government observers of the war. If it could have been proven that the Iranians did not possess sufficient skills to repair sophisticated equipment even when they possessed the required parts, then a recruiting of foreign technical experts would have been expected. At the very beginning of the Iranian Revolution, Iran offered employment to maintenance personnel from former U.S. companies operating in her country, but received no favorable responses. After these rebuffs, no other known attempts to recruit foreign technical expertise occurred as a growing Islamic pride

rejected all forms of American and, to a lesser degree, Western presence. The Iranians seemed determined to perform all of their maintenance by themselves to the best of their abilities. And as the war wore on and America continued to influence world opinion against Iran, it was doubtful that foreign maintenance technicians would have been trusted with Iran's precious weapons systems.⁴

While no confidence was expressed in the widespread expertise level of Iranian technicians, U.S. government officials were unanimous in stating that Iran had enough competent technicians to repair all types of equipment in their military weapons inventory. The opinion was expressed that while not all of the maintenance efforts might be successes, some of them would be. An example was cited concerning an Iranian aircraft overhaul and maintenance facility that indicated some aircraft entering the facility would emerge successfully "overhauled" while others would not. That some emerged successfully overhauled reflected an existing Iranian maintenance expertise.⁵ These qualified technicians were used to train the smartest available high school and college graduates in their maintenance skills--

4. Interviews with U.S. Government officials, 30 January 1989, 30-31 January 1989, and 03 February 1989.

5. Interview with U.S. Government officials, 03 February 1989.

thus keeping all maintenance in the hands of Iranians and not "suspect" foreigners.⁶

Therefore it is agreed that in the Iranian case there was not an exploitation, or recruitment, of foreign maintenance experts. This decision on Iran's part appeared to reflect a religious or national consciousness that would not permit a foreign presence to influence them or dilute their singlemindedness. Instead Iran attempted all of her most complicated maintenance solely with her own best-trained technicians.

D. ILLEGAL ARMS IMPORTS AND WAR PLANS

When a nation is preparing to go to war with another country, it will probably seek to bolster its armament supply. Nations know that large equipment losses will occur during combat which may not be easily replaced, and so weapons are stockpiled beforehand to avoid this situation. Iran, while not anticipating war but in striving to become a first-rate Gulf power, planned to nearly double her armed forces in the late 1970's. Iraq, probably fearing that she would some day have to fight Iran, began rearming herself in 1977--mainly with Soviet weapons. [Ref. 14:pp. 10-11] Intelligence analysts can predict upcoming military action through the indicators of armaments stockpiling, increased military exercises, and reserve mobilizations. In the same

6. Interview with U.S. Government officials, 30 January 1989.

manner, a nation's future war plans can be determined by identifying the types of weapons it is importing.

Addressing this idea, most interviewed government officials expressed the view that Iran's weapons needs throughout her war with Iraq remained the same, and that this constancy prevented any analyst's interpretation of Iranian future war plans.⁷ Some others believed that there was a relationship between Iranian requests for parts and their war plans, but that the Iranian parts procurement strategy was so inefficient and disorganized that this link was impossible to discover.⁸ While this inefficiency is noted, there still existed some clues to Iranian battle plans from both their failure to acquire certain "high tech" parts and by their urgency in getting accelerated shipments of "low tech" expendable supplies.

The failure of Iran to acquire large numbers of radars and radar parts for their F-4, F-5, and F-14 aircraft, after their existing stocks of these items were exhausted, would tend to eliminate planning for any large-scale bombing raids into Iraqi territory. Conversely, if Iran could have managed to receive large quantities of these aircraft radars and parts, then analysts would expect future Iranian air excursions into Iraqi-held territory.

7. Interviews with U.S. Government official, 30-31 January 1989, 01 February 1989.

8. Interview with U.S. Government official, 03 February 1989.

What was actually seen, however, was a constant need for all types of aircraft spare parts, with at most only a "trickle" of received parts. But the items that were requested for accelerated delivery were shipments of small arms and ammunition.⁹ These "low tech" and expendable items were received in large quantities from unspecified nations in legal, but usually hidden, purchases. The acquisition of large amounts of small arms and ammunition would alert analysts of Iranian planning for upcoming battles. This was in fact exactly what happened.¹⁰ Iran would request accelerated shipments of ammunition in advance of her Spring and Fall offenses, which could have further convinced analysts of planning for upcoming ground-based fighting.

When considering land and air battles, Iran was limited to tank, artillery, and infantry conflicts by the end of her war. It was supplies for these forces that were most requested, and regular offensives followed receipt of these expendable items. Iran's future war plans were able to be determined through her supply requests.

9. Interviews with U.S. Government official, 30-31 January 1989, 01 February 1989.

10. Interview with U.S. Government officials, 03 February 1989.

E. IMPACT ON U.S. NATIONAL SECURITY

The effects of illegal arms exports were as significant to United States national security as they were to Iran's abilities for prosecuting her war. Every part that was stolen from the U.S. military supply system, while potentially turning a non-operational Iranian weapon into an operational one, also potentially retained a non-operational U.S. weapon in its "downed" status. Because stolen parts result in falsely inflated inventory statistics, U.S. military supply personnel would not have reordered parts when they actually reached critically low levels. By having unreliable inventories of spare parts, the military's readiness was lowered. Should the thefts have continued for a prolonged period without detection, severely depleting U.S. inventories, any emergency tasking that prompted accelerated equipment/parts failures or damage could have resulted in non-operational equipment due to lack of replacement parts in the supply system. In this situation, records would have falsely indicated available replacement parts.

Such a situation could have occurred with the U.S. Naval forces patrolling the Persian Gulf. Should air warfare have erupted and a critical need for F-14 replacement parts developed, the F-14 parts thefts perpetrated by the Inanlou theft ring could possibly have prevented F-14s from being promptly repaired. [Ref. 1:p. 1] In reality, what really

occurred was that the stolen F-14 parts were exported to Iran, where they served to repair Iranian F-14s which then posed a threat to U.S. ships and aircraft operating in the Persian Gulf.

Of course the threat to Persian Gulf based American servicemen caused by illegally exported arms was far more complicated than simply from Iranian F-14 aircraft. U.S. parts served to repair Iranian F-4/5 aircraft, and the status of Iranian HAWK missile defenses was never certain. Each of these platforms and systems could easily have destroyed American lives and equipment. It was possible to have made an Iranian weapons system operational for a few thousand dollars, that later could potentially have destroyed a billion dollar American warship. The illegally exported U.S. military parts posed a great threat to American national security in the Persian Gulf.

Finally, Iran's ability to acquire U.S. military parts in spite of an American embargo against their shipment, could have encouraged other world nations to overlook similar difficulties in obtaining parts and to more readily enter into armed conflicts. Iran almost made the prosecution of a war seem too easy. With seemingly insurmountable obstacles preventing her from obtaining replacement parts to keep her U.S. military systems operational, Iran consistently was able to field her tanks, artillery, aircraft, and though questioned, possibly her air

defense systems. Even if Iran's example did not encourage other nations to consider war, it certainly lowered the credibility of America's embargo and supply system security.

In all of these examples--a diminished U.S. stockpiling of weapons and parts; a lowered U.S. military readiness; a direct threat to U.S. Naval forces patrolling the Persian Gulf; and encouragement to other nations considering war--the illegal export of U.S. military parts served to threaten U.S. national security interests.

In concluding this chapter, it should be noted that all of the discussed effects of illegal exports of U.S. arms, except for a lack of foreign technical expertise exploitation, were those that seemed likely to occur. It had seemed obvious to the researchers that any parts received by Iran would increase the operational status of her war equipment. What was not anticipated was that the very limited amounts of parts received would not be sufficient to maintain all or most of the Iranian systems. Likewise, although these received parts did enable Iran to prosecute her war for a longer period than if she had not obtained them, the limited amounts of materials actually entering Iran were not adequate to provide an unending supply of operational weapons systems.

Because of the "high tech" nature of U.S. weapons systems, it was expected that Iran would have attempted to recruit foreign technicians experts in the maintenance of

these arms. Iran did initially attempt to recruit technicians from former U.S. companies stationed in her country, but she resisted further recruitment after her initial offers were declined. Muslim pride was a key reason for Iran's depending upon their own talents and training to repair the most sophisticated weapons systems. But, contrary to our expectations, the Iranians had successfully learned enough maintenance skills from their former American teachers to repair any U.S. system in their inventory-- providing they had a supply of functional spare parts.

While most of the government officials interviewed did not agree that Iran's requests for parts and arms reflected her future war plans, this researcher continued to believe that they did. Most officials pointed out that Iran's "shopping list" for replacement parts and arms remained almost the same throughout her war, regardless of upcoming battles or strategies. In reality, the only items she specifically emphasized for accelerated shipment-- ammunition and small arms requests--were the critical items to be used in her upcoming offenses. In this example, Iran's urgent call for shipments of ammunition were indicative of her infantry-oriented assaults planned for the future.

And lastly, it always seemed obvious that illegal exports of arms to Iran posed a threat to American national security interests. Even before U.S. Naval forces entered

the Persian Gulf, Iranians supported terrorism across the world, and Americans were among their favorite targets. Small arms and explosives could have been utilized in Iranian perpetrations of violence, and the larger aircraft and air defense missile system parts could have been used against any U.S. military retaliations for Iranian terrorist actions.

V. SUMMARY OF FINDINGS, INTELLIGENCE APPLICATIONS,
AND POLICY RECOMMENDATIONS

A. SUMMARY OF FINDINGS

Through personal interviews, review of the current literature, and case study, several postulates have been formulated concerning illegal arms trade to Iran during the embargo period. Since few of the participants in the unlawful traffic were connected to Iran either ideologically or by birth, it is assumed monetary gain was the primary motive. Although a large volume of munitions were illegally exported, Iran's benefits were minimal due to her expansive need of spare parts and the infrequency of delivery. Iran could not rely on the transfer of specific parts when needed, thus could not effect precise war planning, although the request for particular parts can indicate combat intentions. As Iran lost most of her technical expertise early in the war, those weapons which were less complicated received the greatest use, and those requiring greater maintenance and knowledgeable service crews soon became ineffective. Thus illegal arms trade minimally increased the operational status of Iranian equipment and subsequently her war-fighting capability.

The case study exposed patterns of illegal arms trade. By exploiting this knowledge, countermeasures can be developed and interdiction expedited. These court documents

are an untapped intelligence source, from which an adversary's strengths and vulnerabilities can be identified. Through inter-agency efforts, not only could illegal arms traffic be stifled, but information could be acquired about an opponent's force posture.

B. INTELLIGENCE APPLICATIONS

Although U.S. Customs has been given the primary task of uncovering illicit arms traffic, intelligence agencies can aid in the detection of this illegal activity. Through the use of these additional resources, unauthorized exports could be curtailed without adding an unreasonable amount to the workload already carried by over-burdened organizations.

As previously illustrated, in a majority of cases, a third country is used as an intermediate step in the transfer of arms in order to obscure the illegitimate trail and facilitate the licensing procedure by providing a "legal" but fictitious end-user. European and Far Eastern nations have been the predominant layovers in the past. HUMINT sources located in these countries could alert U.S. Customs officials of impending shipments, contents, destinations and points of embarkation. Once Customs knows where and when to look for an illicit export, and has some idea of what type of arms are involved, seizure and apprehension of suspects would be expedited. Of course, the confidentiality of the sources would be of prime importance;

however, as in the Park case, interdiction and prosecution can be effected without jeopardizing the source.

Intelligence resources could also be employed to ascertain a nation's security requirements. If a restricted country requires a weapon system or parts for which the U.S. is the sole supplier, prior knowledge of the nation's desire would alert law enforcement agencies to potential export violations. For example, Iran consistently required a specific radar tube for use on Hawk missile systems. The American corporation Varian was the only supplier of this component. By alerting this company to the potential of exploitation, Customs was able to prevent this component from being illegally exported. Additionally, when suspicious orders or price quotation requests were solicited from Varian, Customs was notified and often initiated "sting" operations.

