INTERNATIONAL AIR CARGO THEFTS AND LOSSES: AN IDENTIFICATION OF VARIABLES

Thesis for the Degree of M. S.
MICHIGAN STATE UNIVERSITY

Harvey T. Harris, Jr.

1966

INTERNATIONAL AIR CARGO THEFTS AND LOSSES:

AN IDENTIFICATION OF VARIABLES

By

Harvey T. Harris, Jr.

AN ABSTRACT OF A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

School of Police Administration and Public Safety

1966

APPROVED

Leon H. Weaver
Dr. Leon H. Weaver (Chairman)

Raymond T. Galvin
Raymond T. Galvin (Member)

Louis A. Radelet
Louis A. Radelet (Member)

ABSTRACT

INTERNATIONAL AIR CARGO THEFTS AND LOSSES:
AN IDENTIFICATION OF VARIABLES

by Harvey T. Harris, Jr.

Due to the increase in volume and value of air cargo and the increase in size and speed of the aircraft carrying it, many security problems have arisen that threaten the airline industry, air cargo shippers, air freight forwarders, air cargo insurers, law enforcement agencies, and the economy in general. Satisfactory solutions to these problems, in many cases, have not been offered; as a consequence, there is a certain amount of apprehension surrounding the domestic as well as the international air cargo industry. The main purpose of the thesis was to identify variables in air cargo thefts and losses.

Seventy-nine air cargo theft and loss variables were identified. For the purpose of laying a broad foundation, the history of air cargo and several pertinent international regulations of air transportation are presented. A review of all available, pertinent literature revealed that little has been written on air cargo thefts and losses. The results of airline and air freight forwarder questionnaires are presented, and many air cargo theft and loss case histories are analyzed. As a result, many air cargo security problem areas were determined. Recommendations are advanced in an effort to aid in controlling potential air cargo thefts and losses.

In the past when air cargo volume was small, air cargo management officials could afford to overlook some thefts and losses; however, with the tremendous increase in air cargo volume, such a traditional attitude towards thefts and losses could prove financially disastrous. Air cargo management officials must become more security conscious and must also realize that scientific research can aid in controlling air cargo thefts and losses.

INTERNATIONAL AIR CARGO THEFTS AND LOSSES:

AN IDENTIFICATION OF VARIABLES

By

Harvey T. Harris, Jr.

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

School of Police Administration and Public Safety

1966

ACKNOWLEDGMENTS

Grateful recognition is given to the following individuals who have aided the writer in numerous ways, at various intervals in his pursuit of knowledge:

To Dr. Leon H. Weaver, for his honest advice and long patience during the writer's graduate studies, for making the arduous task of writing this thesis a rewarding learning experience, and for guiding the actual writing of this thesis.

To Mr. Raymond T. Galvin and Mr. Louis A. Radelet, for the advice and insights, which they imparted to the writer throughout the writer's graduate studies, and for serving on the writer's thesis committee.

To Dr. George G. Ritchie, Jr., a personal friend, for the patience, guidance, and early training that he gave the writer, which formed a foundation for later experiences.

To the participants of this study, who are located all over the world, for without them, there would be no evidence for this thesis.

To the writer's parents, Mr. and Mrs. Harvey T. Harris, for their continued support in all of the writer's endeavors, especially urging the writer to continue his higher education.

To the writer's wife, Judy, for contributing her support and many talents, above and beyond the call of duty, to the writer while he was obtaining a higher education, this thesis is dedicated.

SELECTED TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER PAGE

CHAPTER PAGE

CHAPTER PAGE

LIST OF TABLES

CHAPTER I

INTRODUCTION

Acceleration and diversification characterize air cargo's growth since 1945. In the past only a few emergency, perishable, valuable, or fragile products were shipped by air; today almost any and every product is shipped by air, from monkeys to elephants, from tiny transistors to enormous data processing equipment, from a child's doll to gold bullion worth several thousand dollars.

Air cargo has steadily increased in volume and value, many times what it was in 1945. Air freight increased from 15 million ton miles carried in 1946 to 595 million ton miles carried in 1959, a growth factor 39.7 times what it had been in 1946; air mail increased from 39 million ton miles in 1946 to 198 million in 1959, a growth factor 5 times what it had been in 1946; and air express increased from 39 million ton miles in 1946 to 59 million in 1959, a growth factor 1.5 times what it had been in 1946.[1] United States air cargo carriers from 1946 to 1959 had an impressive growth record of 960 percent, while passenger traffic increased only 430 percent over the same period.[2]

Due to the increase in volume and value of air cargo and the increase in the size and speed of the aircraft carrying it, many security

---

[1] Norair Systems Analysis Group, Air Freight Trends 1946-1970 (Hawthorne: Northrop Corporation, 1960), p. 3.

[2] Ibid., p. 12.

problems have arisen that threaten the airline industry, air cargo shippers, air freight forwarders, air cargo insurers, law enforcement agencies, and the economy in general. Satisfactory solutions to these problems, in many cases, have not been offered; as a consequence, there is a certain amount of apprehension surrounding the domestic as well as the international air cargo industry.

To establish a general frame of reference, it is necessary to distinguish between security administration, airline security, and air cargo security. Security administration may be defined as the direction, management and/or execution of those functions or services performed to protect the personnel, information, equipment, property, and other tangible and intangible assets of an organization.[3] Security administration also includes the protection of an individual's assets. Airline security consists of the protection of an airline's personnel, passengers, cargo, and other assets. Air cargo security is the protection of air cargo. In the past 20 years, air cargo thefts and losses have increased as air cargo volume has increased. No person or organization has ever made a successful documented research study into the problem of air cargo thefts and losses, and as a consequence, such a study is badly needed.[4]

---

[3] Hays C. Larkins, "A Survey of Experiences, Activities and Views of the Industrial Security Administration Graduates of Michigan State University" (unpublished Master's thesis, Michigan State University, East Lansing, Michigan, 1966), p. 56.

[4] Two "studies" have dealt with air cargo thefts and losses on a limited basis: In 1962, Mr. Donald Fish related his air cargo investigative experiences in his book Airline Detective. Also, the International Association of Airline Security Officers distributed a questionnaire on the subject in 1962, to 28 airlines; only eight responded.

I. THE PROBLEM

Statement of the problem. The main purpose of this thesis is to identify variables in air cargo thefts and losses. To this end the experiences of airlines and air freight forwarders, from 1945 to the present, have been studied intensively. Because of today's door-to-door service, air cargo can be picked up at the shipper's door, by the airline or air freight forwarder, and delivered to the consignee's door; the scope of this study will cover this period. Eventhough some airlines and air freight forwarders believe they have had few air cargo thefts and losses to date, there is nevertheless a need for such a study because of the high volume and high value of air cargo and the complicated methods of operation (M.O.) used by some air cargo thieves.

Some companies handling air cargo do not take preventive security measures until after a theft occurs and puts them on notice, instead of before it occurs. Other companies do not take official notice of petty thefts, until a number of them occur or until a large amount of money is involved. When the volume of air cargo was small, some companies could afford to overlook occasional thefts of low value; however, with the increase in value and volume of air cargo, such repeated shortcomings might prove disastrous to those same companies.

The international criminal is "moving in" on the cargo industry more and more.[5] Large criminal syndicates operating on a national and international basis are realizing that an unprotected air cargo storage area is very lucrative and a safer "job" than an armored car or bank

---

[5] Donald Fish, Airline Detective (London: William Collins Sons and Company, Ltd., 1962), pp. 23-24.

holdup. Tighter security measures must be taken regarding air cargo, or a carefully planned burglary or series of simultaneous burglaries could bring disaster to any air cargo handling company which happened to be involved. It is not too uncommon today for gold bullion, diamonds, banknotes, and other valuable air cargo shipments to be valued at over $600,000, which is a very conservative estimate.

Importance of the thesis. This thesis is important for several reasons. Since this particular type of research study has never been made before, one is needed in order to understand the problem of providing adequate security for air cargo shipments. Air cargo is increasing daily in volume and value, and as an obvious result, thefts and losses of air cargo are also increasing. It is important to document and evaluate in a scientific manner facts regarding air cargo thefts and losses, so that current ideas and suspicions circulating among the various air cargo handling companies can be resolved. This study, hopefully, will be a step towards a better understanding of the air cargo security problem that eventually leads to its control. Also, this study, hopefully, will be a step in the development of a body of knowledge about air cargo security, because it attempts to lay the groundwork for more sophisticated analyses of air cargo thefts and losses.

If important variables involved in air cargo thefts and losses are scientifically analyzed and presented logically, airlines, air freight forwarders, air cargo insurers, law enforcement agencies, etc., which are plagued by thefts and losses of air cargo, may be able to benefit from the research findings. The research findings of this study may also benefit other cargo handling companies and companies charged with the protection

of cargo, such as railroads, motor freight carriers, contract security agencies, etc., because cargo thefts and losses occur in all of these various areas. The methods of operation (M. O.) of air cargo thieves, which are presented in this thesis, may enable interested air cargo management personnel to spot the hazardous areas in their air cargo operations.

At the present time there is a considerable variance in the type of security used to protect air cargo. A partial reason for this is the difference in the individual circumstances of the airlines, air freight forwarders, and other air cargo handlers. For example, one type of security operation may be adequate for an airline that has a separate cargo area from the passenger area, but it may be inadequate for an airline that has the cargo and passenger areas together.

This thesis will present guidelines to be considered by air cargo management officials and other interested parties, so that they can apply them or adapt modifications of them to fit their particular circumstances. By putting such measures into practice, air cargo handling companies can save money and also insure a larger and more permanent group of air cargo shippers. No shipper wants to ship his products with an airline or air freight forwarder that has a reputation for consistantly losing air cargo.

Good security measures reduce the temptation and opportunity to steal, but they cannot prevent theft and loss 100 percent. A good air cargo security program will "pay its own way" over a period of time, because it will assist in getting lower insurance premiums, more permanent air cargo shippers, and a good reputation for the airline or air freight forwarder. Relative control, not the complete prevention, of air cargo thefts and losses should be the immediate goal of any air cargo security program, because it is a much more practical one.

There is very little space given to the subject of air cargo theft and loss prevention in the literature. This thesis will be a starting point for future research studies on the subject, and also a starting point for future research studies into the various aspects of air cargo security, such as physical security of air cargo, personnel security measures for air cargo personnel, etc. The thesis, hopefully, will create interest in the subject of air cargo security by making the top management of air cargo operations more sensitive to the problem. Usually top management only hears of the relatively large thefts and losses: They seldom hear of the repeated minor thefts that occur much more frequently than the larger ones. As a result top management often says, "Air cargo thefts? Oh, we don't have many of those."

II. DEFINITIONS OF TERMS USED

Definitions of general terms are offered at this point to provide a better understanding of the contents of the thesis. Specific terms will be defined in the paragraph in which they are first used.

Air mail. Letters and packages carried by aircraft and includes air parcel post; the load can run up to 70 pounds and is shipped through the United States Post Office. It has top priority over air express and air freight.

Air express. A service provided by a partnership between 39 airlines and REA Express (new name for the complete domestic and international surface and air services of Railway Express Agency). It covers a load of 5-50 pounds that is shipped as air express, and it takes priority over air freight, but not air mail.

Air freight. A revenue cargo service operated by each airline and does not include passengers' baggage. It has lowest priority.

Air cargo. Includes air mail, air express, and air freight, but does not include passengers or passengers' baggage.

Air cargo handling companies. Airlines and air freight forwarders.

Passenger mile or revenue passenger mile. One paying passenger carried one mile and does not include airline personnel.

Ton mile or revenue ton mile. One ton of cargo carried one mile.

Carrier. The airline.

Consignor or shipper. Person or organization that initially starts the goods on their journey.

Consignee. Person or organization to whom the cargo is shipped.

Air freight forwarder. Person or organization that picks up the goods from the shipper, delivers them to the airline, and after the aircraft reaches its destination, delivers the goods to the consignee. Air freight forwarders consolidate small shipments, thereby reducing shippers' rates, and they can also use any airline for shipping.

Domestic trunk lines. Air carriers that have permanent operating rights within the continental United States.

Domestic local service lines. Air carriers that operate routes of lesser traffic density between the smaller traffic centers and between these centers and principal centers.

International and overseas lines. United States flag air carriers operating between the United States and foreign countries other than Canada, and over international waters.

All-cargo lines. Air carriers that operate under certificates authorizing scheduled cargo flights between designated areas in the United States and in one case to the Caribbean and in another to Europe.

Modus operandi. Method of operation (M. O.).

Interpol. International Criminal Police Organization, an information gathering agency and criminal records clearing house for almost all free world countries, not including Communist countries or their satellites, which enables member law enforcement agencies to obtain criminal activity information without going through regular diplomatic channels.

III. ORGANIZATION OF THE REMAINDER OF THE THESIS

The remainder of the thesis is divided into ten chapters as discussed below.

Chapter II, History, Development, Present Status, and Future of Air Cargo, is a discussion of all phases of air cargo (air mail, air express, and air freight) in an effort to show how rapidly and drastically the industry has changed. The chapter attempts to show that present facilities are inadequate to accommodate this relatively sudden increase in air cargo volume, and future predictions call for an even greater increase in volume. The main problem that has emerged is the protection of air cargo.

Chapter III, International Regulation of Air Transportation, is a discussion of selected regulations governing the international carriage of goods by air. These regulations demonstrate a need for an agreement between various nations, regarding the international investigation of air

cargo thefts and losses. At present no such agreement exists. The chapter also shows that international air cargo regulations are very complex.

Chapter IV, Review of the Literature, is a discussion of the literature on air cargo security, on airline security which mentions air cargo security, and on security administration and related topics which are applicable to air cargo thefts and losses. Since little had been written on air cargo security or airline security, it was necessary to survey the field of security administration for material applicable to air cargo thefts and losses. In a remote sense, almost everything written on thefts and losses in industry is somewhat applicable to air cargo thefts and losses; however, no attempt was made to survey all the hundreds of writings on the subject of industrial thefts and losses, because the remote connection with air cargo thefts and losses is not significant. Also, since hundreds of articles have been written on industrial thefts and losses, it would be impractical to discuss them in this thesis because of space limitations alone.

Chapter V, Methodology, is a discussion of the many sources of information that were used in gathering the raw data for the thesis and also its limitations. Other aspects covered in this chapter are the exploratory study, formulation of the questionnaires, pretest of the questionnaires, and distribution and return of the questionnaires.