By knowing a component's shelf life and mean time between failures (MTB), an analyst can predict a system's vulnerabilities and requirements. Verification of inoperable systems, either by HUMINT or national technical means, could enhance investigative techniques. Sole suppliers of these parts could be notified of impending offers and export enforcement agencies alerted to watch for those specific parts.

Recognizing an embargoed nation's needs and trade routes is only the tip of the iceberg. Since much of the illegal

trade consists of parts, which are not easily recognizable items, analysts must become knowledgeable of the size, shape and form of controlled defense munitions. It does not do any good for a Customs agent to search a carton marked "truck parts" if he/she does not know what the component is supposed to look like. Additionally, the art of crateology does not benefit an investigation if the size and shape of suspected piece(s) is not related to the size or shape of the container. Diagrams, incorporating dimensions, are required when systems and/or parts suspected of being illegally transferred.

Operational forces, through their contact with foreign militaries can report sightings of U.S. weaponry in the "wrong hands." Iranian gunboats were propelled by American-made outboard motors, easily identified by U.S. Naval personnel. Other nations illegally sell U.S. systems to other countries. As an example, if the U.S. transferred 36 F-16s to a nation, yet only 30 reached that nation's arsenal, foul play could be assumed. Incidents such as these, when reported, could provide Customs with the initial step toward detecting an unlawful operation.

Commanders must remain cognizant of their supply inventories and requisitions. The Inanlou case, involving over \$10 million in stolen DoD parts is not an atypical occurrence. Unusual supply expenditures, unnecessary requisitions and missing supplies may signal illegal

activity resulting in the export of sensitive and expensive components.

Not only can intelligence agencies assist in the interdiction of illegal arms but they can benefit from examining past cases. Intelligence professionals assigned as area specialists could monitor relevant court records to determine trends. This information may serve to clarify the present and forecast future events. By tracking the type of hardware illegally shipped, intelligence personnel may be able to discern an embargoed nation's capabilities and vulnerabilities. Further, by analyzing a nation's desire for specific parts, intentions may become apparent.

C. POLICY RECOMMENDATIONS

Through a review of the cases and interviews with government officials, it becomes apparent that an inter-agency effort is required to squelch the ever-mounting black market trade of arms. Customs, over-extended by circumventing illicit drug traffic, obstructing the increasing flow of illegal aliens, and inspecting routine imports and exports, needs assistance in curtailing the unlawful arms traffic. Agencies such as the FBI, CIA, NSC, DIA (to include all defense intelligence agencies), and local law enforcement organizations could aid in the detection and subsequent apprehension of transgressors.

In conjunction with routine interaction of agencies, specific task forces, such as Operation Staunch, which

consisted of personnel from the Departments of State, Treasury and Commerce, should be initiated for ad hoc investigations. These groups of investigators would be used under exceptional circumstances, primarily when U.S. forces are in peril from illegal arms exports obtained by an adversary or when national security is imminently threatened by such black market trade.

As in the DoD, a "joint service" tour for investigative staff to a complementary agency could benefit the flow of information and improve the utilization of assets. Gaining knowledge of another organization's capabilities, limitations and priorities through first-hand experience would enhance information flow. Additionally, by working within another agency professional contacts can be made which may prove useful in future endeavors. Concurrently, if cross-trained sufficiently, personnel could be transferred to different agencies when workload demands.

Educating the public, particularly arms manufacturers, brokers and shippers about illegal arms transfers may help curtail the activity. Although competition from Third World nations is increasing and the domestic defense budget is declining, munitions dealers must be aware of the ramifications of illegal arms exports. An appeal to their moral standards and elucidation of the effects on national security might cause corporate officials to refrain from

criminal export activity and possibly further inspire them to aid in future investigations.

Public consciousness of the implications of illegal arms shipments must be aroused. Too often criminal behavior is under-valued because the shipment of controlled parts appears to be innocuous. The seriousness of the offenses must be continually emphasized to maintain the public's attention. Public opinion may serve to prompt legislators to amend the current sentencing guidelines, invoking harsher penalties.

Promoting deterrence would alleviate over-loaded investigators, court rooms and prison systems. As previously mentioned, educating potential violators is one way to impede criminal activity. Another is severe penalties for violators. To date, punishments have been relatively trivial and fines rarely exceed the profits of the illegal activity. Until latent violators believe the costs outweigh the gains, illegal activity will flourish. Criminologists suggest that swift and sure punishment is the only deterrent, and until that has been obtained the highly lucrative world of illegal arms traffic will continue to thrive.

The intermediary countries must be persuaded to cease participation in the flow of illegal arms. Extradition of known illegal export conspirators from foreign nations is not usually granted. The embargo of Iran was seen as an

American political maneuver by many European nations, according to the Customs official. As such, and possibly fearing terrorist repercussions, these countries preferred to remain as neutral and uninvolved as possible. Pressure from the U.S., once forces were committed in the Persian Gulf, may have affected the European stance on the acquiescent conduit of illicit arms to Iran, but extradition rights have yet to be forthcoming. Additional coercion is needed to deny safe haven to violators. However, until the U.S. can police its own shores and stockpiles, influence may be unconvincing.

As alluded to previously, the DoD must implement a more effective inventory tracking system. Millions of dollars worth of materiel has been pilfered and shipped to adversarial nations. Storage facilities lack sufficient security safeguards, which in itself invites criminal operations. Surplus equipment is sold without regard to the intentions of the buyer. During an interview with a Customs agent, he stated that "live" missiles have been sold at auctions. The pervasiveness of apathy within the DoD in regards to inventory accountability versus the tight controls seen in the commercial sector may be the result of the lack of perceived monetary incentives. The average government employee does not view misappropriation of state property as a threat to his/her livelihood; although this

lack of concern may not promote felonious behavior, the resulting neglect facilitates criminal activity.

In summary, deterrence is seen as the most effective method of stemming the flow of illegal arms transfers; however, in a capitalist society, where profit is revered, it is not realistic to assume all potential violators will refrain from criminal behavior. Other methods must be used when deterrence fails. Inter-agency surveillance and detection should be promoted; educating corporations and the general public of the ramifications of illicit arms exports should be provided; profit motives must be diminished and punishments expanded to prevent the further escalation of illegal arms traffic.

D. FUTURE RESEARCH AGENDA

Other factors which affect illegal arms transfers were beyond the scope of this study, yet demand further investigation. As the Third World nations develop their weapon manufacturing expertise and sophistication, this will have a serious impact on the U.S. policy of arms sales as a foreign policy tool. As the U.S. is a sole supplier to many nations, an embargo such as Iran's can be an effective diplomatic device. Lesser-developed nations have already seen the usefulness of manufacturing "bootleg" parts, duplications of American components. Not only does this phenomenon impugn political motives for arms restrictions,

it also seriously frustrates adequate threat analyses with the possibility of clandestinely supplied materiel.

Another consideration is the question of interdiction versus countermeasures and which is the most beneficial and cost effective of these options. If interdiction proves to be too expensive or ineffective, perhaps it would be more economic simply to maintain a force structure impervious to the ill-gotten hardware.

Lastly, with a limited amount of resources available, should interdiction efforts be focused upon illicit high- or low-technology weapons? High technology weapons may be more accurate, devastating and insidious, yet less sophisticated weaponry is normally easier to maintain, obtain and reproduce. It would be an interesting digression to compare the damage caused in recent decades by both categories of weapons to see which had the greater effect.

If given enough time, money and investigative latitude, the conclusions drawn in this thesis would be supplemented, strengthened, or proven inaccurate. Additional inquiries should focus on three main areas: U.S. governmental, defense and court officials; intermediary country officials; and Iranian governmental and defense officials. The extended probe would primarily employ interviews; however, this data would be appended and substantiated by exhaustive study of court documents, the review of tomes of evidence acquired by investigative agencies, and historical fact.

The place to begin this study would be at the source, the individuals perpetrating the crime and those trying to stop it.

Dialogues with the criminals would provide information not obtained in court documents or evidence. Data as to why they engaged in this type of activity may serve to curtail and/or identify future violators. It has already been surmised that greed played a major role in the recruitment of illegal exporters, but how much money does it take to persuade someone to break the law, possibly face prison and on a moral plane, turn against one's country? Other information which was unknown to investigators and prosecutors at the time of trial may also come to light during these conversations. In many cases the offender may want his/her lawyer present during the interviews to ensure nothing is said which may incriminate the individual in additional crimes. In this instance, and possibly in all other cases, the defense attorney should be examined.

Counselors for both defense and prosecution could reflect on their attitudes concerning the modifications of trial strategy as a result of the Iran-Contra affair. Prosecutors are wary of cases in which a suspect's knowledge of acting independent of government involvement in the illegal export of arms is not confirmed. Additionally, the defense attorney may use his client's perception of government involvement as rationalization for the crime. In

either case, it is up to the investigative agency (Customs, FBI, CIA, Commerce, State, or DIS, to include all DoD investigative agencies) to employ techniques to foil any possible defense maneuvers. Thus an interview with the agencies involved in apprehending violators would be prudent.

Conversations with local agents would contribute additional information on specific cases. In concert, it may prove beneficial to the study to gain first-hand knowledge of collection techniques. Although this is a sensitive area, various ways have been depicted in court records and if desired, anonymity and non-disclosure of procedures would prevail; however, this experience may prove helpful in further research.

Other sources of data would be the district court judges pertaining to sentencing patterns and legislators concerning sentencing limitations. Additionally, DoD officials involved with logistics and control could furnish requisite data on any new measures incorporated to oversee the massive defense supply system, to ensure that infiltration, as in the Inanlou case, is prevented.

The second phase of this extended research model concerns the intermediary countries, primarily Great Britain, Switzerland, West Germany, Italy, France, and Singapore. Again interview would be the basic tool of the inquiry. It would be interesting to note the foreign

philosophy and opinions of being used as a conduit for the illegal export and sale of U.S. munitions.

Finally, conversations with Iranian government and military officials could substantiate the extent and effect of illegal arms exports during the war with Iraq. At present it seems unlikely that such interviews could transpire, yet expatriates may provide valuable data and in time, further details of the war will emerge.

Thus, to complete the expose of the illegal arms trade to Iran during the conflict with Iraq, vast resources, time, and data which are currently unavailable are needed. This thesis serves as an initial step on which future study can be based and provides an elementary view of the world of the "merchants of death."

APPENDIX A

SUMMARY OF INTERVIEWS WITH U.S. GOVERNMENT OFFICIALS

The full texts of the following interviews are held by Professor Edward J. Laurance. For further information concerning these interviews please contact:

Dr. Edward J. Laurance
U.S. Naval Postgraduate School
Department of National Security Affairs
Monterey, California 93943-5000
(408) 646-2521

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
30 JANUARY @ 0800

1. Did intelligence tasking increase with the movement of U.S. warships into the Persian Gulf?

*Yes, interest did increase upon the U.S. presence in those waters, but the tasking remained about the same. Sometimes we got twice the normal amount of coverage, but that emphasis increased and waned periodically over the years of the Iran-Iraq war.

2. Are SIPRI and Jane's Defense Weekly accurate concerning military capabilities?

*They are generally correct except when the numbers relate to Soviet-sponsored, Nicaraguan-sponsored, or Iranian arms deals. Iran seeks very low visibility and no publicity regarding arms shipments due to the U.S.-led embargo attempts.

3. How do we get our intelligence data concerning Iran's military capabilities?

*We monitor shipments through Lloyd's of London publications and through sightings from friendly port/ship personnel. We get info from human sources. These include refugees, deserters, as well as any in-place personnel that may exist. Other sources are classified.

4. Are the Iranians able to effectively maintain their most complicated equipment and repair/replace spare parts on this equipment?