Chapter VI, Results of the Questionnaires, is a discussion of the information obtained from the airline and air freight forwarder questionnaires. The responses for each question are given, and a summary of the findings is presented.

Chapter VII, Analysis of Case Histories, contains a discussion of the case method, the criteria used in the selection of the cases, and the sources of the cases. Conversion rates of foreign currency mentioned in the cases are given, so the reader can more easily understand the value of the stolen items. The facts of the 70 cases are presented, and a number of the cases have an analysis following the facts. A summary of the cases discusses who perpetrated air cargo thefts, what items were stolen and their value, where and when air cargo thefts and losses occurred, and the methods of operation (M. O.) of the thieves.

Chapter VIII, Selected Air Cargo Security Problem Areas, discusses some of the more important problem areas involved in air cargo security: theft and loss of air cargo, investigation of air cargo thefts and losses, insurance aspects, and management attitudes towards air cargo security.

Chapter IX, Administrative Roles of the Security Director, discusses the administrative roles each airline and air freight forwarder security director must play, if air cargo is to be most effectively protected from theft and loss.

Chapter X, Recommendations, discusses various recommendations made by the writer on the following topics: security division, physical and personnel security, civil defense and emergency planning, security education programs, theft and loss investigations, and shippers and consignees.

Chapter XI, Summary and Conclusions, discusses the more important findings of the study and of the variables identified in air cargo thefts and losses. Conclusions of the writer are given, along with suggestions for further research.

CHAPTER II

HISTORY, DEVELOPMENT, PRESENT STATUS, AND FUTURE OF AIR CARGO

In order to appreciate how drastically and rapidly the air cargo industry has changed and to better understand its security problems, it is necessary to briefly discuss several selected historical events that directly relate to air cargo (air mail, air express, and air freight). Seeing where the air cargo industry has been in the past and how it developed to its present status may indicate where it will go in the future.

I. HISTORY OF AIR CARGO

Introduction. On December 8, 1903, Samuel Langley made an unsuccessful attempt to fly in a steam-driven double biplane. The first successful motorized flight was made by a Dayton, Ohio, bicycle manufacturer named Orville Wright on December 17, 1903, at Kitty Hawk, North Carolina. It was not until Charles Lindberg's 1927 flight across the Atlantic Ocean that commercial aviation really got started.[6] In 1936, the DC-3 (cargo capacity 8,500 pounds) was introduced, and it soon became the workhorse of the airlines. During World War II, the C-47 (cargo capacity 8,500 pounds) was used extensively to carry troops and supplies, along with the C-54 (cargo capacity 16,500 pounds). To facilitate moving people and materials on a priority basis in time of national emergency,

---

[6] Truman C. Bigham, and Merrill J. Roberts, Transportation (New York: McGraw-Hill Book Co., Inc., 1952), pp. 109-111.

the airlines and the U. S. Government formed the Civil Reserve Air Fleet (CRAF) and the War Air Service Pattern (WASP).[7]

Two U. S. Government agencies control the airways: Civil Aeronautics Board (CAB) and Federal Aviation Agency (FAA). The CAB performs three main functions: It regulates several economic aspects of domestic and international United States air carrier operations and of foreign air carriers who come to the United States in the normal course of their business; it aids other organizations in establishing and developing international air transportation; and it promotes safety in the field of civil aviation. The CAB also investigates accidents involving civil aircraft and recommends preventive measures to the FAA. Violation of CAB orders carries a civil penalty of not more than $1,000 for each offense, and its orders are subject to judicial review by the Court of Appeals of the United States or the United States Court of Appeals of the District of Columbia.[8]

The following are only a few of the FAA's functions: It regulates the certification of aircraft flight crews; it administers air traffic control of civil and military air operations within the United States airspace; it develops, tests, modifies, and evaluates systems and devices needed for safe and efficient air navigation; it registers aircraft; it leads and directs business and the federal government in developing a supersonic transport aircraft, which would operate safely and economically;

---

[7] Air Transportation Association of America, A Half Century of Progress in Scheduled Air Transportation (Washington: Air Transportation of America, 1963), p. 8.

[8] United States Office of the Federal Register, United States Government Organizational Manual (Washington: Government Printing Office, 1965-1966), pp. 383-385.

and it constructs and maintains any federal navigational aids necessary for the safety of aircraft.[9]

Air mail. In 1911, the first experimental air mail flights were made between two cities on Long Island, New York. Between May and August, 1918, the first regular air mail service began between the cities of Washington, Philadelphia, and New York. The War Department carried the mail at first, using the opportunity to train U. S. Army pilots. In August, 1918, the Post Office took over full responsibility for the mail from the War Department, since by that time, it had its own planes and pilots. When the Kelly Act of 1925 authorized the Post Office to award mail routes to private contractors, this proved to be a significant boost to commercial aviation. Postmaster General Walter Brown shaped the air industry further, when he used the authority granted him in the McNary-Watres Act of 1930 to build a system of trunk and feeder lines, by consolidating and extending the existing air mail routes.[10]

In 1934, after a Senate investigation, the U. S. Army Air Corps took over all air mail flights, but due to the high cost and a rash of accidents, the air mail flights were given back to private contractors three months later. In 1935, the first air mail flight crossed the Pacific, and in 1939, the first crossed the Atlantic. Statistics of air mail carried on regularly scheduled aircraft show that volume has increased greatly: 1938 (12,750 ton miles); 1950 (73,968 ton miles); 1963 (356,601 ton miles).[11]

---

[9] Ibid., pp. 396-399.

[10] Bigham and Roberts, op. cit., pp. 110-112.

[11] Air Transport Association of America, op. cit., p. 4.

Air express. In 1919, there were two express systems: American Express Company and Southeastern Express Company. In 1929, the Railway Express Agency (REA) was taken over by the Class 1 rail carriers, and Southeastern Express Co. was absorbed into REA. In 1929, REA and a number of airlines formed an air express service, which provided an extensive door-to-door pick up and delivery service.[12] If an aircraft is to remain at an airport more than two hours, the air express is unloaded and put on another leaving sooner. Shipments are also consolidated for efficiency and economy. Statistics of the amount of air express carried on regularly scheduled aircraft, show a tremendous growth: 1938 (2,173 ton miles); 1950 (37,864 ton miles); 1963 (70,834 ton miles).[13]

Air freight. In 1914, the first scheduled air cargo and passenger flight was from St. Petersburg to Tampa, Florida, by the St. Petersburg-Tampa Airboat Line, which had as its motto, "safety first." Prior to World War II, almost all property shipped by air (except air mail) was called air express and was shipped through the Air Express Division of REA. Air freight volume increased greatly, due to the supplies needed during World War II. Lower rates, redesigned aircraft, more frequent scheduling, and more dependable service increased air freight volume after World War II, with air freight being carried in the cargo bins of passenger aircraft and in the all-cargo carrying DC-3 and C-46 aircraft.[14]

---

[12]Frank M. Cushman, Transportation for Management (New York: Prentice-Hall, Inc., 1953), pp. 27-28, 37.

[13]Air Transport Association of America, loc. cit.

[14]R. Dixon Speas, Technical Aspects of Air Transport Management (New York: McGraw-Hill Book Co., Inc., 1955), p. 243.

Air freight, handled on an individual basis by each airline, has door-to-door service, but is not as extensive as REA's service. Air freight is undoubtedly the fastest growing segment of air cargo today. Statistics of the amount of air freight carried on regularly scheduled aircraft show a tremendous increase in volume: 1938 (no air freight carried on a regularly scheduled aircraft); 1950 (248,899 ton miles); and 1963 (1,023,007 ton miles).[15]

II. DEVELOPMENT OF AIR CARGO

Industry's changing role towards air cargo. Today, a wide variety of items are shipped by air, such as aircraft engines, household goods, machine parts, etc. The largest single category that is shipped by air, machinery, together with the "heavy items" category make up approximately 50% of all air freight volume. Because the distance factor has been eliminated by faster aircraft, a change has occurred in the air cargo shipping policies of many companies. Now the transportation cost of shipping a particular item by air is appraised in terms of not only the "lowest shipping cost," but also of the "total company benefits."[16] When shipping by air, the initial shipping cost is only one factor considered; other factors considered are warehouse costs, insurance premiums, storage costs, pilferage, etc.

Harvard research study. The cost of distribution is the most

---

[15] Ibid., pp. 2-4.

[16] Ellis D. Slater, "The Effect of Air Freight on Company Policies," Michigan Business Review, 16:25, March, 1964.

important problem confronting modern American business today. Air carriers maintained that the speed of air freight could produce savings in industrial production and distribution costs that would exceed the shipping cost of air freight; however, it was only a selling point, not a proven fact. The Harvard Graduate School of Business Administration explored this theory in a research study of air transportation in terms of "total costs." The resulting report titled "The Role of Air Freight in Physical Distribution," published in 1956, found that air transportation costs must be studied in the light of packaging, insurance, storage, and other collateral savings, in addition to considerations such as lower inventories with less tie-up of capital, and transportation as an alternative to warehousing in reaching new markets. Thus the "lowest total cost" concept emerged, i.e., the cost of air transportation is higher than surface carriage; however, the "total company benefits" more than compensate for the transportation cost differential.

Stanford research study. After the Harvard study indicated that the "lowest total cost" concept was greatly responsible for the increase in air freight volume in recent years, the Stanford Research Institute, in 1962, undertook research into the uses of air freight. The Institute devised an Air Freight Qualifications Method that enables companies to determine what parts of their operations air freight does and does not offer promise of specific benefits. By studying how and why companies use air freight, the researchers found 28 applications of air freight to company procedures. The study was titled "The Role of Air Freight in Determining Company Policy."

Air freight is used for the following purposes: increase sales or

improve service in time-limited situations; increase utilization of production facilities and equipment; reduce company or customer investment in goods in transit; meet unpredictable demands and emergencies; reduce inventory investment; reduce risk of inventory loss or obsolescence; reduce investment and operating expense associated with inventory facilities and services; reduce cost incurred by having jobbers or wholesalers perform inventory function; and reduce risk of having commodities lost, stolen, damaged, or spoiled in transit.

Air freight is also used to reduce costs and time over which provisions for preserving or protecting goods in transit are required, enhance control or management of goods in transit, reduce duties in international movements, and expedite handling of small lots. The many and diverse uses of air freight, just mentioned, illustrate the tremendous diversity and scope of today's air cargo industry and also why air cargo security is so important. Companies ship their products by air, because it is supposedly the fastest form of transportation, and they save regarding "total costs;" however, when air cargo is delayed by being damaged, lost, carelessly handled, or stolen, the shipper does not realize the service for which he has paid, and the air cargo industry faces the possibility of losing a customer.

III. PRESENT STATUS OF AIR CARGO

Air cargo is the fastest growing segment of the transportation industry today. The volume of air mail, air express, and air freight is increasing at such a rapid rate that it has outgrown its facilities, aircraft, and handling personnel. Air cargo sales are breaking all records,

and more services are being offered to the public to pursuade them to ship their cargo by air. As an example of the increase in volume of air cargo, the traffic across the North Atlantic, long used as an index to international air traffic because it is so heavily traveled, has increased tremendously. The International Air Transport Association (IATA) reported that during April 1-September 30, 1965, the North Atlantic air cargo traffic of IATA member airlines increased 43.5% above the 1964 total.[17] The Air Transport Association of America (ATAA) reported that domestic airlines carried 22% more air cargo between January 1-September 30, 1965, than it did during the same period in 1964. The total air cargo carried was 938.5 million ton miles, distributed as follows: air freight (720.8 million ton miles, increase of 24.4%), air express (63.6 million ton miles, increase of 13%), and air mail (154.1 million ton miles, increase of 15%).[18] For more examples of the increase in air cargo volume, several large airlines, such as Pan American World Airways (PAA),[19] Trans World Airlines (TWA),[20] United Air Lines (UAL),[21] and American Airlines (AA),[22] have recently reported air cargo records that exceed any previous time in their history.

Air cargo facilities. At the smaller airports, air cargo is

---

[17] News item in The New York Times, November 12, 1965, p. 82.

[18] Ibid., October 31, 1965, p. 88.

[19] Ibid., September 11, 1965, p. 8.

[20] News item in The Wall Street Journal, May 12, 1965, p. 27.

[21] Ibid., November 2, 1965, p. 24.

[22] Ibid., November 5, 1965, p. 2.

handled in small rooms adjacent to the ticket counter. At the large airports, air cargo is sometimes handled in small rooms adjacent to the ticket counter, but mostly in separate air cargo terminals. Some airlines have a separate air cargo terminal, and other airlines share a large building petitioned-off for their individual air cargo operations.

Located in New York, the John F. Kennedy (JFK) International Airport air cargo center, the world's largest cargo complex, includes six cargo buildings and houses airlines, air freight forwarders, Customs officials, etc. This $5,500,000 center, which even includes an animal port that cared for more than 100,000 animal air travelers in 1963, is expanding from 122 acres to 159 acres at a cost of $1,347,000 to meet the increase in volume of air cargo.[23] The O'Hare International Airport air cargo center in Chicago, Illinois, is one of the busiest in the world. Located at O'Hare is UAL's air cargo terminal, the world's largest air freight terminal used exclusively by one carrier under one roof; due to a lack of space, this terminal is presently being enlarged.[24]

Since air cargo volume is rapidly increasing, most large cargo areas are open on a 24-hour basis. Many air cargo facilities are being automated, especially in the larger air terminals; such refinements as rollers on large conveyers, hydraulic pallet hoists, automatic net drops, etc., make it almost unnecessary for air cargo handling personnel to ever lift any cargo. In UAL's air cargo terminal at O'Hare Airport, no fork

---

[23]News item in The New York Times, October 17, 1965, p. 88.

[24]Personal interview between writer and Joe Huemmer, Claims Investigator, United Air Lines, O'Hare International Airport, Chicago, Illinois, September 24, 1965.

lifts are used, and the cargo is only lifted by the employees at one point in the entire operation, at the pallet loading point.

Air cargo aircraft. Aircraft are getting larger and larger; their cargo capacity is growing; and jets are replacing propeller-driven aircraft. Today, aircraft are able to travel at greater speeds and on a more economical basis. From 1935-1965, direct operating costs have decreased from 20 cents per ton mile to less than 5 cents per ton mile.[25] Typical of the large air cargo carrying aircraft is the Lockheed Hercules Airfreighter, which has a cargo capacity of 50,000 pounds and a 9 x 10-foot rear opening for straight-in ramp or truck-level loading. The Canadair Forty Four (CL-44), cargo capacity 66,000 pounds, is unique, because the complete tail end of the fuselage swings open through an arc of 105 degrees for straight-in loading. For speed, the "Swingtail 44" can be loaded in the tail portion and in the main fuselage area simultaneously. The Lockheed C-141 Starlifter (cargo capacity 68,500 pounds) has been described by Secretary of Defense McNamara as being the most modern and most efficient air transport in the world.[26] The Douglas DC-8F Jet Trader (cargo capacity 95,000 pounds) is used by many airlines.

Air cargo sales and service. Air cargo sales are breaking all records. The larger jet aircraft, with pressurized cabins, make it possible for more cargo to be carried at a faster speed than ever before. To make it as easy as possible to ship almost any item by air, the airlines

---

[25]"Aerospace Technology: Stimulus to Progress," Aerospace, 2:10, Winter, 1964.

[26]News item in the Detroit Free Press, October 1, 1965, p. 4-A.

and air freight forwarders have instituted services never before offered. Door-to-door pick up and delivery is routine now, and the service is being extended to almost every city of any size, whether or not it has an airport. Around-the-world air cargo service is now available. Many airlines spend a large part of their budget for air cargo advertising, now that the volume justifies it. Today, many passenger-cargo jet aircraft carry passengers and as much cargo as the DC-3 (8,500 pounds) did years ago, and PAA, which has 13 all-cargo jet aircraft, can carry 15,000 pounds of air cargo on each jet-passenger flight.[27]

IV. FUTURE OF AIR CARGO

Predictions. Because air cargo has had such a phenomenal growth in the past and is increasing in volume and value daily, several predictions have been made for future air cargo growth. Mr. Juan T. Trippe, chairman and chief executive officer of PAA, the world's largest cargo carrying airline, has forecasted that in a few years air cargo volume will double. Mr. Trippe has also stated that cargo revenue may eventually equal that from passenger service.[28] Mr. Robert L. Johnson, senior vice president in charge of marketing of UAL (the nation's largest airline), estimated that UAL will increase its air cargo business by 50% in 1966.[29] The importance of air cargo is reflected in the recent elevation of several major air cargo carriers' veteran cargo managers to vice president

---

[27] News item in The Wall Street Journal, June 15, 1965, p. 4.

[28] Ibid.

[29] News item in the Detroit Free Press, January 28, 1966, p. 6-B.

positions in charge of air cargo.

The estimated increase in air cargo growth for the 1965-1970 period is 240%; for 1970-1975, 135%. A conservative estimate states that during the 1965-1970 period there will be a 130% increase in the growth of air cargo; for the 1970-1975 period, 112% increase in growth. The predictions for the 1956-1970 period are for a growth between 26% and 48% annually, or almost twice the rate of growth experienced between 1955-1960, or predicted for 1960-1965.[30]

Air cargo aircraft. In the near future, several airlines will begin to use Boeing 727-QC's (quick convertible), i.e., aircraft that can be operated for passenger service during the day and be converted and loaded within two hours for nightly cargo flights. Airlines also will begin using an extended version of the Douglas DC-8F, the DC-8-61, which has a 37-foot longer fuselage and can carry 25,000 pounds of cargo in holds below the passenger cabin.

In an unprecedented move, the technical directors of 10 European airlines held a meeting for the purpose of reaching an agreement on specifications for a new aircraft to fly European routes in the 1970's; usually, the aircraft manufacturers go to the airlines. Building planes has become so speculative that manufacturers now have grown cautious of building a new aircraft without a guaranteed market. British European Airways (BEA) want a new short-haul air bus to be built, so they can buy 30-40 of them. Since a manufacturer needs to sell 80-100 to break even, the main idea of the meeting was to get the other European airlines (Air

---

[30]Norair Systems Analysis Group, op. cit., pp. 27-28.

France, Alitalia, KLM Royal Dutch Airlines, Lufthansa, Sabena, Scandinavian Airlines, Swissair, Finnair, and Aer Lingus) to buy enough aircraft, so that BEA can place their order. The 10 airlines decided to give the project to European manufacturers (French and British companies), before American manufacturers moved in on the market.[31]

PAA ordered 25 Boeing 747's (cargo capacity 214,000 pounds), the biggest aircraft order in history.[32] More orders are expected.

Secretary of Defense Robert S. McNamara gave Lockheed Aircraft Corporation a $2 billion contract to build a fleet of the world's largest cargo carrying jet aircraft (58 of them) by 1972. The aircraft, called the C-5A, will be able to carry 280,000 pounds of cargo[33] and will travel at approximately 550 miles per hour. This is considerably larger than Russia's new air transport, the Antonev-22 (cargo capacity 160,000 pounds), which was shown in the Paris Air Show in June, 1965. The C-5A will have a cargo space 150 feet long and 2,700 square feet of floor space; six Greyhound buses could fit inside the giant aircraft at one time. PAA is the only airline on record as considering the C-5A for its transatlantic route; however, other airlines are unofficially considering it.[34]

The supersonic aircraft field is gaining momentum daily. Aircraft that fly from 1,450 to 2,000 miles per hour are now being tested.

---

[31]News item in The New York Times, October 22, 1965, p. 37.

[32]News item in The State (Lansing, Michigan) Journal, April 17, 1966, p. F-13.

[33]News item in The Wall Street Journal, February 18, 1966, p. 5.

[34]News item in the Detroit Free Press, October 1, 1965, pp. 1-4A.

Europe's supersonic jet transport, the British-French Concorde, will cruise at 1,450 miles per hour and is expected to be tested in the air by 1968 and put in service by 1971. The entry from Soviet Russia, the Russian TU-144, will be able to fly at a top speed of 1,550 miles per hour, and it is supposed to be test flown by 1968 or 1969. Two American manufacturers have aircraft in the supersonic race: Lockheed and Boeing. President Johnson will eventually decide whether one or both companies will produce the SST (supersonic transport) commercially. In October, 1965, the giant XB-70 test bomber, forerunner of the SST, reached a speed of 2,000 miles per hour in a test flight. The SST will go into service in 1974, if approved. Thus far, U. S. airlines have ordered 44 British-French Concordes, in case the U. S. program is delayed; U. S. airlines have also ordered 44 American built SST's. Foreign airlines have ordered 52 American built SST's. Each firm has deposited $100,000 per plane with the FAA.[35]

Air cargo facilities. Where possible, air cargo handling companies are enlarging their present facilities; UAL, PAA, etc., are planning new air cargo terminal buildings. The trend is to expand and automate air cargo facilities to meet the increasing volume.

Air cargo sales and service. Air cargo sales are expected to increase at a rapid sustained rate for the next 5-10 years. Service will undoubtedly become better and more extensive as the new, larger jet transports are built to carry more cargo than ever before. Air cargo volume seems to be just getting started.

---

[35]"Latest on the 'Superjet'-Why U. S. is Lagging," U. S. News and World Report, 59:108-109, November 1, 1965.

V. SUMMARY

Air cargo volume did not become significant, until troops and supplies were needed for World War II. After the War, air cargo volume grew at a steady pace, because aircraft were redesigned for carrying cargo and the demand for shipping cargo by air continued. Industry changed its attitude about shipping its products by air, when they found that due to the overall costs saved, this form of transportation was actually profitable. The Harvard and Stanford research studies of air freight illustrate this point very well.

Today, air cargo volume has rapidly increased to the point that it has outgrown its facilities, aircraft, and handling personnel. New aircraft and facilities are being planned for the future; however, an air cargo security problem now exists. Most predictions indicate that air cargo volume will increase even more in the next 10 years.

The situation now is this: The airlines and air freight forwarders have advertised the benefits of shipping by air, and the public has accepted their "offer," by shipping a record volume of goods by air. Now it is up to the air cargo handling companies to honor their "bargin," by providing fast, efficient, and safe passage for the public's goods. One main reason shippers use air transportation is because it reduces the risk of loss, damage, theft, etc.; therefore, by accepting the business, air cargo handling companies have a duty to provide adequate air cargo security for the goods as long as they are in their possession.

This air cargo security challenge is not being adequately met today by air cargo handling companies. If they continue to delay in meeting this challenge, it will mean loss of business to various forms of

surface transportation (rail, motor freight, etc.) that are improving their services and expanding at a rapid rate. Unless air cargo handling procedures are improved and air cargo thefts and losses are controlled, other more efficient forms of freight transportation will arrest the fantastic growth of air cargo volume. A good air cargo security program is a necessity for all air cargo handling companies, but more important, it is also good business.

CHAPTER III

INTERNATIONAL REGULATION OF AIR TRANSPORTATION

Selected international air transportation agreements are presented in this chapter for several important reasons. The agreements are historically significant, because they demonstrate that there have been attempts by many nations to cooperate with each other regarding various aspects of international air transportation, e.g., air cargo operations, air sovereignty rights, etc. Although there are numerous air transportation agreements between many nations, there are presently none of the following aids to international air cargo theft and loss investigation in existence: an international code of criminal law dealing with air cargo theft investigation, investigators with international jurisdiction to investigate air cargo thefts, and an organization that specifically collects and analyzes information on all significant international air cargo thefts.[36] Also, the agreements give the reader a better understanding of the complexity of international air cargo operations.

I. PARIS CONVENTION OF 1919[37]

When World War II ended, the Allied powers, in an effort to establish an international air transportation agreement, met in Paris, France,

---

[36] Law enforcement agencies keep air cargo theft records, but they do not separate them from other crimes; there is no organization which collects and systematically analyzes air cargo thefts and losses exclusively.

[37] Speas, op. cit., p. 5.

on October 13, 1919, and many formally signed a convention establishing certain principles. Some pertinent articles are presented below:

Article 1. This article gave complete sovereignty to all air space (mother country, colonies, and adjacent territorial waters) to the respective states.

Article 2. This article allowed freedom of passage above respective states without distinction of nationality; however, conditions in other articles allowed each state to establish restrictions of air corridors and forced landings, which resulted in Article 1 being reinforced and Article 2 being minimized.

Eventhough the United States did not officially ratify the Paris Convention agreements, Article 1 became a basic principle of international air law, which was observed by all nations.

II. AIR COMMERCE ACT OF 1926[38]

This Act was the first official statement made by the United States concerning its international air policy, a statement of air sovereignty similar to the Paris Convention. A provision gave foreign civil aircraft the right to navigate over United States territory, if authorization was first obtained from the Secretary of State and if reciprocal rights were granted to United States aircraft.

---

[38] Ibid., p. 6.

III. HAVANA CONVENTION OF 1928[39]

The Pan American Convention on Commercial Aviation, meeting in Havana, Cuba, established a 37-article agreement; a few pertinent articles are presented below:

Article 1. This article recognized the sovereignty of states over the air space above their territories and territorial waters.

Articles 4 & 5. These articles provided for innocent air passage over foreign states, but under restrictions imposed by the foreign states.

Article 6. This article required mandatory landing, for any aircraft violating restricted air space, at the nearest unrestricted airport.

This agreement was later ratified by the United States, Dominican Republic, Guatemala, Mexico, Nicaragua, and Panama, but 18 North Central, and South American countries signed the agreement in 1928.

IV. WARSAW CONVENTION OF 1929[40]

On October 12, 1929, 33 countries drafted the 41 articles comprising the agreement in an effort to standardize a number of policies and procedures in international air transportation; however, the United States (not a participant) did not ratify the agreement (with two modifications) until June, 1934.

In 1947, the member organizations of the International Air Transport

---

[39] Ibid.

[40] International Criminal Police Organization, Theft of Goods During Their Carriage by Air (Report of the International Criminal Police Organization, 31st Session of the General Assembly. Paris; 1962), pp. 2-7.

Association (IATA) voted against revising the Warsaw Convention; however, documents signed at The Hague on September 28, 1955, modified several articles in an effort to standardize certain rules relating to the international carriage of goods by air.

Carriage of Goods

Article 5. This article states that the shipper must give the airline an "air consignment note."

Article 6. This article states that the air consignment note should be made out by the shipper in three original parts and be handed over with the goods. The first part, marked "for the carrier," is signed by the shipper. The second part marked "for the consignee" is signed by the shipper and the airline and must accompany the goods. The third part, signed by the airline, is handed by him to the shipper after the goods have been accepted. The carrier must sign on acceptance of the goods. The airline's signature may be stamped; the shipper's may be printed or stamped. If the shipper asks the airline to make out the air consignment note, the airline shall be deemed, subject to proof to the contrary, to have done so on behalf of the shipper.

Article 8. This article states the particulars which the consignment note must contain: date and place of its execution; place of departure and destination; agreed stopping places (alteration due to necessity has no effect of depriving the carriage of its international character); name and address of the shipper, first carrier, and the consignee (if required); nature of the goods; number of packages, method of packing, and any identifying marks on them; weight, quantity and volume or dimensions of the goods; apparent condition of the goods and of the

packing; freight (if agreed on); date and place of payment, and person who is to pay it; if payment on delivery, price of the goods and amount of expenses incurred (if necessary); amount of the value declared in accordance with Article 22(2); number of parts of the consignment note; documents handed to the carrier to accompany the air consignment note; time fixed for the completion of the carriage, brief note of the route to be followed (if agreed upon); and a statement that the carriage is subject to the rules relating to liability established by this convention.

Article 11. The air consignment note is prima facie evidence of the contract of the receipt of the goods and of the conditions of carriage. The statements in the note concerning the weight, dimensions, and packaging of the goods, in addition to those relating to the number of packages, are prima facie evidence of the facts stated. Those statements concerning the quantity, volume, and condition of the goods do not constitute evidence against the carrier's note to have been checked by him in the presence of the shipper or relate to the apparent condition of the goods.

Article 13, Paragraph 3. If the airline admits losing the goods, or if the goods have not arrived at the expiration of seven days after the date on which they ought to have arrived, the consignee is entitled to put into force against the airline the rights which flow from the contract of carriage.

Article 14. The shipper and the consignee can respectively enforce all the rights given them by Articles 12 and 13, each in his own name, whether he is acting in his own interest or in the interest of another, provided that he carries out the obligations imposed by the contract.

Liability of the Carrier

Article 18. The carrier is liable for damage to any goods, if damage took place during the carriage by air. "Carriage by air" means the period that the goods are in the charge of the carrier, whether the goods are in the aircraft, warehouse, or wherever they may be. "Carriage by air" does not include any carriage outside the airplane, unless it is so stipulated in the contract. If it is so stipulated and damage does occur, any damage is presumed, subject to evidence to the contrary, to have occurred during the carriage by air.