*Yes. They wouldn't go to so much trouble to obtain parts that they couldn't effectively utilize. They are obviously able to at least sometimes effectively maintain complicated U.S. equipment. However, they may be obtaining some maintenance assistance from the Israelis.

5. Are there are Americans in Iran assisting with military equipment maintenance?

*No. I don't think there were any Americans left in Iran after the hostages were released.

INTERVIEW WITH U.S. GOVERNMENT OFFICIALS
30 JANUARY 1989 @ 1330

1. Did Operation Staunch intensify any with the deployment of U.S. Navy ships in the Persian Gulf?

*There were no changes in the areas of intelligence gathering or reporting. Operation Staunch proceeded as it previously had, with the exception that our diplomats could now show increased interest and reasons for other nations to stop arms shipments to Iran since American lives were at peril. The JCS were most concerned that U.S. lives were in danger and policy setters were concerned when U.S. ships entered the Persian Gulf. This last concern seemed to be political in nature with the threat of public disfavor if American lives were lost in combat. When the Chinese silkworm missiles were discovered in Iran, considerable pressure was applied to the Chinese until they agreed not to provide Iran with additional missiles.

2. Did Iran need U.S. spare parts?

*No they didn't. The Shah bought enormous quantities of spare parts filling up countless warehouses. There are still warehouses full of spare parts bought under the Shah's reign that have been overlooked/misplaced.

3. What effect did the U.S. embargo have upon Iran's need for parts?

*We really don't know the effect of the embargo, because of the countless supplies of spare parts bought under the Shah's reign. The Iranians are constantly finding warehouses filled with spare parts needed for American equipment. When the Iranians couldn't locate enough warehouses containing U.S. parts, they attempted to purchase the parts. When this became impossible, they were most willing to try to purchase the parts illegally so as to prevent publicity of their need for parts.

4. What effect did the illegal transfer of U.S. parts to Iran have on their military capability?

*While this is a question unable to be measured precisely, the small transfer of illegally shipped parts didn't seem to make any difference in Iran's military capability. There really didn't appear to be a large quantity of parts that actually reached Iran, and many of the ones that did were beyond their shelf life or were defective.

5. When did Operation Staunch begin, how effective was it, and what specific information can you provide on the topic?

*Operation Staunch began in about 1983. It was a marginally effective program until Irangate hit, and then

worldwide attention was brought to governments' unpublicized selling of arms to Iran. With Irangate, just about all of the Western governments joined the bandwagon to stop arms shipments to Iran. At the least, this attention drove the prices of arms up for Iran, drove the purchasing networks underground, and disrupted some of the shipment logistics. It is generally felt that Operation Staunch reduced Iran's ability to conduct large scale warfare. She couldn't mount large offenses on the scale of the war's early years. Staunch had an effect on Iran's inability to match Iraq's strength. This helped Iran to be forced to accept a cease fire agreement.

*It would be helpful to look at the situation existing if Staunch had not been implemented. The Iranians had enormous reserves of cash (oil income of about \$10 billion per year in the early years of the war) and would have had the opportunity to buy arms/parts from all of the European sources. Free access to private markets would have provided them the opportunity to spend well over their normal \$2.5 billion per year on arms. Because of the American embargo and the effects of Operation Staunch, Iran had to turn to China and North Korea for supplies which turned out to be less capable equipment. The loss of Western markets was replaced almost on a one-to-one basis by sales from China/N. Korea. It appears that China sold Iran some surplus tanks, the Silkworm missiles, and quantities of ammunition. There is speculation over sales of fighter aircraft, but none have ever been known to have been received in Iran. North Korea sold Iran small arms, mortars, and quantities of ammunition.

*In spite of Iran's need for additional aircraft, there is no evidence that anyone actually delivered a single aircraft to Iran, other than possibly a few trainers. This was due to the bad publicity from the hostage crisis during the early part of the war, and due to Operation Staunch during the later years. The European sales amounted to very little money annually and did not include any major items.

6. What were the Iranian perceptions of their military capability needs?

*At the beginning of the war, they felt that they had more than enough aircraft, armor, artillery, ammunition, etc. This changed in 1981/82 when Iran entered Iraq and the border warfare became a fact of life. For the first time since routing the Iraqi's, the Iranians were stopped cold at the Iraq border. Iraq hadn't performed well at all militarily. They didn't achieve their objectives quickly, if at all. But the Iranian military became worse and worse with the rise of the Revolutionary guard. This group was not militarily effective or well-trained, but rather was politically fervent. Promotions were based upon adherence to religious beliefs, and not military achievements/skill.

*When military equipment/parts were received in Iran and distributed by these fanatical and disorganized Revolutionary Guards, it was not immediately sent to locations requiring its use, nor to warehouses where it could be retrieved when needed. Much received equipment was put on display or held in Teheran. If Iran would have been allowed to purchase arms openly and freely, more of the received arms would have been sent to regular army units and would have been used effectively, unlike its use by the Revolutionary Guards.

*As the war dragged on, the Iranians became aware of a need for more trained pilots. There was a large-scale defection of F-4/F-14 pilots following the revolution which eventually led to a downing of some planes due to a lack of pilots. Immediately following the revolution, there was a wide-scale slaughter of Western-trained personnel and a general harsh treatment for those who survived. Pilots trained in the U.S. were out of favor. However, some did survive and attempted to train Iranian flight students in the skills required to pilot F-4/14 aircraft. These pilots were not very effective.

7. What, if anything, caused a stopping of arms/parts shipments to Iran?

*The U.S. hostage crisis, Irangate, and U.S. ships in the Persian Gulf all led to the stopping of parts sold to Iran. Immediately following Irangate, there were seven or eight scandals in foreign nations which resulted in a big drop off of sales afterward. Psychological warfare was effectively used worldwide after the hostage crisis, when the U.S. said it was "anathema" to sell arms to those "bastard fanatics" who so readily violate international law and courtesies by imprisoning diplomatic personnel.

8. Did any Iranian equipment become in an "up" status due to illegally transferred U.S. parts?

*No, other than four P-3's coming into an up status, everything else continued to get worse and worse. The existing equipment was either damaged in battle, or broke due to use without available spare parts. As cannibalization took place, some equipment was retained in an operational status, but this number kept on dwindling too.

9. How important were the Hawk Missile System replacement parts to Iranian capability?

*This system never really figured very highly in the Iranian defense philosophy. They depended upon F-4/5 aircraft for air defense, much like the U.S. itself.

10. Did the Iranians have the technical expertise to repair their complicated equipment?

*Yes they did. The fact is that many of the Western-trained technicians were executed or fled following the first months of the revolution, but enough remained that maintenance could be performed on the most complicated of systems. F-14 aircraft and Hawk missile system equipment were able to be maintained at least some of the time. While there were not sufficient numbers of properly trained technicians to service all of the existing equipment, there were some available that could maintain some of the equipment. And these technicians attempted to train the smartest available students in their skills. The Iranians considered Americans as the "Great Satan" and did not want Americans in their country even if they possessed the skills to effectively maintain and repair Iran's most complicated equipment.

11. What equipment did Iran want to buy?

*Iran distributed a 39-page "shopping list" at the start of the war from their purchasing agents stationed in London. This list remained about the same throughout the war, with only changes requested in delivery times (especially for ammunition deliveries as offensives were planned or as supplies were running critically low). The list did not change in any relation to upcoming offensives nor special losses in battle. It mostly contained requests for truck/tank/aircraft parts. Requests for missiles, F-14 parts, and Varian tubes for the Hawk missile system were often directed in person to arms dealers or the companies manufacturing needed parts.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
30 JANUARY 1989 @ 1500

1. When did the U.S. place Iran on an "Embargo List?"

*This "embargo" is called the "Munitions Control List" and Iran has been on this list since about the time of their revolution--approximately February of 1979. By being included on this list, Iran was prevented from legally acquiring U.S. manufactured war goods.

2. Was there more than one "embargo" placed upon Iran by the United States?

*There were two other findings against Iran that resulted in "tightenings" of the items allowable to be transferred to that country. First, in 1984, the Secretary of State formally found that Iran supported world terrorism so an additional list of items became forbidden for sale to Iran. This included the "dual use" items such as all aircraft, all aircraft spare parts and components, national security commodities, technical data, naval and marine equipment, communications equipment, electronic test equipment, cryptographic equipment, off-highway wheel tractors, large diesel engines, portable electric generators, and chemicals used in the manufacture of chemical weapons.

Secondly, in 1987 the restriction list was tightened further to include high-speed power boats and scuba gear, which had been identified as having military applications. These "embargoes" were imposed by the Secretary of State but were administered by the Department of Commerce through the Office of Export Licensing.

3. Do you feel that much militarily useful U.S. material was received by Iran in spite of the embargo?

*I believe that the "black market" arms sales were the key to Iran's ability to keep airplanes in the air during their recent war. When the war started, Iran didn't have sufficient spare parts to maintain their aircraft, and this shortage grew more acute as the war continued. We don't know how many aircraft were kept in, or placed into, an "up" status due to illegally transferred parts, due to the hidden and secretive nature of these shipments. We also have great uncertainties concerning exactly how many Iranian aircraft were in an "up" status. But because the U.S. is the only country manufacturing F-14 spare parts, and since we had an embargo against transferring these parts to Iran, and since there were always operational F-14 aircraft in the Iranian inventory, they must have been receiving spare parts from the U.S. via illegal means.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
30 JANUARY 1989 @ 1545

1. What was Operation Staunch's original rationale?

*"By denying Iran's warfighting capability, we would drive them to the bargaining table and thus end the war." And to this stated end, Operation Staunch seems to have been effective.

2. What were some of the effects of Operation Staunch?

*Every year saw a drop in the total arms sales to Iran from Western European and non-Communist Bloc countries after Irangate. These countries may have not been responding directly to pressure from Staunch, but possibly were acting in their own self interests as they didn't want to see Iran become dominant in that region of the world. They may have feared the results to their economies and political influence if Iran won the war and gained influence.

3. Can you give me specific monetary figures of the drop in arms sales due to Operation Staunch?

*For a ball park figure, by the summer/fall of 1986, sales from Western European and non-bloc countries dropped by 80%. But this was made up for, on a one-to-one basis, by the PRC and North Korea.

The following figures concern arms sales to Iran from West/West European sources:

- In 1984 there were \$1+ billion spent on arms sales.
- In 1988 these sales were down to \$200 million.

4. Can you give specifics on military systems or types of weapons that were eliminated from Iran's operational inventory due to Operation Staunch?

*We convinced the Chinese not to ship Silkworm missiles to Iran. We completely ended Iranian mini-submarine purchases from Germany/Italy. We ended the functioning of certain classes of patrol boats due to the lack of replacement parts. And due to a close working relationship with U.S. Customs, we were able to prevent any Varian Tubes from entering Iran.

5. Do you really believe that no Varian Tubes entered Iran, and how do you know this?

*We don't believe that a single Varian tube entered Iran, because these tubes are only manufactured at one company, and this company has cooperated with Customs from the beginning of the embargo to notify them of all requests for this item. Several "sting" operations have been set up to capture the hopeful shippers of these tubes to Iran. Upon occasion real Varian tubes that were disabled or simply worn out were freshly painted to give the appearance of new

equipment, and were shown to buyers attempting to ship this controlled item back to Iran. But to our knowledge, there have been no live Varian tubes shipped to Iran.

6. Were replacement parts for the Hawk Missile System transferred to Iran?

*It appears that the main shipment of parts for this system were provided to Iran by Israel. Israel sold Iran these missile system parts, plus other high-priority/high-tech parts, in order to protect itself from Iraq. Of course Israel felt more threat from Iraq than from Iran. Israel is suspected of selling Iran radar parts for their SAM's, anti-tank missiles, communications gear, and F-4/5 jet parts.