Article 20, Paragraph 2. In the carriage of goods, the carrier is not liable, if he proves the damage was caused by negligent pilotage or negligence in the handling of the aircraft, or in navigation, and that in all other respects, he and his agents have taken all necessary measures to avoid the damage.

Article 22, Paragraph 2. In the carriage of goods, the liability of the carrier is limited to a sum of 250 francs per kilogram, unless the shipper has made, at the time when the package was handed over to the carrier, a special declaration of the value at delivery and has paid a supplementary sum if the case so requires. In which case the carrier will be liable to pay a sum not exceeding the declared sum, unless he offers proof that the sum is greater than the actual value to the shipper at delivery.

Article 22, Paragraph 4. The sums mentioned above refer to the French franc consisting of 65, ½ milligrams of gold of millesimal fineness 900. These sums may be converted into national currency in round

figures.[41]

Article 25. The carrier cannot avail himself of the provisions of this convention which exclude or limit his liability, if the damage caused by his willful misconduct or by default, in accordance with the law of the court seized of the case, is considered to be equivalent to willful misconduct. Similarly the carrier cannot avail himself of said provisions, if the damage is caused as aforesaid by any agent of the carrier acting within the scope of his employment.

Article 28. An action for damages must be brought, at the plaintiff's option, in the territory of one of the high contracting parties, either before the court having jurisdiction where the carrier is ordinarily resident, or has his principal place of business, or has an establishment by which the contract has been made, or before the court having jurisdiction at the place of destination. The method of calculating the period of limitation shall be determined by the law of the court seized of the case.

It is interesting to note that the plaintiff has a choice of four courts, provided the court he chooses is on the territory of one of the high contracting parties. Also the Warsaw Convention does not state anywhere that the decisions of courts of the high contracting parties must be enforced. Theoretically, a plaintiff who won a judgment in a court in a country other than where the judgment has to be executed must institute proceedings to enforce the judgment by asking for an "exequatur." This is a traditional procedure found in international

---

[41] One French franc = $.20 (U. S.) cents.

civil law for having a decision given in one country executed in another.[42]

The liability that has been under discussion, civil liability, arises from contractual obligations. When an article is stolen during carriage, the carrier is liable in civil law; therefore, carriers insure themselves against such liability. The only persons responsible in criminal law are the actual perpetrators of the crime; the airlines are not criminally responsible for air cargo thefts.

V. CHICAGO CONFERENCE OF 1944[43]

In 1944, because the scope of international air transportation had increased in importance during World War II, the Allied nations, except Russia (whose agents were recalled enroute), met in Chicago, Illinois, to establish international agreements for the regulation of civil air transportation, and three separate agreements emerged: (Provisional) International Civil Aviation Organization, International Air Transport Agreement, and the International Air Services Agreement.

(Provisional) International Civil Aviation Organization. This organization was established to represent all participating nations in administering the terms of international air agreements and to develop and

---

[42]Exequatur is a Latin word meaning "let it be executed." In French practice, this term is subscribed by judicial authority upon a transcript of a judgment from a foreign country, or from another part of France, and authorizes the execution of the judgment within the jurisdiction where it is so indorsed. Henry Campbell Black, Black's Law Dictionary (St. Paul: West Publishing Co., 1951), p. 682.

[43]Speas, op. cit., pp. 7-8.

improve international air transportation. In 1947, the "Provisional" was dropped from the name, thus the ICAO. Article 44 of the Chicago Agreement presents several ICAO aims, among others: to insure the safe and orderly growth of civil aviation throughout the world; to encourage the arts of aircraft design and operation for peaceful purposes; to meet the needs of the world population for safe, regular, efficient, and economical air transportation; to promote safety of flight in international air operations; etc. From its Montreal, Canada, headquarters, the ICAO has aided international air transportation greatly, by holding annual assemblies, encouraging further agreements, and completing studies on international air cargo activities.

International Air Transport Agreement. This agreement contains the well-known "five freedoms," and its significance lies in the fact that the five freedoms became known as they were incorporated on a modified basis into other agreements. The Agreement was ratified by only a few nations; the United States withdrew its ratification. The five freedoms are found in Section 1, Article 1. Each state grants to the other contracting states the following freedoms of the air concerning scheduled international air services: the right to fly across its territory without landing; the right to land for non-traffic purposes; the right to put down passengers, mail, and cargo taken on in the territory of the state whose nationality the aircraft possesses; the right to take on passengers, mail, and cargo destined for the territory of the state whose nationality the aircraft possesses; and the right to take on passengers, mail, and cargo destined for the territory of any other contracting state and the privilege to put down passengers, mail, and

cargo coming from any such territory. In regards to the third, fourth, and fifth freedoms, the undertaking of each contracting state applies only to through services on a route constituting a reasonably straight line out from and back to the homeland of the state whose nationality the aircraft possesses.

International Air Services Agreement. This agreement allows civil aircraft of signatory nations to fly across the territory of other signatory nations, either without landing or landing for non-traffic reasons. There were a number of conditions attached to the Agreement concerning military problems and the right of nations to establish designated flight corridors for transit aircraft and to assess reasonable fees on landing aircraft.

VI. BERMUDA AGREEMENT OF 1946[44]

On February 11, 1946, the United States and Great Britain met in Bermuda and ratified the International Air Services Transit Agreement, thus filling out the air laws for the two countries by specifying modified versions of the five freedoms (International Air Transport Agreement) as follows: Freedom 1 and 2 was included without modification. Freedoms 3, 4, and 5 were modified; the cargo capacity provided by airlines of both nations was to be unrestricted, unless demand and volume became unbalanced. IACO was to settle all disputes.

---

[44] Ibid., p. 9.

VII. SUMMARY

As is evident from reading this chapter, there have been many attempts to regulate international air transportation. Some conferences and their resulting documents have even discussed air cargo, reaching agreement on various aspects of the subject. There are complex procedures and regulations regarding the handling of air cargo, obtaining a state's permission to fly over its land, etc., but there are no regulations regarding the investigation of international air cargo thefts and losses. Because the volume of air cargo has increased rapidly and seemingly taken the international participants by surprise, aspects regarding the investigation of air cargo thefts and losses will have to be agreed upon in a conference in the near future, or a continuation of the problem will add to the already complex nature of air cargo operations.

CHAPTER IV

REVIEW OF THE LITERATURE

The specific problem of air cargo thefts and losses has, unfortunately, been the subject of little literature. There have been no books published on the specific subject of air cargo thefts and losses; however, there have been three journal articles published that deal with the subject. One book on airline security and four journal articles mention air cargo thefts and losses. Seven books and one booklet dealing with security administration and related topics have sections applicable to air cargo thefts and losses.

I. LITERATURE ON AIR CARGO SECURITY

Journal articles. Mr. R. C. J. Gordon, an underwriting member of Lloyd's of London Insurers, wrote an article on the "Problems of Air Cargo Security," in which he vigorously attacked air cargo security.[45] Mr. Gordon stated that the problem of air cargo security had been discussed several times in recent years, but there were few signs that airline or airport management personnel were serious enough about it to actually do something to prevent air cargo thefts.

In making numerous recommendations based on observations made at a few airports, Mr. Gordon stated that it should be possible to use air

---

[45] R. C. J. Gordon, "Problems of Air Cargo Security," Security Gazette, 6:47-48, February, 1964.

cargo vehicles only within the boundaries of the apron (runway adjacent to terminal), to limit access of trucks and personnel to the cargo area, to have the right to search all personnel and vehicles entering the air cargo area, and to patrol the fences around the cargo area. In short, the security of an airport should be run like a dock security program at a well-run port.

To insure good air cargo security, several other points were made by Mr. Gordon: The airline should not hire any cargo handling personnel with a previous criminal record. Every airline should have its own security department to transport all valuable cargo, including registered mail, to and from the aircraft. All airlines should have a "strong room" for the storage of valuable goods. All airlines should have the right to search all personnel who leave the air cargo area after working hours.

Because Mr. Gordon's article was based on little, if any, documented scientific research, and because he made such broad, sweeping statements concerning air cargo security, he left himself "wide open" for criticism. It was not long in coming.

In the very next issue of the same journal, at the editor's request, a reply to Mr. Gordon's article was written by Mr. Gordon Fraser, at that time, Chairman of the Airline Security Officers' Association and head of Quantas' (Australia's national airline) security division for over 16 years. After stating that Mr. Gordon had discussed some very good points in his article and that the Airline Security Officers' Association was pleased to know that an underwriter from Lloyd's was interested in air cargo security, Mr. Fraser began his dissection of

Mr. Gordon's article.[46]

Mr. Fraser pointed out that it was not always possible or practical to model air cargo areas after well-run dock security programs at a port. The passengers and cargo are often transported on the same aircraft, making it impractical for the aircraft to make two stops at an airport, one at the passenger terminal and one at the cargo terminal. Some airports do not have a separate cargo terminal, and it is necessary to store the cargo in a room just off the ticket counter. Passengers must have access to the terminal and their baggage. Airline schedules would have to be changed to allow an aircraft to unload cargo at a separate location from the passenger terminal.

Regarding the recommendation that no airline should hire any cargo handling personnel who has a criminal record, Mr. Fraser stated that airline personnel department officials would like to know how this could be done on a practical and economical basis. The financial cost of checking each cargo handler's background thoroughly for a criminal record would be prohibitive, not to mention the manpower that would be needed.

Concerning Mr. Gordon's idea about each airline having its own security service which would be responsible for the transport of all valuable cargo, including registered air mail to and from the aircraft, Mr. Fraser stated that this would be possible, only if a large security staff could be maintained 24 hours a day at each airport through which the airline operated. Restrictions of manpower and financial cost make this suggestion impractical at this time.

---

[46]Gordon S. Fraser, "Airline Security Officers Answer Insurance Challenge," Security Gazette, 6:87-88, 90, March, 1964.

Mr. Fraser also stated that most major airlines have the right to search their air cargo personnel as they leave the air cargo area. In some airlines this management prerogative is a condition of employment and is acceptable to the union. After discussing some of Mr. Gordon's other points, Mr. Fraser thanked Mr. Gordon for his interest in air cargo security and said that he hoped Mr. Gordon would continue to give the problem his close study. It appeared from what Mr. Fraser said that Mr. Gordon's article was the first occasion that British interest had been shown in the problem of air cargo security by a responsible representative of the underwriters.

Another article, written by a graduate student in the School of Police Administration and Public Safety at Michigan State University, surveys the field of air cargo security.[47] The article is based on a research study involving approximately 123 airlines, several trade associations, and two law enforcement agencies. Over 19 airlines, all trade associations, and the two law enforcement agencies responded to inquiries for information on air cargo thefts and losses, and problem areas in air cargo security.

After discussing the history of air cargo, the article points out that industry's role towards air cargo has changed. In the past, only special goods traveled by air; today, almost every product travels by air in an effort to save "total costs." Instead of keeping an article in a warehouse until it can be sold, business found that it is cheaper to

---

[47] Harvey T. Harris, Jr., "Air Cargo Security," Industrial Security, 9:4-15, August, 1965.

send the goods by air, thereby eliminating the storage period.

Investigation of air cargo thefts is discussed in an effort to show some of the many problems that are involved in this aspect of air cargo security. Because the Warsaw Convention of 1929 requires seven days to lapse before a claim can be made on missing air cargo, security officials and other interested parties often do not get word of a theft, until the trail of the thief is "cold."

Several air cargo security recommendations were made: a visitor identification and control system should be in use in all cargo areas; strangers should not be allowed to roam around the air cargo area. If a stranger is spotted, a guard or an employee should challenge him to determine his reason for being in the area. Police methods, such as patrol dogs and fingerprinting of employees, should be utilized more often, where the circumstances permit. A thief will think twice before he tries to steal air cargo from a warehouse that is guarded by a police dog and an alert security guard. Often a man will run from a guard on foot, but he will usually hesitate before running from a police dog, because he cannot anticipate what the dog will do. Fingerprinting is useful to detect crime, to "weed out" undesirables, and to identify accident victims.

The shipper, consignor, consignee, airline, and air freight forwarder have a part in controlling air cargo thefts and losses. In many cases the security is adequate, but existing operating procedures need to be revamped to keep up with the increase in volume of air cargo.

II. LITERATURE ON AIRLINE SECURITY WHICH MENTIONS AIR CARGO SECURITY

Book. There has been only one book written on airline security; however, it devotes portions of several chapters to air cargo thefts and losses.[48] In his book, Donald Fish, possibly the first designated airline security director in the world, describes his 14 years with the British Overseas Airways Corporation (BOAC). Mr. Fish, who has been referred to as the world's most famous airline security expert,[49] cites several case histories of air cargo thefts and losses and gives several insights as to future trends in the area of airline security.

Mr. Fish explains how he started from "scratch" and built an airline security organization which has dealt with air cargo thieves from New York to Hong Kong. His airline security personnel were especially trained to spot the special type of crime that flourishes under the peculiar conditions of air travel.

Often it is hard to determine exactly where a theft took place. If an aircraft stopped 10 times between London, England, and Sydney, Australia, and a theft was discovered when the plane arrived in Sydney, presently there is no law which allows anyone to make a thorough investigation at each airport at which the aircraft loaded or unloaded cargo enroute. Mr. Fish submits that this situation demonstrates a need for a code of international criminal air law. He further states that if the

---

[48] Fish, op. cit., 224 pp.

[49] Tom Tullett, Inside Interpol (London: Frederick Muller, Ltd., 1963), pp. 137-138.

airlines are going to cope with the peculiar type of crime plaguing them now, it is the airlines' security forces who will have to do the investigating work.

Some of the most interesting segments of the book describe how Mr. Fish solved the cases which he personally took an interest in, for one reason or another. Often, the time and place of an air cargo theft could not be determined; therefore, pertinent facts had to be deducted from the case's known facts. In one case, Mr. Fish actually committed the crime hypothetically several times, until he knew the amount of time the actual crime took. After he knew the amount of time required to commit the crime, there was only one location on that aircraft's flight where the crime could have occurred. Mr. Fish was particularly expert in determining the time and place of air cargo thefts, a very important skill in the investigation process.

Journal articles. An interesting article on "Australian International Airline Security" was written by Mr. Gordon Fraser, Chief Security Officer of Quantas (previously mentioned).[50] Mr. Fraser mentions air cargo thefts and states that Quantas has handled as much as 21 tons of gold bullion in one weekend, Australia being a gold mining country.

In the period between 1945-1948, the major airlines saw a need to appoint full-time security officers, in addition to regular airport guards. These security officers found that a thorough investigation was required

---

[50]Gordon S. Fraser, "Australian International Airline Security," Police, 8:30-32, September-October, 1963.

in air cargo pilferage cases and similar matters. Mr. Fraser also mentions that most of the larger airlines appointed a security director who had previous police or security investigative experience, such as Scotland Yard detective, Federal Bureau of Investigation (FBI) agent, Australian police officer, Dutch security expert, etc. This article is similar to an article Mr. Fraser wrote previously for another journal.[51]

In an article titled, "Specialist Guard on Airports," the Aviation Civil Constabulary explains how it guards six airports in England and Wales, four in Scotland, and one in Northern Ireland, with a complement of 341 men and women.[52] The most activity occurs at the London Airport, where each year about 12,000 tons of air mail and 60,000 tons of air freight pass through it. Problems occur when it becomes necessary to store extremely valuable shipments overnight for one of the 44 airlines now using London Airport.

The Constabulary trains its personnel in its own recruit school, which is staffed by an inspector and a sergeant; the school also provides refresher courses as they are needed. Each year about 500 cases of "bad" security are brought to the attention of the airport tenants by patrolling guards, but the total amount of stolen property at the London Airport is only approximately $196,000 a year.[53]

---

[51]Gordon S. Fraser, "Australian Airline Security," Security Gazette, 1:301-303, September, 1959.

[52]"Specialist Guard on Airports," Security Gazette, 3:11-12, January, 1961.

[53]In the January, 1966, Security Gazette, page 40, it states that the Civil Aviation Constabulary will be replaced by the British Airports Authority Constabulary on April 1, 1966. This sworn police force will perform the same duties as the former organization and will be commanded by the head of the former organization.

An interesting article, written by Mr. George Dorian, Chief of Special Officers, Los Angeles Department of Airports, describes how 26 men provide the security for the Los Angeles International Airport.[54] Owned by the City of Los Angeles, the airport has 20 passenger and two all-cargo airlines, several air freight forwarders, and many other support services located there. Theoretically, each tenant is responsible for the security of its air cargo area; however, a system of informal cooperation, regarding security, has evolved between the Airport Police and the tenants.

Mr. Dorian reported that his department recovered 113 mail bags and 552 units of air cargo in 1963 (conservatively valued at $130,000), which was dropped from trucks or left unattended. His biggest problems are surveillance and patrol of the airport's 3,000 acres. Mr. Dorian also cited a need for an airport security association, which would be a stride towards truly adequate airport security. There must be increased recognition in the fact that security plays a vital role in operating any major airport.

III. LITERATURE ON SECURITY ADMINISTRATION AND RELATED TOPICS APPLICABLE TO AIR CARGO SECURITY

Books. In his book on industrial security, John R. Davis of John R. Davis Associates, Plant Protection Consultants, devotes three chapters to subjects that are applicable to air cargo security.[55] In one

---

[54]George Dorian, "Airport Security at Los Angeles International," Security World, 1:40-43, November, 1964.

[55]John R. Davis, Industrial Plant Protection (Springfield: C. C. Thomas, Publisher, 1957), pp. 109-127, 260-269, 298-305.

chapter which contains information on the prevention of burglaries, he discusses how to prevent burglars from entering doors, windows, and other openings in a building. Lighting and burglar alarm signs on buildings and windows are very effective burglary deterrents. An interesting account of how burglars "jimmy" locks on doors and windows is presented with several illustrations.

Another chapter on employee and visitor identification systems discusses badges, identification cards, and how to select a system that is most effective for different kinds of operations. Key card systems are mentioned, i.e., an identification card that not only carries a description and photograph of the employee, but also contains a coding symbol which activates the opening of a turnstile or door. A key card system relieves a guard from checking identification cards, so he can be used elsewhere. Visitors, Mr. Davis states, should be under some escort control or have a pass that they receive when they enter the area and surrender when they leave.

In a chapter on master key systems, Mr. Davis urges that such a system should be established as soon as possible and that it is very useful, especially in emergency situations, when a key may be urgently needed. An interchangeable core system of locks makes it no longer necessary to call in a locksmith to remove a lock from a door or change a combination, because a core can be removed from one door and inserted into another door by anyone with a control key. Just by changing a lock's core, new security is achieved without any additional cost, either for a locksmith or a new lock.

Mr. S. J. Curtis devotes a chapter of his book to employee security

education programs, a subject that is applicable to the air cargo security field.[56] Since the financial cost would prohibit most, if not all, airlines from putting a guard at each airport along the route to guard air cargo, the burden of air cargo security falls directly on the air cargo employees. Employees must be educated in security, so they can discharge their responsibilities and protect the cargo at the same time. The employee is the first line of defense against air cargo theft and loss.

Mr. Curtis, widely known for being a very creative and imaginative person, was a former security director of J. L. Hudson's department store in Detroit, Michigan, and has had a large amount of experience in organizing and directing security education programs. In his discussion of the theory of security education programs, he outlines who should be educated and the approach to use for each level in the company organization; top management, middle management, first line supervisors, and regular employees. He also discusses the planning that must go into an employee security education program. How to present the material, where and when to present it, how to expose all employees to the material, what the overall objectives of the education program are, etc., are all decisions that must be made in the planning stage of such an education program.

Actual examples of employee security education programs are given by Mr. Curtis. Lectures, movies, posters, demonstrations, created systems checks, role playing, booklets, memos, and exhibits are some of the numerous types of programs that can be conducted to improve security

---

[56] S. J. Curtis, Modern Retail Security (Springfield: C. C. Thomas, Publisher, 1960), pp. 612-731.

in a company. The actual details of the programs depend upon the particular company and the ingenuity of the security director.

In their book, How to Stop Pilferage in Business and Industry, Charles P. Rudnitsky and Leslie M. Wolff, two well-known private detectives who own their own detective agency, explain that industrial larceny is one of the most costly and fastest growing offenses against present day society.[57] Because more companies are very large and autonomous and management does not have to pay out of its own pocket when a loss occurs, the thief operates with little or no fear of getting caught for minor thefts. Management just writes the thefts off as a loss, and the thieves are usually never detected; management, in doing this, indirectly condones the behavior of the thieves.

The authors also state that the industrial thief can be stopped, if proper measures are taken. By knowing the thief's method of operation (M. O.), adequate security precautions can be taken to control thefts. If the thief can expect quick discovery of his actions by management, he is less likely to attempt a theft.

Two facts basic to all industrial thefts are these: opportunity and value. The thief must have the opportunity to commit the theft, and the item stolen must have some value to him. He must also be able to easily convert the stolen item into cash or to use it himself. A thief may steal for one particular reason; later, when he finds that the theft was never detected, he continues to steal more and more until he is

---

[57]Charles P. Rudnitsky and Leslie M. Wolff, How to Stop Pilferage in Business and Industry (New York: Pilot Industries, Inc., 1961), 74 pp.

caught. Little can be done to reduce the value of air cargo shipments; however, alert security officials can reduce the opportunity that a thief has to steal air cargo.

The internal auditing process, a check of records, is a vital part of air cargo operations. Victor Z. Brink, Assistant Controller, Ford Motor Company, and Bradford Cadmus, Managing Director, the Institute of Internal Auditors, devoted one chapter of their book to internal auditing in the air transport industry.[58] In describing the various problems of auditing and internal control, the chapter discusses cargo handling and cargo revenues, along with other topics such as accounting controls, cash handling, equipment and supplies, etc.

The authors state that the rapid growth of the airline industry "outran" many airline companies' internal auditing procedures. No one organization could have all the controls and procedures mentioned in their chapter, but there is a need on the airlines' part to keep-up their auditing and internal control procedures as business expands.

The station load reports show the weights of air mail and air express. Each shipment of air freight has a serially numbered air bill or airway bill (if the shipment is to or from a foreign country). These bills are forwarded to the central accounting office by the originating station. At the central accounting office, the bills are matched with delivery receipts, which have been similarly forwarded from the destination point. Also, the authors point out that adequate internal controls

---

[58]Victor Z. Brink and Bradford Cadmus, Internal Auditing in Industry (New York: The Institute of Internal Auditors, 1950), pp. 389-404.

should be established for air express and air freight shipments that are carried on a C.O.D., prepaid, or a credit basis. Air freight serially numbered air bills should be checked thoroughly, because many opportunities for fraudulent practices, which exist in the case of passenger traffic, also apply to air freight.

Another book, which is applicable to air cargo thefts and losses, was written by Paul E. Knight, presently a security officer for Pan American World Airways (PAA), and Alan M. Richardson. Knight and Richardson state that two basic principles govern the industrial security function: intelligence, which is knowledge; and control, which is the application of a directing influence. The main function of knowledge is to make any action taken effective; action taken before being informed runs the risk of being harmful or wasteful. Intelligence is knowledge, and it is the body of information which is "the necessary precondition of effective action." Control is directing an influence so that tendencies remain within established limits.[59]

The authors also state that security supervision must know company policy and procedure and understand the employees thoroughly. Only an understanding of the company's aims, objectives, and attitudes will insure an almost complete integration of security personnel into the overall company operation. Subordinate security personnel will often reflect their superior's attitude, when the security system is well integrated with company policies and procedures. An important function

---

[59] Paul E. Knight and Alan M. Richardson, The Scope and Limitation of Industrial Security (Springfield: C. C. Thomas, Publisher, 1964), pp. 16-19.

of security is to possess an appreciation of its duties in relation to the entire company and to seek to avoid conflict with other company departments. Because security must operate through people, security supervision must have the cooperation and will of the people to help.[60]

Dr. Leon H. Weaver has two chapters in his book that are somewhat applicable to air cargo personnel. Personnel investigations, which often include a background investigation and a polygraph test (erroneously called lie detector), are discussed in connection with the investigation of potential employees. The polygraph is used by business to investigate thefts, subversive activities, and the habits of individuals.[61]

Another chapter of Dr. Weaver's book discusses various opinions that management has, regarding the investigative process and the handling of known subversives who work for the company. The use of outside investigative companies to investigate potential employees, as opposed to using the company's own security department, is also thoroughly discussed.[62]

Mr. B. W. Gocke discusses theft control, from the viewpoint of why thefts occur in industry. He lists the following reasons: Some companies state that bad public relations may result if employees are prosecuted for petty thefts, because the public usually sides with the employee against the big, impersonal company that "can afford the loss."

---

[60] Ibid., pp. 87-89.

[61] Leon H. Weaver, Industrial Personnel Security (Springfield: C. C. Thomas, Publisher, 1964), pp. 173-251.

[62] Ibid., pp. 405-623.

Accounting methods in many companies are not designed for the express purpose of pinpointing thefts. Losses remain undisclosed or hidden in another budget item, such as "waste," etc. The physical security of many companies is lax, e.g., lack of gate control of personnel, visitors, and vehicles. Management officials in several companies have weak security systems out of fear of costly civil suits resulting from false arrests. This type of management action avoids the theft and loss issue. The question of how much theft control or protection is needed is largely determined by the law of diminishing returns, i.e., to that point beyond which the cost of adding one more protective unit will be greater than the resulting savings.[63]

Booklet. The International Union of Marine Insurance published a booklet titled, "Cargo Loss Prevention Recommendations," which is primarily for the following readers: shippers, consignees, ocean carriers, port and terminal operators, air cargo terminal operators, and marine underwriters.[64] In the section that mentions air cargo terminal security, several areas dealing with theft and loss prevention are discussed.

Receipt procedures of air cargo are considered, along with storage procedures. These are two critical areas, because damaged cargo should either not be received by the cargo supervisor, or its condition should

---

[63]B. W. Gocke, Practical Plant Protection and Policing (Springfield: C. C. Thomas, Publisher, 1957), pp. 18-19.

[64]Committee on Cargo Loss Prevention, Cargo Loss Prevention Recommendations (New York: International Union of Marine Insurance, 1964), pp. 26-30.

be noted carefully. If received for temporary storage, until it can be claimed by the shipper or consignee, a broken or partially opened container should be kept in a locked area, preferably in a locked strong room. Loading and unloading air cargo is important, because many cargo thefts and losses occur during this time. Protection of cargo from the weather should be provided between the terminal and the aircraft.

The article concludes with the following recommendations: Report all losses promptly. Screen air cargo handling personnel carefully. Maintain a security patrol when the air cargo terminal is closed. Try to avoid delays in transit. This booklet is one of the few booklets on air cargo thefts and losses that is available to the public. Almost every airline and air freight forwarder has a manual of procedure for air cargo operations; but these are not available to the public.

CHAPTER V

METHODOLOGY

The purpose of research is to determine answers to problems by applying scientific procedures to certain facts. Scientific procedures were developed in order to increase the likelihood that the information gathered will be relevant to the problem being studied and will be reliable and unbiased. There is no guarantee that any given research study will produce relevant, reliable, and unbiased information; however, scientific research procedures are more likely to do so than any other method known to man.[65] This chapter is a description of the scientific research procedures used in this study.

I. SOURCES OF INFORMATION

Exploratory study. An exploratory study was conducted to increase the writer's familiarity with air cargo operations, thefts, and losses, and to provide a census of problems in air cargo security, i.e., these problems regarded as important by air cargo security officers working in the field. The main purpose of the exploratory study was to discover ideas and insights into the problem areas of air cargo security. Details of this study will be discussed in section III of this chapter.

---

[65] Claire Selltiz and others, Research Methods in Social Relations (revised one-volume edition; New York: Holt, Rinehart, and Winston, 1965), p. 2.

Survey of the literature. A survey was made of all relevant literature, including the following sources: books; publications of the government, learned societies, and other organizations; periodicals; encyclopedia articles; unpublished materials; and newspapers. The main purpose of the review of the literature was to locate hypotheses that might serve as leads to further investigation in the field; however, little research of any significance has been done on air cargo thefts and losses. One method, sometimes rewarding, of developing ideas and insights about a problem is to attempt to apply to the area in which one is working concepts and theories developed in completely different research contexts. With this thought in mind, a survey was made of studies in several social science fields, not immediately relevant to air cargo security (economics, political science, psychology, and sociology), with no immediately useable results.