But even with these Israeli parts, Iran was not able to do more than replace their attrition. By the winter of 1987, Iran possessed far less war materials than when she entered the war in September 1980.

7. What was the effect of Irangate on Operation Staunch?

*It focused world attention on the "secret" governmental sales of arms to Iran by other world governments. This caused seven or eight scandals as previously hidden arms sales were revealed. Other countries began halting sales to Iran, the intended purpose of Staunch, and the U.S. embarrassment actually helped achieve our intended purpose.

8. What is your understanding of the military items that were actually received by Iran, and their value, through the Irangate operations?

*The total value of the arms is estimated at approximately \$18-20 million. Although difficult to accurately determine, it is believed that approximately 1600 TOW missiles and a quantity of I-Hawk missiles were actually received by Iran.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
31 JANUARY 1989 @0900

1. What exactly is your area of responsibility here?

*The State Department determines which arms sales are in the best interests of the overall world stability. I am responsible for the foreign policy portion of the sale/resale of significant military equipment. I have to determine if the U.S. agrees to allow a country possessing U.S.-made military equipment, or equipment containing U.S.-made parts, to be resold to another nation. In this capacity I work for the Assistant Secretary of State for Politico Military Affairs--Ambassador Helms.

2. Do you believe that very much illegally transferred military equipment/parts were received by Iran during their war with Iraq?

*There exists a real capability for U.S. citizens to illegally transfer U.S. origin weapons to restricted countries. There is big money to be made in arms sales. The U.S. gives foreign aid in the form of military arms sales especially to Israel and Egypt. We do this allegedly because of the good that it provides for the recipient country, but in reality we do this for the good will and privileges derived for the U.S. from our aid. When we sell hardware to other countries, we train their people to use and maintain the equipment in U.S. locations/facilities so these people can get the idea of how good life is in the United States, and we make a "friend."

While we supply vast sums of money and equipment to Israel and Egypt, we cannot afford to adequately provide for all the other potentially friendly nations that request arms. Israel takes some of the arms that the U.S. has provided them and sells them to these other requesting countries. Israel did sell some spare parts to Iran, though these were probably limited to F-4 parts.

3. Are there any kinds of materials that your office approves for transfer to Iran?

*We allow the sale of personal protection equipment for the heads of state. We do scrutinize the requests to ensure that the number in kind of requested items are appropriate for their described purpose. We are talking about armored limousines and related equipment to protect the heads of state. We feel that as bad as some leaders may be, at least we somewhat understand their motivations and probable actions. They are a "known quantity" to us, whereas their successors would be "mystery men" and possibly far worse. We preferred to sell protective equipment for Khomeini rather than face the possibility of a more fanatical leader replacing him in the event of an assassination.

We sold Iran cardio-pulmonary and cardio-vascular equipment, although even this was carefully scrutinized.

4. Do you feel that much U.S. military equipment was received by Iran during their recent war?

*No I don't. Iran needed large quantities of cheap, easily replaceable equipment, and the U.S. doesn't supply that sort of item. The more technical, expensive, and more easily controlled items that the U.S. manufactures and sells were just too difficult to consistently and effectively get out of the country and into Iran. Also, you've got to remember that Iran depended more upon bullets and artillery/mortar rounds backed by advancing masses of soldiers than upon Hawk missile systems or F-14's or other technical and mechanically "delicate" equipment.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
31 JANUARY 1989 @1030

1. Was Operation Staunch effective in preventing sufficient military arms from reaching Iran?

*For many nations the export of military goods is a main source of income. For the U.S. the sales of arms amounts to a yearly income of between \$12-20 billion. For some smaller nations, the economics of small forces requires selling of military arms to other buyers to make their manufacturing profitable. As to Operation Staunch's effectiveness, that is a hard question to answer. We found it impossible to shut down Iran's receipt of equipment, munitions, grenades, etc. But we significantly raised the costs of importing this equipment into Iran. We had a substantial contribution to slowing the supply of equipment into Iran. Without the U.S.'s efforts, China would still be selling billions of dollars of arms to Iran. In fact, the stopping of Chinese arms sales to Iran was the second most important reason that compelled Iran to accept a cease fire agreement. The most important reason was the internal turmoil caused by the mass slaughter of young boys during the war.

2. What did Iran attempt to acquire during the war?

*Iran had a supply bottleneck largely due to the U.S. embargo that was imposed about the time of the Embassy hostage crisis. This was an evidence of their control by a supplier nation. They needed everything to keep their aircraft flying. They also wanted standoff weapons to attack shipping--Silkworm missiles. They also wanted missiles for the purpose of attacking Iraqi cities. Iraqi supplies were sufficient for their need, unlike Iran's severe limitation of received supplies.

At first Iran fought with the weapons left in their arsenals from the Shah's U.S. purchases. But these sophisticated weapons gradually broke, or were war losses, and the Iranians' use of weapons degraded down to small arms fire, and sometimes just human wave assaults with boys that didn't carry weapons. Once they got down to this level of fighting, it was hard to improve their lot. So the "grey market" became great for supplying Iran with small arms and ammunition. Not so much the U.S., but other countries sent this type of arms to Iran quasi-legally and covertly. Often Greek shipping carried the goods to Iranian ports. They were able to acquire SCUDs for use against Iraqi cities.

The Iranians were pretty much able to acquire what they needed for the war. But these needs were mostly for small arms, ammunition, and artillery rounds. Towards the end of the war, Iran was having difficulty in paying for the received war materials.

3. What was Israel's part in supplying Iran?

*Israel had a long-time relationship with the Shah's intelligence command. They did supply some materials to Iran. But after all, you are a friend of your enemy's enemy.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
31 JANUARY 1989 @1430

1. When did the U.S. first impose an embargo against Iran?

*We suspended all licenses and approvals for export to Iran of defense articles on November 28, 1979.

2. What Acts govern the export of items to foreign countries?

*Section 38 of the Export Administration Act governs the vast amount of commodities exported from the U.S. by non-governmental entities.

The Arms Export Control Act governs export from the U.S. by both U.S. governmental and non-governmental entities of defense articles and furnishings of defense services (training, maintenance, assistance in assembling).

The Defense Security Assistance Agency governs governmental entities in the export of items.

3. What effect do these Acts have on promoting U.S. national security?

*"The U.S. controls exports for the furtherance of world peace, foreign policy, and security interests."

4. So after November 28, 1979, were all transfer of U.S. war materials to Iran attempted without the request for/use of a proper license?

*Yes. Anyone attempting to engage in an arms transaction out of our country into Iran required a license to do so. And no licenses were granted for such purposes after November 28, 1979. Therefore, anyone attempting such transactions without a license broke the law. Actually, anyone even conspiring to illegally ship arms without a license was guilty of breaking the law, without even shipping any arms. This was the situation in the Zamani and Kangaroo cases of attempted arms transfer.

In the Zamani case, Mr. Zamani did not actually ship any arms or parts to Iran, not that he didn't try to do so. For various reasons, his parts deal fell through before he could complete all transactions and ship the goods to Iran, but he was recorded on tape as possessing knowledge that he was required to have a license to export his parts, and that he was not going to request a licence--because he knew that all such requests were being denied.

*The sentences for violating this law can be up to a \$1 million fine and ten years imprisonment. This new, harsher sentencing became available in 1986.

5. Why do you think people tried to transport parts to Iran? Was it a patriotic action of Iranian nationals? Are there any common characteristics of the people attempting these illegal arms/parts transfers?

*With almost a 100% accuracy, all illegal transfer attempts were accomplished by entrepreneurs interested in the lucrative profit potential. These people involved in the illegal arms transfers were not the most moral nor the highest class of individual. They saw the potential for profit and they pursued it regardless of the illegality of their actions. They didn't expect to be caught, but the profits were so high that they risked the danger of detection. Possibly some of these people were former Iranian citizens and felt loyalty towards their homeland, but it seems to me that their main overriding concern was the potential profit from these arms sales. There were criminals!

6. How much materials do you think actually reached Iran through illegal arms transfers?

*The number of F-4's flying indicated that some parts got to Iran. F-4 parts are manufactured in many locations and possibly some foreign vendors sold these to Iran. Also, there is a real problem with falsified end-user statements being utilized which falsifies the actual recipient of the exported parts. If an exporter states that Israel is the final destination for F-4 parts, but actually ships them from Israel to Iran, the U.S. export controls have been sidestepped.

There was a time when unclassified parts could be copied from technical data packages at holding facilities. Then these drawings could be used as a source for making the actual parts. Therefore, there are probably many, many sources for some F-4 parts, and a potential illegal exporter could easily get some parts manufactured, and then either falsify the contents of his shipment (list the F-4 parts as "washing machine" parts) or utilize a false end-user statement.

In my best estimation, there were:

- No Hawk missile parts received in Iran (other than some I-Hawk missiles through Irangate).
- No F-14 parts received in Iran.
- Some F-4 parts were received in Iran.
- Some tank tracks were received in Iran.
- Much ammunition and small arms were received, though mostly through non-U.S. sources.

7. Did many arms merchants try to get licenses after the embargo?

*Yes, quite a few did, but after being turned down once most didn't try again. And there were many that just didn't

attempt to get a license at all after the embargo was imposed.

8. Did Iran have the technical expertise in place to perform maintenance on the sophisticated U.S. equipment, and to correctly replace failed parts?

*Iran probably had a few people capable of properly repairing the sophisticated U.S. equipment. Yes, I feel certain that they had the expertise in place to repair and maintain U.S. equipment. But they didn't have enough of these trained people. Of course, that didn't matter a lot, because the Iranians didn't have the parts needed to repair the U.S. equipment. They had the expertise to repair the equipment if they would have had the parts, but they didn't have the parts.

Let me be more specific. I believe that the Iranians actually had a good supply of parts on hand. They just didn't know where they were located. Immediately after the revolution, the fanatics began killing a number of foreign-trained technicians/inventory control/computer operator personnel, which resulted in the loss of most of Iran's logistical structure. The people who knew where the vast quantities of parts were located, and those who knew how to find that information which was stored on computers, were massacred. Others fled the country after seeing the fates of their fellow workers. Many of these erased computer records of warehouse locations and parts accounting software. So on November 28, 1979, the U.S. shut off all supply of U.S. parts to Iran, and the Iranians complicated their situation by executing a lot of middle and high-level management personnel involved with the parts supply and storage business.

Even if Iran had needed parts located in forgotten warehouses around the country, by being unable to consistently locate them, they had a devastating parts crisis. I believe that Iran's radars went down in 1982 and no replacement parts reached them from the U.S. Not one functional Varian tube reached Iran, and so their Hawk missile system was not used to try and preserve the life of their existing Varian tubes.

8. Were these illegal arms/parts transfers a National Security concern?

*No. There were no Hawk missile batteries up due to failed illuminators. So these would not have been a threat to overflying U.S. warplanes. And Iran had so few F-14's operational (about 8-10) that she surely wouldn't have pitted them against an American air strike possessing upwards of 12 F-14's.

9. Then how could these illegal transfers have hurt the American National Security?

*If Iran would have received the needed parts to get their search and surveillance radars up, those needed to get their missile systems connected to their detection systems, and if they could have gotten more F-14's up, then our National Security would have been endangered by the threat to all of our forces in the Persian Gulf and those that might attempt to overfly Iranian soil.

10. Was there any pattern to the items illegally transferred? Did requests indicate upcoming offensive war needs?

*No. There was no pattern to requested items. The list of requested parts remained essentially the same for the duration of the war.

11. Should the U.S. Parts Supply System be overhauled or better regulated?

*No. Our system is based upon our economic system which allows many vendors to bid for projects. While a single source vendor simplifies efforts to prevent illegal export of manufactured items, simple economics causes multiple vendors to be allowed to bid for manufacturing rights for parts after the system is no longer being produced by the parent company.