Questionnaire sent to airlines.[66] In the aviation industry, there are two categories of airline operations: scheduled airlines and unscheduled airlines. Since the unscheduled airlines often are relatively small in size, operate according to demand, and are less likely to be able to furnish the information needed for this study, they were not included in it. Since the major scheduled airlines are larger, operate on a scheduled basis regardless of demand, and are more likely to be able to furnish the information needed for this study, one segment of them was studied.

---

[66] Official Airline Guide (world-wide edition; Chicago: Reuben H. Donnelley, Publisher) 21:A-5-A-10, May, 1965.

Almost all major scheduled airlines belong to either the Air Transport Association of America (ATAA) or the International Air Transport Association (IATA). Since the IATA has 88 members, operating in numerous countries throughout the world, as opposed to the ATAA, with 43 members operating mostly in the United States, the study was based on the IATA members. The only modifications were the following: two scheduled all-cargo carrying airlines in the United States were included in the study; and the ATAA members, who were also members of the IATA, were included in the study. A total of 90 airline questionnaires were air mailed to 90 airlines throughout the world on or about August 16, 1965: 88 IATA members and two all-cargo carrying airlines.

Questionnaire sent to air freight forwarders. Since the main emphasis of this study is on the airlines' handling of air cargo security, only a sample of air freight forwarders were studied. The members of the Air Freight Forwarders Association[67] were included in the study according to the following criteria: They were organized, major air freight forwarders, easily accessible, and recommended by an official of the IATA[68] and a member of the United States Congress[69] as a logical group to study. A total of 17 questionnaires were sent to the 17 members of the Air Freight Forwarders' Association on or about August 16, 1965.

---

[67]Letter to writer from Louis P. Haffer, Executive Vice President and Counsel, Air Freight Forwarders' Association, August 5, 1965.

[68]Letter to writer from Don B. Pengelly, Information Officer, International Air Transport Association, June 30, 1965.

[69]Letter to writer from the Honorable Charles E. Chamberlain, D-Michigan, House of Representatives, United States Congress, August 30, 1965.

Letter sent to newspapers. Occasionally, a newspaper will publish an account of an air cargo theft or loss. To obtain as many of these accounts as possible, a form letter (see APPENDIX A) was sent to "The Editor" of 34 major newspapers throughout the world (see APPENDIX B), selected according to size of circulation and knowledge of the writer.[70] The letter asked for information (copies of the accounts and photographs) on air cargo thefts and losses. A total of 12 newspapers responded, approximately 35%, but only one (the London Daily Express) sent copies of published accounts. Several newspapers offered to sell the writer pictures that were available on the subject, and others offered advice about how to get more information, which was very helpful.

Other letters sent. Over 50 other letters were sent, asking for current information on various aspects of air cargo thefts and losses, to the following (partial) list of persons and organizations: airline and air freight forwarder associations; commercial aircraft manufacturers: law enforcement agencies; professional law enforcement and security associations; authors of publications pertaining to air cargo; a library; an electronic equipment testing laboratory; airline, air freight forwarder, and insurance executives; electronic protection equipment manufacturers; airline security officers; three journal editors; a fire protection professional association; various federal government agencies; a United States Congressman; and others. Eighty-nine (89) letters were sent to the writer (see APPENDIX C) in connection with air cargo security.

---

[70] International Year Book Encyclopedia of the Newspaper Industry (45th annual edition; New York: Editor and Publisher, 1965), 628 pp.

Personal interviews. Personal interviews were conducted with 35 persons in connection with different aspects of air cargo: thefts, losses, insurance, operations, and literature (see APPENDIX D). This method was used, because it was an ideal way of gathering current information. The tone of the interviewee's voice, the things left out of an answer to a question, and the value-laden aspects of the interviewee's responses were followed-up to determine the personal significance of his attitudes, something that cannot be done when using a mailed questionnaire. An attempt was made to obtain responses that were spontaneous, highly specific, concrete, and self-revealing. Responses that seemed to be forced, general, or superficial were of little value to the study.

The type of interview used varied with the person being interviewed. A Field Observation Data Form, pertaining mostly to physical security, was used to guide the interviews with airline cargo personnel (see APPENDIX E). Other interviews were nonstructured, i.e., the interviewee was encouraged to express his opinions about air cargo, without any questions or format to guide him. The writer tried to create a completely passive atmosphere, in which the interviewee was free to express himself without fear of disapproval, admonition, or disagreement, and without advice from the writer. This approach produced some rewarding and amusing results, which will be discussed in Chapter VIII.

Personal observation. To obtain current knowledge of how air cargo operations are being carried on today, the writer visited, for at least one day, air cargo areas at one small and three relatively large airports:

Capital City Airport, Lansing, Michigan;[71] Dulles International Airport, Chantilly, Virginia;[72] Detroit Metropolitan Airport, Detroit, Michigan;[73] and O'Hare International Airport, Chicago, Illinois.[74] At the above mentioned airports, except Dulles, interviews were held with airline and air freight forwarder personnel; observations were made of air cargo facilities, operations, and personnel; and a physical inspection of the air cargo areas was made. At Dulles the writer made an unannounced visit and observed air cargo handling procedures after the cargo left the storage area and while it was being loaded onto the planes. This data-collection method was used, because it afforded the writer an opportunity to check statements made in air cargo literature. Many helpful suggestions were advanced by the air cargo handling personnel interviewed during this study, and the air cargo operations observed (see APPENDIX F) gave the writer several new ideas.

Collection of case histories. All literature available was searched for air cargo theft and loss cases. Scattered about in books, journals, etc., are numerous case histories; however, there is no large collection of cases from the various different sources. The writer collected and analyzed 70 cases that were available to him in an attempt to isolate any similarities or differences between them. It is a well-known fact that a few instances of a phenomenon may produce a wealth of new information and insights about that phenomenon. Instead of testing known hypotheses, the writer sought facts which would lead to new

---

[71] August 18, 1965.

[72] December 28, 1965.

[73] August 17, 1965.

[74] September 24, 1965.

hypotheses, regarding air cargo thefts and losses. All 70 cases are presented in Chapter VII.

II. LIMITATIONS OF THE STUDY

In any study of this magnitude, there are obviously many limitations, some imposed by the writer and some imposed by the nature of the subject being studied. Only international air cargo carriers were studied (with the exception of two American all-cargo carriers), ruling out American air cargo carriers, unless they were also international air cargo carriers. Only air freight forwarders, who were members of the Air Freight Forwarders Association, were studied, ruling out numerous domestic and international air freight forwarders.

In dealing with an international population, there was a language barrier between the writer and the participants. The airline questionnaire (written in English) was sent to all members of the IATA; many did not speak English. The time it would have taken to translate the questionnaire and respond to it, obviously, was a factor in determining the number of returned questionnaires. One possible solution was to translate the questionnaire into the native language of the participant and upon its return, translate the response into English; however, time and finances did not permit this to be done.

There was also a distance barrier. Some questionnaires were received days after they were mailed, and others were received weeks after they were mailed. If all the participants had main offices in one city or even in one country, the mailing task would have been simplified.

A time barrier was also present. The questionnaires were addressed

to the "Chief Executive Officer," and, in some cases, by the time the letter and questionnaire had found their way to the appropriate person, much time had been lost. The chief executive officer was thought to be the best general choice for an addressee, because many companies do not have a separate security division. In many companies, theft records are not kept in a central location, if kept at all; therefore, it was necessary to wait for each branch office to report its individual theft totals.

A lack of finances on the part of the writer prevented the study from being more complete, from the standpoint of persons interviewed and air cargo areas visited. Possibly, when the problem is better understood and research into its nature is more in demand, a more thorough study of air cargo thefts and losses can be made.

A serious limitation was that many companies did not respond to the questionnaire for various reasons. The ones that took the time to send a letter explaining why they could not participate in the study gave numerous reasons. Several stated that they did not keep theft and loss records, and they did not know how many thefts they had. Others stated that they kept records, but since it would take several weeks to fill out the questionnaire, they could not spare the manpower. In short, their theft and loss records were so inadequate, they were unable to fill out the questionnaire. Others suspected that they had thefts, but all losses were mixed-in with the claims records and there was no practical way of separating them. Several companies did not complete all parts of the questionnaires, especially the "number and value of thefts" section.

Another limitation was that more case histories of thefts and

losses were not available. Literally hundreds of case histories of air cargo thefts are located in the files of airlines, law enforcement agencies, air freight forwarders, etc., but they are only available to other airlines, law enforcement agencies, air freight forwarders, etc., when investigating another case. These files, naturally, were not open to the writer; however, a much more accurate and complete study could have been made, if they had been. There is no international agency that systematically collects air cargo theft cases, possibly because many airlines and air freight forwarders consider their air cargo theft cases to be "confidential," i.e., not available to outsiders due to business competition and other factors. This policy is fine; however, when the name of the company is not mentioned, and nothing is presented to connect the case to any particular airline or air freight forwarder, it is difficult for the writer to see what harm an analysis of the cases would do. On the contrary, something may be learned that could aid in controlling future air cargo thefts. Many a case is connected to a particular airline or air freight forwarder in books, journal articles, and the newspapers, with no significant effect on the volume of air cargo, which is rising above all previous records.[75]

Another limitation of this study is the fact that there was no research literature on air cargo thefts and losses to aid the writer in forming hypotheses, determining areas of study, and designing research

---

[75]Upon learning of this research study and its findings, a relatively large air freight forwarder (after an interview) gave the writer permission to study its air cargo theft cases. This progressive air freight forwarder realizes that research is one method of controlling air cargo thefts.

methods. The only available literature pertaining to the subject, other than the writer's research article, was part of a book and several journal articles.

III. EXPLORATORY STUDY

The information on which the exploratory study was based was drawn from a wide variety of sources. A thorough survey was made of all literature on the airline industry, air cargo operations, thefts, losses, types of aircraft used by commercial airlines, and subjects in the field of security administration applicable to air cargo thefts and losses. The survey included books, periodicals, official reports, technical manuals, addresses given by experts in the field, and any other available literature on the subject. Letters of inquiry were sent to approximately 123 airlines, who were either members of the IATA or the AATA, requesting information on air cargo security problems and any possible solutions the airlines may have for solving the problems; 19 airlines replied. Although the letters were addressed to the "Security Officer," many replies were received from other company officials; it seems that many companies do not have a security officer. Replies were received from persons with the following titles: corporate secretary, public relations manager, tariffs and claims analyst, sales manager, international station manager, assistant ground services manager, traffic and sales superintendent, district manager, director of cargo service, and cargo services-procedures manager.

Letters of inquiry were also sent to 22 major aircraft manufacturers, requesting information on commercial aircraft used to carry air cargo;

such things as technical manuals, photographs, specification sheets, etc., were requested in order to determine the capacity, speed, and other necessary facts needed for a basic understanding of that aspect of air cargo. Fifteen aircraft manufacturers replied.

Letters of inquiry were also sent to 11 other organizations and persons, requesting information on air cargo thefts, losses, and operations. Letters were sent to the following persons and organizations: Air Line Pilots' Association; American Society of Travel Agents: FAA; IATA; International Civil Aviation Organization (ICAO); Interpol; Official Airline Guide; The Port of New York Authority, Aviation Division; Security World Publishing Company, Inc.; Emery Air Freight Corporation; Mr. Peter J. Sant, Vice President, William H. McGee Company, Inc. (marine underwriter). All eleven replied.

Information was also obtained from a personal interview with the sales representative of the American District Telegraph Company (ADT) in Lansing, Michigan.

As a result of the exploratory study, it was found that it was not practical to study all 123 (approximately) airlines at one time. The 88 IATA members (the larger group) were chosen to be studied, and the smaller group (the AATA) was set aside for a later study. To include a sample of all air freight forwarders, the 17 members of the Air Freight Forwarders Association were studied. The exploratory study brought to the surface several air cargo security problem areas which were mentioned in more than one of the many letters sent to the writer.[76]

---

[76]For a more thorough description of the exploratory study's findings, see August, 1965, Industrial Security, pp. 4-15.

IV. FORMULATION OF THE QUESTIONNAIRES

Based upon the exploratory study, a more precise review of the literature, an analysis of air cargo theft and loss cases, personal interviews, visits to air cargo handling areas, and personal knowledge of the writer, the questionnaires were formulated. The airline and air freight forwarder questionnaires are very similar in format.

The questionnaires mainly contain questions with fixed answers, and the person circles his choice or choices. Some questions have blank spaces after them, so the person can write in his own answer, if he thinks it was not covered. This flexibility in answering the questions gives the person a chance to answer more questions exactly the way he thinks they should be answered. Some questions, where applicable, give the person a chance to rank his answers in order of their frequency of occurrence, based upon his experience with actual cases.

After examination of air cargo theft and loss literature, interview responses, personal knowledge of the writer, and security administration and law enforcement literature, the following categories were included in the questionnaires: general, number and value of thefts, items taken, time of thefts, location of thefts, persons who commit thefts, circumstances accompanying thefts and losses, investigation of thefts and losses, and case histories. Specific items in the above categories are different in some instances, depending upon whether the question pertained to airlines or air freight forwarders. The questionnaires cover air cargo from the time it leaves the shipper, until it reaches the consignee. The airline questionnaire is a 6-page, typed document, and the air freight

forwarder questionnaire is a 5-page, typed document.

Each questionnaire was accompanied by a one-page, typed cover letter, which explained who the writer was, the purpose of his correspondence, and the task required of the recipient of the questionnaire. Air cargo was defined to give the recipient a frame of reference, and the main purpose of the research study was explained. The writer promised not to mention the company's name, if the person filling out the questionnaire so indicated. The date to return the questionnaire was given, but the writer indicated that he would accept the questionnaire anytime. The writer thanked the person for participating in the research study.

V. PRETEST OF THE QUESTIONNAIRES

The questionnaires and accompanying letters of explanation (documents) were pretested for several reasons: to determine what changes were necessary before administering the final drafts, to catch and solve unforeseen problems in the administration of the documents, and to indicate the need for additional questions or the elimination of others. The documents were pretested through the use of personal interviews (the best method to use in pretesting questionnaires), because the person reading the questionnaire can explain in detail what difficulties he has with each question, what the question means to him, and what points need to be enlarged upon, as he and the author of the questionnaire go over it together.

The following six persons were used in the pretest of the documents: an air cargo supervisor with American Airlines, an air cargo agent with

North Central Airlines, an air cargo agent with United Air Lines, a college professor in security administration at Michigan State University, a college senior in security administration at Michigan State University, and the writer's wife. The three air cargo handling veterans were used mainly to test the content of the questions, so that no significant aspect of air cargo operations would be left out of the questionnaire. The three non-air cargo veterans were used mainly to test the clarity of the questions, i.e., to determine if the interpretation of each question was clear.