12. Do you feel that illegal arms/parts transfer attempts to Iran began with the Iran-Iraq War or were these happening previously?

*They were not unique to the war. I cannot say exactly or quote specific illegal shipment attempts, but Iran did attempt to illegally transfer U.S. non-approved items before their war with Iraq. Even when the Shah was a great American ally, we did not share everything with him. So there were always attempts to acquire what we did not want to be exported.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
01 FEBRUARY 1989 @0900

1. Did the Iranians attempt to illegally transfer U.S. arms/parts into their country? Why? How?

*The Iranians were unable to legally buy U.S. spare parts and other arms so they tried to acquire them the only way available to them. The Iranians "published" a list of the war materials they needed and were willing to purchase from any supplier. They most often were not the actual person/s who directly violated U.S. export laws--they did not falsify the contents of shipments nor the actual end-user--although they may have advised their purchasing contacts to do so. The Iranians could not manufacture components for sophisticated U.S. arms systems, and there were no merchants other than the U.S. for F-14 and Hawk missile parts that they could buy materials from, so they were forced to illegally acquire their U.S. parts if they hoped to possess any of these items.

At the beginning of the Iran-Iraq War, Iran had lots of available currency with which to purchase arms around the globe. They placed several "procurers" in London to distribute their "war materials shopping list" and to coordinate purchases from any interested arms/parts merchants. These procurers would either simply receive calls from interested buyers and then make deals, or they would directly contact known arms merchants/arms manufacturers. In this way most of their arms purchases were conducted.

2. Did the Iranians make any special attempts to recruit buyers/shippers of illegal arms transactions?

*No. There seemed to always be an unending supply of greedy businessmen desiring the substantial profits available from this type of trade. However, while this might not be termed "recruitment," Iranian agents did directly contact some U.S. arms manufacturers/parts manufacturers in attempts to purchase needed parts.

3. What parts did the Iranians most often attempt to illegally ship to their country?

*They needed and attempted to obtain F-14 parts, Hawk missile system components/missiles, tank parts, and most recently components for producing chemical gasses.

4. How did the U.S. discover the attempted illegal shipments?

*There were several means of discovery including:
- Undercover Operations where companies manufacturing war materials/components notify U.S. Customs whenever unauthorized requests for materials occur.

Then U.S. Customs sets up "sting" operations to capture the felons.

- Information from freight forwarders leads Customs to apprehend felons.
- All of the various types of "whistle-blowers" that recognize an attempt to illegally ship controlled goods and contact Customs.
- Jilted girlfriends of the smugglers.
- News reel footage revealed the Iranian use of U.S. manufactured speed boats for military purposes, which prompted the U.S. to restrict sales of those "dual use" items also.

5. How successful do you feel the U.S. was at catching the "bad guys?"

*I think we were very successful, but you never really know the extent of the illegal involvement. You never know what you don't know. I mean that we cannot give a good estimation of the extent of undetected illegal shipments because we were either unable to detect them, or else there were not any besides the ones we detected.

6. Are there any remedies to our system of arms/parts sales that would make it more difficult for illegal arms shipments to occur?

*We should watch the sales of our surplus goods. When the government sells its surplus goods to private distributors, they are depending on them to behave legally and not sell to terrorist groups or countries opposed to the U.S. Perhaps the government should conduct all sales of these surplus goods itself to ensure that they go to legal sources, instead of depending upon the honesty of a private distributor.

The FBI conducts a program designed to sensitize defense contractors toward illegal attempts to acquire militarily-oriented materials and national security needs from them-- called the DECA Program.

7. If we are very successful at halting illegal arms/parts shipments, how expensive is this interdiction process? Is there a better/cheaper manner in which to accomplish the same results?

*I believe that we are very successful in detecting, capturing, and convicting illegal arms smugglers. The interdiction process is very expensive, but we have an arrangement with the military where we "borrow" their operational equipment/parts to show to prospective buyers in a sting operation, and then return the equipment to the military. This substantially reduces the costs of our sting operations. So interdiction is expensive, but far less expensive than it could be. And interdiction expenses are

far less than the potential costs of an operational Hawk missile system or F-14.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
01 FEBRUARY 1989 @ 1330

1. How did the Iranians go about getting their needed supplies shipped illegally from the U.S.

*A branch of the Iranian Embassy in London was used as a quasi "contracting office" for bids for desired military equipment/parts. The Iranians had a complete technical library for the F-14 aircraft so they knew exactly what to ask for, and the stock numbers. If they required 20 Varian tubes, they put out the word of their need for these parts, and maybe 20 different arms brokers would telephone the Varian Corporation and request to buy 20 Varian tubes. So to the Varian Corporation, it would appear that the Iranian need was for 400 Varian tubes when they actually only needed 20.

2. How did the illegal shippers go about requesting their needed parts/equipment--did they call the manufacturers and ask for specific parts?

*More often than not the purchasers would telephone a manufacturer with a list of the needed part numbers. This was very professionally done.

3. Do you believe that a large quantity of illegally shipped parts/equipment reached Iran?

*No, I don't. I don't think enough parts reached Iran to keep any of their systems operationally "up," nor to bring any "downed" gear back into an "up" status.

4. Did there seem to be a pattern between the requested parts/equipment and Iran's current/future combat requirements?

*No, there didn't seem to be this correlation. The list of needed parts remained about the same for the duration of the war. About the only thing changing was the speed of delivery that Iran wanted--they often requested expedited delivery of small arms ammunition and artillery rounds. Possibly through consolidating each of the indicted cases you could determine some trend that escapes us now. But we don't really look at that perspective of the illegal transfer attempts--rather our intelligence analysts look at broader security issues like preventing the opportunity for critical arms components to illegally leave our country.

5. So you don't think that what Iran attempted to illegally transfer was a function of their war plans?

*No I don't. Iran always needed Hawk missile parts and Varian tubes and F-14 parts because the ones they had were beyond their shelf life or had broken or were war casualties. So while Iran kept these items on her "want

list" she didn't actually receive them. And what she really needed and used were the massive shipments of small arms ammunition and artillery rounds. These items were not used in some "special" offensive, but rather were used in every battle.

6. Do you think that Customs cases/indictments could be used as an intelligence tool by the military to discover critical military equipment/parts requirements?

*Rather it seems that Customs can use military/governmental intelligence reports to determine what parts the Iranians need in order for our agents to effectively discover their attempts to illegally ship these materials.

As an example, through Project Gemini, U.S. Customs identifies the makers of defense parts, the freight forwarders, the exporters, and everyone else possibly involved in the shipment of arms, and asks for their cooperation in calling in reports of requests for specific illegal arms. This has been exceedingly valuable with the Varian Corporation out of Palo Alto, California--the only makers of the Varian tubes that are a critical component in the Hawk missile system. These tubes are required for the TPSA ground-based radar which initially detects incoming aircraft, and for the fire control radar on the Hawk missile system itself. Well, all of the Iranian Varian tubes are well past their shelf life, and Iran can only get these tubes from the Varian Corporation in Palo Alto. So Customs has an arrangement with Varian Corporation for them to notify Customs every time an "unusual" or suspicious request for Varian tubes is made. Through their cooperation, not one Varian tube has been received in Iran. The company can account for every one of their Varian tubes.

7. What is the difference between Operation Exodus and Operation Staunch?

*Operation Exodus is a Customs initiative to stop strategic exports (technical or munitions) from going to any illegal destination.

Operation Staunch is a State Department initiative to stop munitions from going to Iran.

8. Were illegal arms sales/shipments to Iran a new phenomenon starting with the Iran-Iraq War?

*No, they were going on for years before. You must remember that even our allies aren't allowed to receive all of our military munitions. And so even when the Shah was our friend, I think that there were attempts to ship non-authorized equipment to Iran. But this is hard to prove without looking over every indictment for the past umpteen years.

INTERVIEW WITH U.S. GOVERNMENT OFFICIALS
02 FEBRUARY 1989 @ 0900

1. Was the illegal shipment of parts to Iran a new phenomenon beginning with the Iran-Iraq War?

*No, it wasn't a new phenomenon. Illegal arms shipments were occurring even when the Shah was in place. Parts requiring licenses might have been illegally shipped. I say might because I don't have any evidence immediately at my disposal, but I'm sure this was taking place even when Iran was our close friend. And the reason I don't have examples is because illegal shipments to Iran, and others of our allies, weren't being studied back then when they were occurring.

2. Is there something deficient with the U.S. parts system that lends itself to fraud?

*The potential for misuse of arms and for fraud is great. Israel is selling some of the military aid that we send them. President Marcos of the Philippines was selling U.S. arms to other countries for personal gain.

3. How can the system be better regulated?

*Possibly more prosecutions/convictions would lower the amount of crime. More publicity of successful convictions might lower the incentive to illegally export--this might create a better deterrent.

People don't often know what to do when they suspect an illegal export is taking place. They sometimes call the FBI. The FBI formerly had a practice of never sharing their information/leads with the Customs agents, and so the exports usually took place. The FBI studied the cases until they were sure of a successful case, and that was often after the export took place. Today the FBI is more willing to cooperate with Customs in the investigation of illegal export cases.

4. So how are most of the illegal exporters discovered?

*We have the statistics from January 1985 of successful cases which are as follows:

- 52% utilized paid informants.
- 34% utilized cooperating industrial sources (no payments).
- 5% utilized export interdiction actions at docks.
- 1% utilized routine reviews of export documentation paperwork (Shipper Export Declarations).
- 1% utilized referrals from other agencies (case spinoffs).
- 7% utilized other means.

5. Could you characterize the illegal exporters? Do they share any common traits? Could you predict who might be tempted to illegally export arms? Is U.S. Customs trying to work with manufacturers in identifying indicators of potential illegal arms shipments?

*There are many motivations for this crime. There are hardly any foreign agents. This crime doesn't ever seem to be espionage-oriented with the Iranians. There were several Iranian nationals involved. But there were more non-Iranian nationals. The common denominator seems to be a greed for money, and not a nationality nor political ideology. But maybe the motivation is neither totally money-oriented nor patriotically-oriented. Some Iranian students in the U.S. possibly tried to justify their educational expense by illegally shipping home needed parts. There was a mixed bag of convictions of Iranian nationals and all other nationalities.

If I had to guess at the motivation, I would put it at 85% greed and 15% loyalty to their homeland. So anyone who had a prior record of arms sales and who was very greedy might be a potential illegal exporter of arms.

6. So does Customs give any traits to be looked out for to manufacturers that would indicate potentially illegal exporting?

*Yes, Customs alerts companies to characteristics of illegal arms transfers. A list of these is found in the "Indicators of Possible Diversions" which is distributed to manufacturers of items controlled for export to certain countries. Also the FBI puts out cautions to companies with classified government contracts in order to detect potential thieves. They give characteristics of the guys who most might be tempted to sell out.

7. Are there any loopholes in the laws that make detection of export crimes more difficult?

*Yes, even when we are onto a suspected criminal, their U.S. mail cannot be searched without a search warrant. The same protection applies to Air Express shipments, which might contain the actual illegally exported materials.

8. Did the prosecution or sentencing of illegal exports to Iran become more severe after U.S. ships entered the Persian Gulf and U.S. lives were at risk?

*No. There was a new emphasis on export controls in 1981 which actually "picked up steam" in 1982, but the U.S. ships in the Persian Gulf didn't seem to affect this. I think that Irangate affected the sentencing of export violators as the courts and public became more aware of the scope of the problem.

9. Has the prosecution of criminals been effective in stopping some of this traffic?

*Well, it has driven it more underground. By 1984 diversions became more rampant as Customs became more and more successful at catching these illegal exporters. So falsified end-user statements became more common, and countries wouldn't ship the parts directly to Iran, but rather would include an intermediary country.

10. Do you feel that Iran had the expertise in place to properly utilize the parts she illegally obtained? Did you see an effort to recruit foreign human expertise?