The writer noted which questions the pretesters had trouble interpreting, several criticisms of the questionnaires' format, several suggestions for improvement of the questionnaires, and whether or not the pretesters became bored while filling out the questionnaire. All of the air cargo veterans expressed interest in the content of the questionnaire, saying that it was comprehensive and stimulated their interest as they proceeded through it. They also said they did not realize air cargo security was so extensive.

Several additions and corrections were made to the documents as a result of the pretest process, and the questionnaires seemed to be more explicit than before the pretest. The time spent in pretesting the documents, although relatively lengthy, certainly was rewarding in the final analysis of the returned questionnaires, because most questions were answered clearly. This clarity seemed to indicate an understanding of the questions.

VI. DISTRIBUTION AND RETURN OF THE QUESTIONNAIRES

The resultant airline questionnaire and accompanying letter of explanation (see APPENDIX G) and the resultant air freight forwarder questionnaire and accompanying letter of explanation (see APPENDIX H) were mailed to the population. The airline documents were mailed to the "Chief Executive Officer" of the 88 members of the IATA and of the two all-cargo airlines operating in the United States. From 90 airline questionnaires mailed out, 22 responses were received: 15 questionnaires were filled out, and 7 airlines sent letters with information in them pertaining to the study. This is approximately a 24% return, considered good by research methodology experts, because there were language, time, and distance barriers, in addition to this being the first study of its kind. There might have been a higher return rate, if announcement letters (containing post cards to be returned, if the companies were interested in participating in the study) had been sent before the actual mailing of the questionnaires or if a follow-up questionnaire had been sent to those who did not respond; however, time and finances did not permit such steps.

The air freight forwarder documents were mailed to the "Chief Executive Officer" of the 17 members of the Air Freight Forwarders' Association. Of 17 air freight forwarder questionnaires mailed out, five responses were received: two questionnaires were filled out; three sent letters containing relevant information, approximately a 29% return. The air freight forwarders which returned the questionnaires were relatively large ones, and their questionnaires were almost completely filled out; therefore, some meaningful generalizations can be made from the facts obtained, which pertain to the entire air freight forwarder industry.

CHAPTER VI

RESULTS OF THE QUESTIONNAIRES

This chapter presents the findings of the 15 airline and two air freight forwarder questionnaires (a total of 17), which were filled out in various degrees of completeness. In accordance with the wishes of the representatives who filled out the questionnaires, no airline or air freight forwarder names will be mentioned.

I. AIRLINE QUESTIONNAIRES

The responses in each section of the 15 questionnaires will be given, but, where applicable, the questions as well as the answers will be given, to facilitate a better understanding of a particular instance.

General

Question number 1. In connection with this study, 13 airlines requested that the name of the airline not be mentioned, and two requested that the name be mentioned, only if necessary.

Question number 2. What percentage of your total business is air mail, air express, and air freight, when all are combined together? Four airlines stated 10%. Of eight others, each gave one of the following: 66%, 60%, 25%, 20%, 14-16%, 10.5%, 9%, and 8%.

Question number 3. Circle the areas that are increasing in volume of business in your company. Give percent of increase from last year. For air mail, two airlines stated 20%. Of eight others, each gave one

of the following: 33%, 19%, 11%, 9%, 8-9%, 8%, 5%, and "slight" increase. For air express, of four airlines, each gave one of the following: 19%, 18%, 12%, and 10%. There is no air express service outside the United States. For air freight, of 12 airlines, each gave one of the following: 83%, 41%, 32%, 31%, 23%, 20%, 19% (first six months of 1965), 14-18%, 15%, 14%, 9.2%, and "increasing."

Question number 4. Does your company have a separate security division? Four answered, "yes," and 11, "no." One of the "no's" stated that the security department of the parent organization was at their disposal, when needed. One airline stated that their internal audit section investigates all theft cases involving cash, but security is the responsibility of each official in charge of an area.

Question number 5. If your company does have a separate security division, how many employees does it have, not counting clerks, stenographers, secretaries, and typists? Of three airlines each answered one of the following: 9, 3, and 1.

Question number 6. Does your company have written policies and procedures regarding air cargo security? Ten airlines answered, "yes," and two, "no." One of the "yes's" elaborated by saying, "very generally."

Question number 7. How many persons are assigned the task of checking periodically to see if air cargo policies and procedures are being carried out properly? Of four airlines each answered one of the following: 20, 6, 5, and 1. Another airline stated that no one had this duty exclusively; however, "policies and procedures were continually being monitored and reviewed by local management on the line and by numerous head office supervisory personnel." Another stated that one person is

delegated in each section "to supply reports to the general office."

Number and Value of Thefts

Although four airlines furnished information for this category, none furnished information for all years between 1945 and 1965. One airline reported only for the year 1958: 1 theft, value $30. Another airline reported only for the year 1964: 40 thefts, value $1,935. Two other airlines reported information for numerous years.

TABLE I

NUMBER AND VALUE OF THEFTS FOR TWO AIRLINES

	AIRLINE X		AIRLINE Y*	
Year	Number of thefts	Value of thefts (U.S.) dollars	Number of thefts	Value of thefts (U.S.) dollars
1959	412	$13,781		
1960	420	14,049		
1961	320	10,704	21	$2,188
1962	426	14,249	34	2,514
1963	356	11,908	46	3,675
1964	374	12,510	68	11,399
1965	none given	none given	51**	none given
TOTALS	2308	$77,202	220	$19,776

*The airline reported that statistics for previous years were not "readily available."

**The questionnaire did not give the part of 1965 from which this number of cases was taken.

The total number of thefts reported by the four airlines is 2,569, and the total value is approximately $98,943. Several interesting comments were given by various airlines in this category. One stated that claims statistics were not "broken-down" according to theft, damage, etc., but the claims ratio has been less than one-fourth of one percent of the total revenue, since inception. Another reported that their statistics

do not distinguish between theft and other types of losses. Another reported that the number and value of their thefts are "confidential," but that no systematic or organized thefts over a period of time and involving any substantial losses have ever involved its company. The same airline then stated that they had suffered four large losses: two thefts "within the last two years," one involved $288,400 and the other $232,400; of two others "earlier this year" (1965), one involved $10,000 and the other $4,000. Another airline simply stated, "no records kept."

Items Taken

Ten airlines reported that radios had been taken, nine reported clothes, eight reported watches, seven reported cameras, and five reported optical products. Regarding the following items, each was reported by three airlines as having been taken: currency, small jewelry, books, newspapers, drugs, hand tools, rare coins, and tape recorders. Regarding the following items, each was reported by two airlines: pearl jewelry, gold coins, pearls, banknotes, electronic parts, air mail, automotive parts, fresh fruit, small office supplies, and photographic film. Regarding the following items, each was reported by one airline: coins, uncut diamonds, gold bars, platinum bars, industrial diamonds, typewriters, livestock, radioactive isotobes, data processing equipment, automobiles, and lighting fixtures.

Several comments were written on the questionnaires in this category. One airline wrote, "furs," and two others wrote, "stockings." One stated that clothing and associated lines were their major losses. Another reported that "almost anything subject to pilferage" was taken. Another reported, "usually small items, not heavily packed, easily con-

cealed."

Time of Thefts

The number after each "time a theft took place" is the number of airlines which marked the item: while in storage awaiting transit, 7; 2 p.m.-10 p.m., 5; 10 p.m.-6 a.m., 5; while loading, 4; while unloading, 4; 6 a.m.-2 p.m., 2; while in storage, 2; while in storage after transit, 2; while in flight, 1; while aircraft being repaired, 1; while aircraft being cleaned, 1; after transit, 1; and weekends, 1.

The airlines ranked the times when air cargo thefts occur into three groups: most (1), middle (2), and least (3) frequently. Of three airlines, each put one of the following as most frequently: night, 2 p.m.-10 p.m., and rush period. One airline put 10 p.m.-6 a.m. in the middle group, and one put 6 a.m.-2 p.m. in the least group. One airline stated that no records were kept, and two others reported that the time of theft could not be determined.

Location of Thefts

Seven airlines reported that thefts occurred at the "departure airport," seven reported, "destination airport," and six reported, "at an airport along the route." Of two airlines, each reported one of the following as being where thefts occurred: "in transit from city freight depots to the airport," and "pick-up and delivery service trucks."

The airlines ranked the location where thefts occurred into three groups: most (1), middle (2), and least (3) frequently. Two airlines put the departure airport in the most group, one put, "transit from city freight depots," and one put, "destination airport." For the middle group, of four airlines, two put, "departure airport," one, "destination airport,"

and one, "airport along the route." For the least group, one put, "destination airport."

Persons Who Commit Thefts

Regarding persons who commit thefts, eight airlines reported, "loading crew;" five reported, "person not connected with airline, airport, or air freight forwarder;" two reported, "airport janitor;" two reported, "warehouse cargo handlers;" one reported, "air freight forwarder;" and one reported, "truck driver between city depots and airport." One wrote, "we wish we knew-only loaders have been caught red-handed."

The airlines ranked persons who most (1), middle (2), and least (3) frequently perpetrated air cargo thefts. Of four airlines, one reported, "loading crews," and one reported, "warehouse staff," as persons most frequently engaged in thefts; one reported, "loading crew," in the middle group; and one reported, "outside sources," in the least group.

Circumstances Accompanying Losses

Ten airlines reported, "inadequate packaging," as a circumstance, which accompanied an air cargo loss. Each of these items was reported by five airlines: loaded in bad weather unprotected, perishables delayed too long, and overcarried. Each of these was reported by four airlines: unloaded in bad weather unprotected, water damage, left out in weather unprotected, failed to get special handling because airline not notified properly, and accidentally loaded on wrong flight. Each of these was reported by three airlines: items piled too high crushing bottom ones, misdirection due to error on air documents, and cargo removed short of destination. Each of these was reported by two airlines: erroneous

labeling, delayed by customs authorities, and careless handling. Each of these was reported by one airline: failed to get special handling due to lack of personnel, failed to get special handling due to laxity of personnel, inadequate facilities for perishables, delayed by need to fill out numerous documents, and airplane crashed.

The airlines ranked the circumstance that has most (1), middle (2), and least (3) frequently accompanied a loss. In the most frequent group, of five airlines, two reported, "careless handling;" one reported, "delay;" one reported, "packing deficiencies;" and one reported, "inadequate packaging." In the middle group, of four airlines, two reported, "careless handling;" one reported, "perishables delayed too long;" and one reported, "water damage." Of four airlines, each reported one of the following in the least group: misdirection due to error on air documents, erroneous labeling, fork lift contact, and weather.

Investigation of Thefts and Losses

Question number 1. Ten airlines reported that they investigated all thefts, and 10 reported that they investigated all losses. One airline reported that it investigated only thefts ordered investigated by management, and one reported that it investigated only losses ordered investigated by management.

Question number 2. Who conducts your company's air cargo theft and loss investigations? Seven airlines reported that their cargo personnel conducted their investigations; five reported, "security personnel;" five reported, "an outside law enforcement agency," with two airlines of those already mentioned, specifically stating that the FBI investigated all of their thefts. Of seven other airlines, each

mentioned that the following person or department conducted all of their investigations: insurance department, internal audit department, general manager, management personnel, local police and Interpol, claims manager, and cargo superintendent's office.

Question number 3. If you conduct your own investigations of air cargo thefts and losses, with whom do you work? Twelve airlines reported that they worked with the appropriate police officials; seven reported, "with other airline security men when necessary;" and four reported, "alone." Two, of those already mentioned, specifically stated that they worked with the FBI on all thefts. Of four airlines, each said that they worked with the following: insurance investigators, internal audit department, insurance underwriters, and "it depends on the case."

Question number 4. Which types of thefts and losses are reported to appropriate police agencies? Six airlines stated that they reported all thefts, and three stated, "thefts over $400." Each of the following was reported by two airlines: thefts between $100-400, thefts where it is known that the thief has the stolen items in his possession, losses over $400, and "depends upon the circumstances." Of five airlines, each marked one of the following as a type of theft or loss which is reported to an appropriate police agency: thefts where it is not known that the thief has the stolen items in his possession, all losses, losses occurring under suspicious circumstances, break-in thefts, and any series or loss trends. One airline reported that they report events to the police on two occassions: "if the conclusion of inquiries should result in prosecution;" and "if pilferage is occurring, the police will be called to investigate for the psychological effect." Another airline

simply stated, "no record."

Question number 5. Are all theft and loss reports sent to a central location in your company for analysis? Eleven airlines reported, "yes." One airline stated that the reports were analyzed by the cargo superintendent.

Question number 6. Are your company investigative personnel notified immediately upon discovery of a theft or loss? Ten airlines reported, "yes;" two reported, "majority of the time;" and one reported, "only if very valuable cargo is involved."

Question number 7. What is the time lapse that occurred between the time the thefts took place and the time they were reported to your company's investigative personnel? Ten airlines reported, "1-7 days." Of the following three choices, each was reported by two airlines: 7-10 days, 10-15 days, and more than 15 days.

The airlines ranked the time lapse that most (1), middle (2), and least (3) frequently occurred. For the most group, five airlines reported, "1-7 days;" one reported, "7-10 days;" and one reported, "immediately in case of valuable shipments." Of three airlines, each reported one of the following as being in the middle group: 15 days or more, 7-10 days, and 10-15 days. One airline reported, "15 days or more," in the least group.

Question number 8. Does your company ever receive air cargo that no one ever claims? Eleven airlines reported, "yes."

Question number 9. Nine airlines reported that they try to find the owner of cargo that no one ever claims, and the same number reported that they try to send it back to the shipper. Four stated that they sell

it after storing it for a reasonable length of time, and one stated that they store it until it is claimed.

Question number 10. Eleven airlines stated that they keep records on loading teams who work on aircraft that leave the airport. One reported, "no."

Question number 11. Are investigations hindered by the fact that the theft report never reaches the investigative personnel? Four airlines reported that they were not hindered, and two reported that they were hindered by the fact that the victim reports the theft only to the insurance company, when he makes a claim. Of six other airlines, each reported one of the following: airline settles small claims quickly to foster good public relations, insurance company fails to inform the airline of the theft, all claims are investigated by insurance department before settlement is made, lapse of time before the theft is discovered, theft reports are mandatory, and investigative personnel are always informed of a theft.