*There was at least some recruitment of foreign pilots to fly Iranian aircraft and to train student pilots. There might have been some efforts at recruiting foreign maintenance types to assist/train Iranians, but then this became illegal in the U.S. in 1985 with the ITAR (International Traffic in Arms Regulations). I personally have not heard of any maintenance types that were ever recruited.

11. Is your annual expenditure to interdict illegal arms exports expensive, and do you consider it effective?

*In 1984 Customs spent \$33 million in the efforts to interdict illegal arms exports. And quoting Steve Walton, our former director, our efforts:

- drove them underground,
- allowed us to see the same inquiries repeatedly,
- and made it much more difficult for them to obtain needed parts.

Because of our efforts, the Iranians became much more cautious of arms deals, which really drove their prices up as our efforts became more intense and successful.

INTERVIEW WITH U.S. GOVERNMENT OFFICIAL
03 FEBRUARY 1989 @0900

1. In your opinion, how much effect did the illegal arms/parts transfers have on Iran's war performance?

*The illegal arms transfers had no great effect on Iran's war performance. With the U.S. embargo, all of Iran's sophisticated U.S. arms systems continued degrading due to insufficient spare parts. The other more commonly used equipment, like small arms, mortars, artillery pieces/ammunition, and tank parts were readily received from communist countries. Although no tanks were known to have been shipped to Iran, they had such a vast inventory at the start of the war, that cannibalization successfully kept sufficient numbers of tanks in an operational status.

2. Were the types of items illegally shipped to Iran indicative of their current/future war plans?

*This is a difficult question to answer. I feel that there was a link between the requests for parts and Iran's war plans, but their parts procurement strategy was so inefficient and disorganized that it was terribly difficult to discover a cause and effect relationship. An example which tends to dispute your question's truth is the failure of Iran to request NBC (Nuclear/Biological/Chemical) equipment either before or after Iraq's deadly chemical gas attacks. You might expect Iran to stock up on the needed protective equipment for their future chemical weapons attacks, but this didn't occur.

3. What is your knowledge of the equipment/parts delivered to Iran through the "Irangate" deals?

*To the best of my knowledge, which is pretty sketchy from little publicity of the Irangate consequences, I believe that TOW missiles, I-Hawk missiles, and possibly Varian tubes were received by Iran.

4. What was the National Security damage caused by illegal arms deliveries to Iran?

*Well, I'm unsure as to the effect of these deliveries on the Hawk missile system's operational status, but this system is very effective against overflying aircraft. If the illegally delivered parts kept this system operational, then our National Security was degraded by endangering our nearby U.S. warplanes that potentially could have conducted air strikes against Iranian territory. The TOW missiles didn't have U.S. tanks as targets so would have caused little concern. And maybe if F-14 parts could have kept all Iranian F-14's in an operational status, then these aircraft would have been a threat to overflying U.S. warplanes.

5. Did the U.S. have countermeasures developed against attacks by these U.S.-origin weapons?

*The existence of effective countermeasures is uncertain. I think that we could have neutralized F-14 attacks by our own F-14's, but I'm unsure of countermeasures developed against the Hawk missile system.

6. Were the Chinese and North Korean sales to Iran of military equipment a substantial percentage of their arms receipt?

*According to Daniel Gallik in The World Military Expenditures And Arms Transfers 1987 (by U.S. Government Printing Office, Washington, D.C., March 1988), greater than 50% of Iranian arms receipt arrived from Chinese/N. Korean sources in 1987.

7. Do you feel that there is any intelligence value to be gained from reviewing U.S. Customs indictments and court records of illegal arms shipments?

*We already get much technical intelligence information through other sources that you are aware of. I think that we could learn the illegal arms networks and shipment patterns through reviewing these court records. They could help the government more successfully track illegal arms shipments.

INTERVIEW WITH U.S. GOVERNMENT OFFICIALS
03 FEBRUARY 1989 @1030

1. Was there any correlation between the illegally shipped U.S. arms/parts and Iran's war needs or her combat performance?

*I don't think that the Iranians asked for any special equipment needed for a certain upcoming offensive, nor did it seem that they changed their military equipment "shopping list" based upon equipment battle casualties. Their list of needed parts/materials remained the same for the duration of the war. However, there was a marked improvement in their performance against Iraqi armor during the Karbala 5 offensive at the city of Al Barsah, due primarily to their far greater supply/use of TOW missiles. We think that their supply of these missiles was provided by the "Irangate" shipments, and that the TOWs had a direct relationship on the Iranian performance against Iraqi armor.

2. How much effect then did these illegally received items have on Iran's war performance?

*While Iran was enabled to have been effective in this one battle through the resupply of sophisticated U.S. weapons, there was not a long-term effect. To have been truly effective in improving Iran's war performance, the illegally shipped U.S. weapons would have been required to continuously arrive in Iran. This was not the case however. The Iranians didn't get a further resupply of TOW missiles, and they were not again as effective against Iraqi armor. The illegal shipment of these weapons had a great short-term effect, but no long-term effect.

3. What was the effect of the U.S. embargo against Iran, and her world-wide embargo efforts through Operation Staunch?

*Iraq began successful offensives against Iran in 1988 due to Iran's shortage of all weapons, and because of Iran's lack of TOW missiles resulting in unstoppable Iraqi armor advances. Iran began suffering a real shortage of tanks and was unable to receive enough parts to keep enough tanks in an operational status. They were able on a limited basis to manufacture some of the less sophisticated tank parts (sprockets and possible tracks) but couldn't produce the more technical parts like fire control systems and radars. Iran's internal manufacturing of parts was not effective in a long-term analysis. Iran suffered greatly from a lack of spare parts and weapons systems caused by the U.S. embargo and Operation Staunch efforts.

4. Did Iran try to acquire foreign technical experts to maintain their sophisticated weapons systems?

*The revolutionary purges did result in a severe degradation of Iranian technical expertise, but due to cultural/religious pride, they didn't attempt to recruit this type of foreign assistance to my knowledge.

5. For the Air Force expert, which type of aircraft did Iran most depend upon during the war, and did Iran receive enough parts to keep sufficient numbers of these flying?

*The F-4/5 aircraft were the most utilized air frame during the war. Although parts were received from other countries for both of these aircraft, much cannibalization occurred which left operational fewer than 50 F-4's out of an original 221 aircraft, and fewer than 60 F-5's out of an original 169 aircraft.

INTERVIEW WITH U.S. GOVERNMENT OFFICIALS
03 FEBRUARY 1989 @ 1130

1. Could you summarize Iran's military capability through her war with Iraq?

*Iran was strongest at the start of the war and she grew weaker from that point onwards. She began the war with hundreds of M-48 and M-60 tanks, around 100 operational F-4's, a lot of F-5's (I'm unsure of an estimated number), and a vast stock of spare parts.

By the middle years of the war, Iran had experienced a great degradation in numbers of operational units of many weapons systems. Aircraft and tanks were both casualties of combat and normal parts failures. But by this time there were insufficient numbers of parts available to repair all broken equipment. The human losses were staggering and there was no way to effectively replace pilot and maintenance personnel. These losses were caused not only from Iraqi effectiveness, but from Iranian revolutionary executions and reprisals. The Iranians actually drove alongside U.S. military equipment during the first days of the revolution and machine-gunned aircraft and other systems as a demonstration of their hatred towards Americans. They executed hundreds of Western-trained/sympathetic technicians that were the only experts in maintenance of U.S. equipment.

Iran was so desperate for technical expertise that she recruited the most successful graduates of Iranian high schools and Iranian graduates of overseas technical universities, and employed them in the maintenance of sophisticated weaponry. They were paid the equivalence of officer salaries, and though not treated with as much respect as officers, they were in a class more influential than the enlisted men. These technicians were called "homofars," and were the equivalent of a warrant officer position.

So by the time of the cease fire agreement, Iran had attempted to internally train both pilots and maintenance technicians, with only marginal results. The pilots were able to fly the aircraft, whether or not they could successfully maneuver them in combat situations. The technicians were sometimes able to repair sophisticated weapons systems, and sometimes not. But by the last days of the war, Iran was suffering greatly from an across the board lack of spare parts. About all she could consistently receive was supplies of small arms/ammunition. But these were the most successfully employed weapons that Iran used.

2. Why didn't Iran try to recruit U.S./foreign maintenance experts to repair her equipment?

*Iran did offer jobs to maintenance personnel from former U.S. companies operating in her country, but there were no takers on the offers. But the attempt to recruit foreign technical expertise wasn't repeated due to Iran's Islamic hatred of U.S. influence and her desire to keep as many of these "foreign Satans" out of her country as possible. They rejected any Western presence. The mere idea of appealing to the "Great Satan" for assistance was anathema. They would do all of their own maintenance and pilot training the best way they could without foreign intervention and contamination. Iran's revolutionary leaders probably wouldn't have trusted American maintenance technicians to work on their military equipment.

3. Did Iran have money shortages hampering arms sales near the end of the war?

*There were money shortages near the end of the war due to Iran's need to import food, raw materials for industry, and machinery. Iran annually spent about \$2.5 billion on arms, and each year this accounted for a larger part of their available resources.

4. Did Iran manufacture much of its military equipment requirements?

*There was no machine tool industry in Iran, so they were only able to manufacture simple technology items. This consisted of producing only small arms, ammunition, and artillery pieces/ammunition up to about 100 mm in size.

5. With their critical need for parts, how did Iran receive parts following the U.S. embargo?

*Greater than 50% of their weapons supply receipt came from Communist countries for most of the war. By the end of the conflict, I feel that far greater than 50% came from Communist sources, though I can't give a good percentage of the amount. The remainder came from other Western sources and from illegally shipped U.S. supplies.

6. Were the Iranians able to effectively utilize their received parts?

*The Iranians got a lot of broken parts, and parts beyond their service life dates. But if good parts were received in Iran, and they were not lost in internal shipping or at warehouses, then the technicians did know what to do with them.

There is an aircraft overhaul and maintenance facility in Teheran that did effectively fix their most complicated gear, and there were personnel capable of routinely maintaining complicated equipment. But you should understand that this facility was not like the orthodox, high-level

maintenance facilities found in the West. The Iranians did whatever it took to make a system work, and if "tinkering" with parts or "jury rigging" them to make a system work was necessary, then they did this. And if an aircraft came into the facility for overhaul, while it might make it out "overhauled," it might just as likely not emerge "overhauled."

7. Can you describe the Iranian logistic setup?

*The Iranian logistic setup was based on the American system, with much computer filing and operation. But when the U.S. support left Iran, there is evidence that many of their records and computer programs were either erased or sabotaged, resulting in a useless system turned over to the Iranians. The Iranians could not locate the computer programs dealing with their supply system (in many cases), and often if they found the correct program, they discovered the records to be erased upon entering them. So the Iranian logistics system was essentially a shambles following the U.S. withdrawal from their country.

8. Why didn't the Iranians utilize their F-14's to a greater extent? Why didn't they share the technology with other interested sources like the Soviets?

*The Iranian Air Force considered their F-14's a national asset of key importance that was to be protected and hidden. It was a secret, key national asset. No other country possessed this aircraft except for the U.S. and so they were very proud of it and protective towards it. They felt about it like Americans feel about our "Stealth Bomber." F-14's were the most sophisticated weapons that Iran possessed and they were identified with the Iranian national interest.

9. When did U.S. ships enter the Persian Gulf to protect shipping?

*Approximately February 1987.

10. Were Americans ever prohibited from living in Iran after our ouster, possibly to prevent technical assistance?

*Americans were never prohibited from living in Iran, but none did after the embassy hostages were released.

11. Which U.S. parts were most often attempted to be illegally shipped to Iran? How many of these actually arrived?

*Aircraft parts, tank parts, vehicle parts, and Hawk missile systems spare parts and missiles were most often attempted for export. But only a "little trickle" of U.S. parts were actually received in Iran, and these had a largely irrelevant effect on Iran's military capability or combat performance.

12. What was the effect of the TOW missiles received through the "Irangate" deals?

*Iran started the war with approximately 20,000 TOW missiles. We believe that fewer than 2000 were received by Iran through Irangate dealings. The number was probably closer to 1600 TOW missiles received. Due to Iranian inefficiency, probably not all of these were actually introduced into combat. I think some of them were lost in warehouses around Iran, some were displayed on generals' jeeps as status symbols, and some were just not delivered to the units needing them most that were on the fronts then conducting battle operations. So many of the TOW missiles received were not effectively utilized.

The question about Iranian success against Iraqi armor at the Karbala 5 offensive indicates a misunderstanding of the issue. There was always a large number of disabled Iraqi tanks in every offensive, and the number of tank kills in Karbala 5 was no different from that found in any other offensive. And the fact remains that most Iranian kills of Iraqi tanks occurred through the use of Iranian artillery and not TOW missiles.

13. Did Operation Staunch become more effective, or more vigorously pursued after U.S. warships entered the area of potential combat operations?

*Operation Staunch was not pursued any more vigorously because of the presence of U.S. warships in the Persian Gulf. But it gave our U.S. diplomats more "punch" when speaking to foreign diplomats that knew of the potential danger to American lives in the region. And the danger to American lives gave more publicity in the U.S. press concerning the real need to cut off all arms sales to Iran.

14. Did the illegally exported U.S. arms/parts have any effect on the availability rates for Iranian weapons systems?

*No, there never was a radical change in the availability rates for aircraft nor tanks. And the Hawk missile system was probably barely operational since 1982. If illegally transferred U.S. arms had been a significant source of Iranian arms receipt, we probably would not be seeing a cease fire now.

15. Did you see "high tech" weapons systems becoming functional, even for a while, after receiving U.S. parts?

*No. Iran received very little, if any, in the way of high tech parts, and if she did receive the parts, it had no effect upon making any weapons system operational. But understand that by the end of the war Iran had devolved into a low tech consumer that focused upon guns and bullets rather than planes and missiles in their fight against the Iraqis.

16. In conclusion, do you feel that Iran's requests for specific equipment/parts were a function of her war needs or war plans?

*No. For the entire eight years of the war, Iran's military "shopping list" remained essentially the same. Sometimes Iran requested accelerated delivery of artillery ammunition in anticipation of the routine and expected Spring and Fall fighting. But there were no special requests that were to be utilized in unique tactics in any planned offensives, to the best of my knowledge. The only difference I saw in Iran's equipment requests occurred toward the end of the fighting when she asked for more "dual use" items. I think these requests occurred because she couldn't get items with a direct military application, and had to resort to these dual use supplies.

Once again you must understand that the most responsible and effective people were not in charge of requesting military materials. Instead of military officers doing the planning, you had committees of the religiously-oriented Muslims deciding upon the needed equipment. This resulted in a continuously more disorganized and less effective means of acquiring needed parts and equipment.

APPENDIX B

SAMPLE COURT DOCUMENT

FILED
1983 FEB -3 PM 4:55
WILLIAM L. WHITTAKER
CLERK
U.S. DISTRICT COURT
NO. 107 OF CA.

No.

UNITED STATES DISTRICT COURT

NORTHERN District of **CALIFORNIA**

Division

THE UNITED STATES OF AMERICA

KEN PARK, aka KWAN PARK

INDICTMENT

Title 22, United States Code, Section 2778; 22 C.F.R. Sections 123.1, 127.1, 127.3 -- Illegal Export of Arms; Title 18, United States Code, Section 1001; 15 C.F.R. Section 387.5 -- False Statement to Department of the United States

Attest: *[Signature]*
Deputy

Filed in open court this day
of A.D. 19.....

CLERK

Attest: *[Signature]*

U.S. DISTRICT COURT

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

JOSEPH P. RUSSONIELLO
United States Attorney
Attorney for Plaintiff

FILED
1989 FEB -3 PM 4:55
WILLIAM L. WHITTAKER
CLERK
U.S. DISTRICT COURT
NO. DIST. OF CA.

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

CR89 0053

UPV

UNITED STATES OF AMERICA,
Plaintiff,
v.
KEN PARK, aka
KWAN PARK,
Defendant.

Criminal No.
VIOLATIONS: Title 22, United States Code, Section 2778; 22 C.F.R. Sections 123.1, 127.1, 127.3 -- Illegal Export of Arms; Title 18, United States Code, Section 1001; 15 C.F.R. Section 387.5 -- False Statement to Department of the United States

INDICTMENT

COUNT ONE: (Title 22, United States Code, § 2778; 22 C.F.R. §§ 123.1, 127.1, 127.3)

The Grand Jury charges: T H A T

On or about January 8, 1989, at the San Francisco International Airport, State and Northern District of California.

KEN PARK, aka
KWAN PARK,

defendant herein, did willfully export from the United States without a validated license for such export defense articles on the United States Munitions List (22 C.F.R. § 121.1) to wit, five fire containers designed for use on F-14 fighter aircraft.

FORM 08D-103
MAR 83

© U.S. GPO: 1989-202-441/64223

EXHIBIT NO.
56
U.S. DISTRICT COURT
NO. DIST. OF CA.

1 All in violation of Title 22, United States Code, § 2778
2 and 22 C.F.R. §§ 123.1, 127.1 and 127.3.

3 COUNT TWO: (Title 22, United States Code, § 2778; 22 C.F.R.
4 §§ 123.1, 127.1, 127.3)

5 The Grand Jury further charges: T H A T

6 On or about January 8, 1989, at the San Francisco
7 International Airport, State and Northern District of California,

8 KEN PARK, aka
9 KWAN PARK,

10 defendant herein, did willfully export from the United States
11 without a validated license for such export defense articles on
12 the United States Munitions List (22 C.F.R. § 121.1) to wit,
13 twelve fixed wire round resistors, which are part of the high
14 powered target illuminator for the Hawk ground missile system.

15 All in violation of Title 22, United States Code,
16 § 2778; and 22 C.F.R. §§ 123.1, 127.1 and 127.3.

17 COUNT THREE: (Title 22, United States Code, § 2778; 22 C.F.R.
18 §§ 123.1, 127.1, 127.3)

19 The Grand Jury further charges: T H A T

20 On or about January 8, 1989, at the San Francisco
21 International Airport, State and Northern District of California,

22 KEN PARK, aka
KWAN PARK,

23 defendant herein, did willfully export from the United States
24 without a validated license for such export defense articles on
25 the United States Munitions List (22 C.F.R. § 121.1) to wit, two
26 hundred and sixteen wing and roller assemblies which are part of

I N D I C T M E N T

- 2 -

1 the Sidewinder missile system.

2 All in violation of Title 22, United States Code, § 2778 =
3 and 22 C.F.R. §§ 123.1, 127.1 and 127.3.

4 COUNT FOUR: (Title 18, United States Code, § 1001; 15 C.F.R.
5 § 387.5)

6 The Grand Jury further charges: T H A T

7 On or about January 6, 1989, at the San Francisco
8 International Airport, State and Northern District of California,

9 KEN PARK, aka
10 KWAN PARK,

11 defendant herein, did knowingly and willfully make and cause to be
12 made false, fictitious and fraudulent statements and representa-
13 tions as to material facts in a matter within the jurisdiction of
14 the United States Department of Commerce, a department of the
15 United States, in that in a Shipper's Export Declaration, Form
16 7525-V, KEN PARK, aka KWAN PARK, represented that the commodities
17 in the shipment he was making consisted of truck and tractor parts
18 and other commodities which did not require a validated export
19 license, that the value of the commodities in the shipment was
20 \$23,274, and that the shipment license designation was the general
21 license "G Dest," whereas, in truth and fact, as KEN PARK, aka KEN
22 PARK, well knew, the commodities in the shipment included military
23 aircraft parts which were valued substantially in excess of
24 \$23,274 and which required a validated export license and "G Dest"
25 was not the proper license designation.

26 All in violation of Title 18, United States Code, § 1001
and 15 C.F.R. § 387.5.

I N D I C T M E N T

- 3 -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

COUNT FIVE: (Title 22, United States Code, § 2778; 22 C.F.R. §§ 123.1, 127.1, 127.3)

The Grand Jury further charges: T H A T

On or about October 29, 1988, at the San Francisco International Airport, State and Northern District of California,

KEN PARK, aka
KWAN PARK,

defendant herein, did willfully export from the United States without a license defense articles on the United States Munitions List (22 C.F.R. § 121.1) to wit, fifteen VA-933A E-Tubes which are used to illuminate the target for the Sparrow missile system which is used on the fire control radar system of the McDonnell Douglas F-4 fighter plane.

All in violation of Title 22, United States Code, § 2778 and 22 C.F.R. §§ 123.1, 127.1 and 127.3.

COUNT SIX: (Title 18, United States Code, § 1001; 15 C.F.R. § 387.5)

The Grand Jury further charges: T H A T

On or about October 28, 1988, at the San Francisco International Airport, State and Northern District of California,

KEN PARK, aka
KWAN PARK,

defendant herein, did knowingly and willfully make and cause to be made false, fictitious and fraudulent statements and representations as to material facts in a matter within the jurisdiction of the United States Department of Commerce, a department of the United States, in that in a Shipper's Export Declaration, Form

I N D I C T M E N T - 4 -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

7525-V, KEN PARK, aka KWAN PARK, represented that the commodities in the shipment he was making consisted of truck and tractor parts and other commodities which did not require a validated export license, that the value of the commodities in the shipment was \$5,901, and that the shipment license designation was the general license "G Dest," whereas, in truth and fact, as KEN PARK, aka KEN PARK, well knew, the commodities in the shipment included military aircraft parts which were valued substantially in excess of \$5,901 and which required a validated export license and "G Dest" was not the proper license designation.

All in violation of Title 18, United States Code, § 1001 and 15 C.F.R. § 387.5.

Dated: 2/3/81

A True Bill
[Signature]
FOREPERSON
(DEPUTY)

[Signature] *Chief AUSA*
[Signature] *Acting U.S. Atty.*
JOSEPH P. RUSSONIELLO
United States Attorney

(Approved as to Form *JRR*)
AUSA: *J. R. Levin*)

INDICTMENT - 5 -

APPENDIX C

COMPLICATIONS IN LEGAL CASE STUDY

One aspect of this thesis is the problem of obtaining court documents for use by an intelligence analyst. In doing the case study this author found the process of finding the records very simple, yet that is only a small part of procedure.

Court records are found throughout the U.S. Each defendant is tried in the district in which the crime was committed; therefore, the first step is to find the court which adjudicated the case. Then one must travel to the proper city where the court is located. This may sound simple, yet districts may be quite confusing, for example, the Central District of California is located in Los Angeles (not quite central California).

Once the courthouse is located (usually in a federal building), and the Office of the Clerk of Courts for Criminal Cases is found, the search is facilitated. In both offices this author visited, cases are listed alphabetically on microfiche. One must merely look up the defendant's name to find the case number, under which everything is filed. Once the case number is determined, a clerk will retrieve the records from an array of records, if the record is in the file. On one occasion the case file was "in chambers"

and therefore inaccessible for some undetermined time. The clerk said she would be happy to send a copy of the contents of the file when it is returned. Much to my delight, a copy of the entire file was received in six days.

Upon acquiring the files, one must remain in the direct vicinity, presumably so none of the documents will be lost or borrowed. While some files merely contain an indictment, others can have a multitude of volumes (the Inanlou case had eight). A clerk is required to Xerox any copies of documents one may want. In San Diego, this would take approximately two to three days, at a cost of \$.50 per page.

Requests in excess of 50 pages would be handled by an outside firm, hired by the requestor. This procedure has varying costs, from \$165 and \$.15 per copy to \$13 and \$.25 per copy. The independent copier brings in his own microfiche machine, takes the picture, transcribes this to a paper copy, all in two to three days. The one difficulty found with this procedure is that most companies deal only with attorneys, or want a deposit prior to any work.

Court personnel and federal agencies are supposed to get copies done by the court at no expense, however, it appears that there is some confusion as to what a federal agency is or how many copies can be obtained free. While this author was in San Diego researching documents for this thesis, she was told by a clerk that they would reproduce an unlimited number of copies at no expense, because the work was being

done for a DoD project. A week after returning to Monterey, the author received a phone call informing her that the requested number of copies was too great for their office to handle and that she should possibly seek an independent contractor for the job. The clerk stated that they would keep the request forms containing the description of the copies desired so the commercial copying company could come in and do the task. Two days later this author received the aforementioned requests in the mail.

Another stumbling block is found in court transcripts of the actual trial proceedings. Although few cases actually go to trial, transcripts would contain a wealth of information and give the opposing points of the case. Court proceedings are recorded in a sort of shorthand, not readable by the layperson. To have this "code" transcribed into a discernable format is quite expensive, depending on the length of the trial. A court recorder is usually hired as an independent representative, thus the work is done when time permits. In recent years the courts have been overloaded. Except in rare cases, when the client is prominent, or an appeal is sought, obtaining a transcript can be quite difficult.

The unfortunate experiences outlined above may be limited to this specific author, yet the lack of cooperation and understanding is assumed to prevail throughout the system. If the use of court documents by intelligence

personnel became a mainstay, it is hoped that measures would be taken to facilitate the process.

APPENDIX D

STOLEN PARTS LISTED IN THE INANLOU INDICTMENT

<u>Date Stolen</u>	<u>Item</u>	<u>Value</u>	<u>Date Exported</u>
12/84	One gimbal assembly for inertial navigation system	\$77,000	12/19/84
	One Bendix GJ-G8 gas turbine fuel control	\$64,000	
1/85	One gimbal assembly for inertial navigation system	\$77,000	1/29/85
	Two parametric amplifiers for the Phoenix Missile System	\$45,000	
1/85	One Bendix CJ-G8 gas turbine fuel control	\$64,000	1/29/85
2/85	One Bendix CJ-G8 gas turbine fuel control	\$64,000	2/17/85
	Two angle of attack computers	\$15,000	
	One lower wing faring panel	\$3,000	
	Two angle of attack indexers	\$150	
4/85	One infrared recorder	\$150,000	
5/85	One servo-mechanism amplifier	\$6,000	5/18/85
	Five vane turbine nozzles	\$4,000	
	Transmitter liquid	\$1,200	

	Sixteen torque actuator rings	\$1,200	
5/85	One drive constant speed	\$52,000	5/27/85
6/85	One angle computer	\$9,500	6/20/85
	Seven vane turbine nozzles	\$6,000	
	One power supply	\$5,000	
	One electron tube	\$1,100	
	Two quick coupling tubes	\$900	
7/85	One gimbal assembly for an inertial navigation system	\$96,000	7/5/85
	One parametric amplifier for the Phoenix Missile System	\$30,000	
	Four cable assemblies	\$11,000	
5/85	Three signal data computers	\$1,380,000	
	Four gimbal assemblies for inertial navigation systems	\$380,000	
	One multi-plex filter	\$240,000	
	Two weapon indicator controls	\$132,000	
	Seven circuit card assemblies	\$37,000	
	Two electron tubes	\$2,300	
5/85	One film magazine	\$37,000	
	One infrared analyzer	\$18,000	
	One duct assembly	\$2,000	
	One pressure switch	\$380	

5/85	One drive constant speed	\$52,000
7/85	One servo-mechanism amplifier	\$6,000
	Two seal assemblies	\$800

LIST OF REFERENCES

1. Bunting, G.F., and H.G. Reza, "Agents Tipped to Thefts of Parts for Iran 2 Years Ago," The Los Angeles Times, 21 August 1985.
2. Frammolino, R., "Theft of Navy Parts: Tale with a Disturbing Moral," The Los Angeles Times, 2 September 1985.
3. Gerth, J., "7th Suspect Held in Plot to Sell F-14 Parts to Iran," The New York Times, 23 July 1985.
4. Mathews, J., "Five Held in Theft of F14 Parts," The Washington Post, 16 July 1985.
5. Penn, S., "Despite American Ban, Iranians Can Still Buy Arms Made in the U.S.," The Wall Street Journal, 5 September 1986.
6. Shaw, G., "Navy Thefts Spark Fear for National Security," The Los Angeles Times, 17 July 1985.
7. Greve, F., "Iranians Pushing to Get U.S. Arms," The Philadelphia Inquirer, 3 August 1985.
8. Lederman, J., "'Operation Staunch' Forced Khomeini's Hand," The Wall Street Journal, 22 July 1988.
9. Klare, M.T., "Secret Operations, Clandestine Trades: The Thriving Black Market for Weapons," Bulletin of The Atomic Scientists, April 1988.
10. Brzoska, M., "Profiteering on the Iran-Iraq War," Bulletin of the Atomic Scientists, June 1987.
11. Conahan, F. C., Measuring Military Capability: Progress, Problems, and Future Direction, Washington: Government Printing Office, February 1986.
12. Moring, F., "Secret Arms Deal Allowed Iran to Buy Up Crucial Missile Parts," The Albany Knickerbocker News, 26 October 1987.
13. Goose, S.D., "Armed Conflicts in 1986, and the Iraq-Iran War," SIPRI YEARBOOK 1987 World Armaments and Disarmaments, Oxford: Oxford University Press, 1987.

14. Karsh, E., The Iran-Iraq War: A Military Analysis,
Dorchester: The Dorset Press, 1987.
15. Bill, J.A., The Eagle and The Lion: The Tragedy Of
American-Iranian Relations, New Haven: Yale University
Press, 1988.
16. Neuman, S.G., "Arms, Aid and the Superpowers," Foreign
Affairs, Summer 1988.
17. Mendelowitz, A.I., EXPORT LICENSING Number of
Applications Reviewed by the Defense Department,
Washington: Government Printing Office, May 1988.
18. Rempel, W.C., and L. Green, "London Center of Iran Arms
Smuggling," The Los Angeles Times, 3 September 1985.
19. SIPRI YEARBOOK 1980 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1980.
20. SIPRI YEARBOOK 1981 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1981.
21. SIPRI YEARBOOK 1982 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1982.
22. SIPRI YEARBOOK 1983 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1983.
23. SIPRI YEARBOOK 1984 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1984.
24. SIPRI YEARBOOK 1985 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1985.
25. SIPRI YEARBOOK 1986 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1986.
26. SIPRI YEARBOOK 1987 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1987.
27. SIPRI YEARBOOK 1988 World Armaments and Disarmaments,
Oxford: Oxford University Press, 1988.
28. Diamond, S., and R. Blumentahl, "Huge Illegal Deal on
Arms for Iran was Known to U.S.," The New York Times, 2
February 1987.
29. Hughes, D., "U.S. Uncovers Extensive Efforts to Procure
Weapons for Iran," Aviation Week & Space Technology, 1
February 1988.

30. Kirk, D., "Iran's Deadly Shopping List," USA Today, 28 April 1988.
31. Mitchell, A., "How Iran Evades Arms Embargo," The Long Island Newsday, 20 August 1986.
32. U.S. Department of Justice, Significant Export Control Cases January 1, 1981 to September 26, 1988, Washington: Government Printing Office, Undated.
33. U.S. v. Kazem, Zamani, Case Docket number unavailable, District of Maryland.
34. U.S. v. Hanely, et al., Case Number: CR-84-0000978, Southern District of California.
35. U.S. v. Asefi Inanlou, et al., Case Number: CR-87-0001092, Southern District of California.
36. U.S. v. Hassan Kangarloo, Case Number: CR-86-312-SVW, Central District of California.
37. U.S. v. Ken Park, Case Number: CR-89-0053, Northern District of California.
38. Interview between a non-attributable U.S. Customs Service Special Agent and the author, February 15, 1989.
39. Blumenthal, R., "Iranian Agents Build Wide Network to Smuggle in Weapons from U.S.," The New York Times, 5 October 1986.
40. Shew, G., and W.C. Rempel, "Billion-Dollar Iran Arms Search Spans U.S., Globe," The Los Angeles Times, 4 August 1985.
41. Bolger, D.P., Americans at War, Novato, California: Presidio Press, 1988.
42. Hatch, P.F., "World's Air Forces 1988," Flight International, Vol. 134, No. 411, 3 December 1988.

INITIAL DISTRIBUTION LIST

	No. Copies
1. Defense Technical Information Center Cameron Station Alexandria, Virginia 22304-6145	2
2. Library, Code 0142 Naval Postgraduate School Monterey, California 93943-5002	2
3. Mr. Peter Maher/Ms. Marilyn Morin Department of State State INR/PMA/RF--Room 6510 Washington, D.C. 20903	1
4. Mr. Dan Supneck U.S. Customs Service H01 West A Street Suite 305 San Diego, California 92101	1
5. Mr. Theodorus F.M. Klemann Department of the Treasury U.S. Customs Service Office of Enforcement 1301 Constitution Avenue, N.W. Washington, D.C. 20229	1
6. LT Dorothy M. Major 1011 Larkstone Drive Worthington, Ohio 43085	2
7. LCDR Charles G. Roller 1449 Main Avenue Port Arthur, Texas 77642	3
8. Dr. Max Gross Defense Intelligence College DIAC/DIC-2D Washington, D.C. 20301-6111	1
9. Assistant Secretary of Defense, International Security Affairs Pentagon Washington, D.C. 20301	1

10. Commanding General 1
U.S. CENTCOM
MacDill AFB,
Tampa, Florida 33608
11. Prof. Ralph Magnus, Code 56 Mk 1
Department of National Security Affairs
Naval Postgraduate School
Monterey, California 93943-5000
12. Prof. Edward J. Laurance, Code 56Lk 5
Department of National Security Affairs
Naval Postgraduate School
Monterey, California 93943-5000
13. Prof. James J. Tritten, Code 56Tr 2
Department of National Security Affairs
Naval Postgraduate School
Monterey, California 93943-5000
14. Commanding Officer 1
Navy Operational Intelligence Center
4301 Suitland Road
Washington, D.C. 20390-5170
15. Chief of Naval Operations (OP-06) 1
Department of the Navy
Washington, D.C. 20350
16. Director of Naval Intelligence 1
Department of the Navy
Office of the Chief of Naval Operations
Washington, D.C. 20350-2000
17. Chairman, Department of Research and 1
Information (DIR)
Defense Institute of Security Assistance
Management (DISAM)
Building 125, Area B
Wright-Patterson AFB, Ohio 45433-5000
18. Security Assistance and Arms Transfer 1
Division of the Politico-Military
Affairs Deputate
Plans and Policy Directorate (J-5)
Organization of the Joint Chiefs of Staff
Pentagon Room 2E971
Washington, D.C. 20301
19. Chief, Security Assistance Division (CCJ4/7-S) 1
HQ, U.S. Central Command
MacDill AFB, Florida 33608-7001

20. Deputy Regional Plans and Programs 1
Division (DALO-SAC)
Assistant Deputy Chief of Staff For
Logistics (Security Assistance)
Department of the Army
Washington, D.C. 20310-0512
21. Chief, Middle East/Africa Division (PRIB) 1
Directorate of International Programs (AF/PRI)
Headquarters, U.S. Air Force
Washington, D.C. 20330-5244
22. Office of Munitions Control 1
PM/MC, Room 800, SA-6
Department of State
Washington, D.C. 20520
23. Navy Office of Technology Transfer 1
and Security Assistance
Department of the Navy
Washington, D.C. 20360-5000
24. Captain Laurence N. Schuetz 1
Box 11
FPO, New York, 09510