Question number 12. Are security or cargo personnel routinely informed of each aircraft crash as soon as it is learned? Nine stated, "yes."

Question number 13. Do law enforcement agencies advise your company of the outcome of cases that you jointly work on? Six airlines answered, "always," and three answered, "sometimes, if future airline help is needed by police." Of four airlines, each answered one of the following: sometimes; always, if solved; if we request to be advised after a conviction; and in most cases.

II. AIR FREIGHT FORWARDER QUESTIONNAIRES

The responses in each section of the two questionnaires will be given, but, where applicable, the questions as well as the answers will be given, to facilitate a better understanding of a particular instance.

General

Question number 1. In connection with this study, both air freight forwarders asked that the name of the company not be mentioned.

Question number 2. One company stated that it had a separate security division; one stated it did not.

Question number 3. One company stated that it had 115 security division employees, not including clerks, stenographers, typists, and secretaries.

Question number 4. Both air freight forwarders reported that they have written policies and procedures regarding air cargo security.

Question number 5. One company stated that 115 persons were assigned the specific task of checking periodically to see if air cargo policies and procedures were being carried out properly; the other stated, "five."

Number and Value of Thefts

Both air freight forwarders furnished information for this category; however, neither furnished complete information for all years between 1945-1965. One air freight forwarder reported 24 thefts in 1961, 307 in 1962, 520 in 1963, 757 in 1964, and 550 (first seven months) in 1965, a total of 2,158 thefts. The other company reported 1,010 thefts in 1963, value $195,000; 1,284 in 1964, value $230,000; 693 (first six months) in 1965, value $96,000; a total of 2,987 thefts, value $521,000.

The total number of thefts for both air freight forwarders is 5,145.

Items Taken

Both air freight forwarders reported that the following items had been stolen: radios, small jewelry, and automotive parts. One company reported the following items: watches, industrial diamonds, cameras, drugs, photographic film, rare coins, optical products, and furs. The other company reported the following: hand tools, clothes, and tape recorders.

Time of Thefts

Both air freight forwarders circled, "10 p.m.-6 a.m.," as being when air cargo thefts have occurred. One reported, "2 p.m.-10 p.m.," and "while being loaded or unloaded from the aircraft," as times when thefts have occurred; the other stated, "6 a.m.-2 p.m."

The companies ranked the time when thefts occurred into three groups: most (1), middle (2), and least (3) frequently. Both reported, "10 p.m.-6 a.m.," in the most group, with one adding, "weekends." One reported, "2 p.m.-10 p.m.," and the other reported, "6 a.m.-2 p.m.," in the middle group. One reported, "2 p.m.-10 p.m.," in the least group.

Location of Thefts

Both companies put "when vehicle was parked on the street," as a theft location. One reported, "when transferred from carrier to forwarder," and the other one, "when shipment was on loading cart at airport." In ranking the locations in three groups, most (1), middle (2), and least (3) frequently, one put, "airport" in the most group, and the other put, "in transfer." For the middle group, one put, "on street," and the other put, "warehouse." For the least group, one put,

"on loading dock," and the other put, "truck."

Persons Who Commit Thefts

Both reported, "airport loading dock personnel," and "outside person, not connected with shipper, airport, or air freight forwarder" as persons who have committed air cargo thefts. One air freight forwarder stated that he thought "cargo handlers" were the persons who most frequently perpetrated air cargo thefts.

Circumstances Accompanying Thefts and Losses

Both air freight forwarders reported the following as having accompanied thefts and losses: "driver left the vehicle unlocked," and "entire vehicle stolen." One reported this circumstance: driver drove from one shipper to another with the back of the vehicle open.

Investigation of Thefts and Losses

Question number 1. Both companies reported that they investigate all thefts, but only one reported that it investigates all losses.

Question number 2. Who conducts your company's air cargo theft and loss investigations? Both companies reported that their security personnel and outside law enforcement agencies conduct investigations. One stated that its investigations were conducted by cargo personnel and management.

Question number 3. Both air freight forwarders, in conducting their own theft investigations, work with appropriate police officials, with one specifically indicating the FBI. One indicated that it also works alone.

Question number 4. Which type of thefts and losses are reported to the appropriate police agency? Both companies answered, "all thefts."

One answered, "losses over $400," and also "thefts where it is not known if thief has the stolen items in his possession."

Question number 5. Both air freight forwarders reported that all theft and loss reports were sent to a central company location for analysis.

Question number 6. Are your investigative personnel notified immediately upon discovery of a theft or loss? One company reported, "yes," and the other one reported, "majority of the time."

Question number 7. What is the time lapse that occurred between the time thefts took place and the time they were reported to your company's investigative personnel? Both answered, "1-7 days." One stated that the time lapse that most frequently occurs is 1-7 days.

Question number 8. Both companies stated that they have received air cargo which on one ever claims.

Question number 9. Both companies do the following things with air cargo that no one ever claims: try to find the owner, sell it after storing it for a reasonable length of time, and send it back to the shipper.

Question number 10. Do law enforcement agencies advise your company of the outcome of cases that you jointly work on? One company reported, "always," and the other one reported, "sometimes, if future company help is needed by the police."

Question number 11. One company reported that it conducts spot checks by following a driver on his route to see if he follows established procedures.

III. SUMMARY

Speculation about various aspects of air cargo thefts and losses does no harm; however, it contributes little, if anything, towards solving the problem. On the other hand, concrete facts, regarding air cargo thefts and losses, aid the airline and air freight forwarder security officer in controlling the problem; such facts have been presented at length in this chapter under the following headings: general, number and value of thefts, items taken, time of thefts, location of thefts, circumstances accompanying thefts and losses, and investigation of thefts and losses. Each of the above categories will be summarized, combining the responses from the airline and air freight forwarder questionnaires. A total of 17 questionnaires (15 airlines and two air freight forwarders) were received by the writer from companies operating on the following continents: North America, South America, Europe, Asia, Africa, and Australia.

General. Approximately 27% of the airlines reported a 10% increase in their total cargo business (air mail, air express, and air freight). Of eight others, each gave one of the following: 66%, 60%, 25%, 20%, 14-16%, 10.5%, 9%, and 8% increase over last year. Eighty percent of the airlines reported that their air freight volume was increasing, giving the following percentages of increase over last year: 83%, 41%, 32%, 31%, 23%, 20%, 19% (first six months of 1965), 14-18%, 15%, 14%, 9.2%, and "increasing." Approximately 67% of the airlines reported that their air mail volume was increasing, giving the following percentages of increase over last year: 33%, two reported 20%, 19%, 11%, 9%, 8-9%, 8%, 5%, and "slight increase." Approximately 27% of the airlines

reported that their air express volume was increasing, giving the following percentages of increase over last year: 19%, 18%, 12%, and 10%. It should be noted, however, that there is no air express service outside the United States. Overall, air freight volume is increasing much faster than air mail and air express, with air mail volume second.

Unfortunately, approximately 71% of the 17 air cargo handling companies reported that they do not have a separate security division. In most cases, security is one of the numerous responsibilities of the local cargo managers. Of the approximately 29% reporting that they had a separate security division, the number of investigators and security management personnel (not including typists, secretaries, stenographers, and clerks) varied greatly: 115, 9, 3, and 1.

Only approximately 71% of the air cargo handling companies reported that they had written policies and procedures regarding air cargo security, with one answering, "very generally." This seems to indicate that 29% of all the companies in this study "play it by ear," when it comes to air cargo security. Only approximately 35% of the companies reported that they had personnel assigned the exclusive task of periodically checking to see if air cargo policies and procedures were being carried out properly, with the number assigned this task varying greatly: 115, 20, 6, two reported 5, and 1.

Number and value of thefts. Although 35% of the companies furnished information in this category, none furnished information for the years 1945-1957. Four airlines reported a total of 2,569 thefts, value approximately $98,943; two air freight forwarders reported a total of 5,145 thefts, but only one reported a value ($521,000). Two airlines

indicated that their companys' claims statistics do not "break down" thefts from damages, etc. One airline stated that their thefts were "confidential," but no series of thefts, "organized and extending over a period of time and involving any substantial loss," had ever involved their company. Then they reported four "spectacular" losses, all occurring "within the last two years," with a total value of $534,800. One airline simply stated, "no records kept."

Items taken. The overwhelming majority of air cargo handling companies (approximately 90%) reported stolen items with the following characteristics: small, not heavily packed, easily concealable, easily converted into cash, and able to be personally used by the thief or his friend. Approximately 71% of the companies reported that radios were taken, approximately 65% reported clothes, approximately 53% reported watches, approximately 48% reported cameras, and approximately 35% reported optical products.

The following other small items were reported by the air cargo handling companies as having been taken: currency, small jewelry, books, newspapers, drugs, hand tools, rare coins, tape recorders, pearl jewelry, gold coins, pearls, banknotes, electronic parts, air mail, fresh fruit, small office supplies, automotive parts, photographic film, coins, uncut diamonds, gold bars, platinum bars, industrial diamonds, typewriters, radioactive isotobes, lighting fixtures, and furs. Only one airline, or approximately 6%, reported each of the following large items as having been taken: livestock, data processing equipment, and automobiles.

Time of thefts. Air cargo thefts have occurred during all of the 24 hours in a day, according to the air cargo handling companies; however,

the findings indicate that air cargo thefts occur most frequently between 2 p.m.-6 a.m., especially during rush periods.

Location of thefts. Air cargo thefts have occurred at a variety of locations. The airlines report the following: 47% reported that air cargo thefts have occurred at the "departure airport;" 47% report, "destination airport;" and 40% report, "airport along the route." Both air freight forwarders reported, "when vehicle was parked on street," as a theft location. Neither the airlines nor the air freight forwarders could significantly agree on one location where "most" air cargo thefts occur; therefore, the problem seems to be extremely widespread.

Persons who commit thefts. Approximately 59% of the air cargo handling companies reported "loading crew," as persons who commit air cargo thefts, and approximately 41% reported, "outside person not connected with airline, airport, or air freight forwarder." From these findings it seems valid to say that approximately 60% of all air cargo thieves work for air cargo handling companies, and approximately 40% do not.

Circumstances accompanying thefts and losses. The air cargo handling companies reported many circumstances that accompanied actual air cargo thefts and losses. Approximately 59% of the airlines reported, "inadequate packaging," as a circumstance accompanying a loss. Approximately 33% reported the following: loaded in bad weather unprotected, perishables delayed too long, and overcarried. Approximately 27% reported the following: unloaded in bad weather unprotected, water damages, left out in weather unprotected, failed to get special handling because airline not notified properly, and accidentally loaded on wrong

flight. Twenty percent reported the following: items piled too high crushing bottom ones, misdirection due to error on air documents, and cargo removed short of destination.

Both air freight forwarders reported, "driver left vehicle unlocked," and "entire vehicle stolen," as circumstances that have accompanied actual thefts. Approximately 33% of the airlines reported, "careless handling," as a circumstance most frequently accompanying a loss, and the same percent reported, "inadequate packaging."

Investigation of thefts and losses. Only approximately 71% of the air cargo handling companies reported that they investigated all thefts, and only approximately 65% investigate all losses. Approximately 48% of all the companies reported that their cargo personnel conduct air cargo theft and loss investigations; 35% reported, "security personnel;" and 35% reported, "outside law enforcement agencies." Approximately 47% of the airlines reported that various persons conducted their air cargo theft and loss investigations: insurance department, internal audit department, general manager, management personnel, claims manager, and cargo superintendent's office.

Approximately 82% of all the companies work with an appropriate law enforcement agency in investigating air cargo thefts and losses. Approximately 47% of the airlines reported that they work with other airline security officials, if necessary. Unfortunately, only approximately 48% of all companies report "all thefts" to the police. No significant percentage of companies reported any one type of loss as being of the type reported to the police. The reporting of a loss varied, "according to all the surrounding circumstances."

Only approximately 76% of all the companies send all air cargo theft and loss reports to a central company location for analysis. Approximately 65% of the companies reported that their company investigative personnel were notified immediately upon a discovery of an air cargo theft or loss. Approximately 71% of all the companies reported that a 1-7 day time lapse occurred between the time air cargo thefts took place and when they were reported to them. Approximately 76% of the companies reported receiving air cargo that no one ever claimed. Approximately 59% of all the companies reported that they do the following with air cargo no one ever claims: "try to find owner," and "send it back to shipper." Both air freight forwarders stated that if they were unsuccessful in the two above approaches, they sold the items after storing them a reasonable length of time.

Approximately 33% of the airlines reported that they were hindered in some way in making investigations: victim reports theft only to insurance company for purpose of making a claim; airline settles small claims quickly to foster good public relations; insurance company fails to inform the airline of the theft; and there is a lapse of time before the theft is discovered. Approximately 73% of the airlines reported that they keep records of loading teams who work on aircraft that leave the airport. Only 60% of the airlines reported that their security or cargo personnel were routinely informed of all plane crashes.

Only 41% of all the companies reported that law enforcement agencies advise them, regarding cases on which they jointly work; approximately 24% reported, "sometimes, if future company help is needed by the police." Only one air freight forwarder reported that it conducts spot checks by

following a driver on his route to see if he follows established procedures.

Conclusion. The number of questionnaires returned, as compared with the number sent, produced ambivalent feelings for the writer. The total response was not as high as hoped for; however, when considering the neophite quality and unknown nature of the study and the writer, the results were gratifying. The frankness and completeness of the answers, to some degree, suggest that the nature of air cargo theft data is similar to an iceberg, i.e., a small part in view, but most is not. The significance of the information gathered is that numerous ideas about various aspects of air cargo are now documented by facts; before they were only surmised.

CHAPTER VII

ANALYSIS OF CASE HISTORIES

I. CASE METHOD

The case method is an excellent way to study the subject of air cargo thefts and losses, and conveniently, there are numerous case histories available for analysis. The case method, which is used in almost all accredited law schools as the principal method of instruction, capitalizes on the experience of the past by distinguishing between the facts in the cases. Some cases seem similar, but their differences can be brought to light by careful analysis.

The case study method is also a useful tool of social research. Scientists working in unfamiliar areas, where they have little or no experience to guide them, have found that intensive study of actual examples is a fruitful method for stimulating insights and suggesting hypotheses for research. The theoretical insights of Sigmund Freud were obtained largely from the study of his patients' cases.

One of the best ways to determine what preventive measures should be taken to protect against air cargo thefts is to study the methods of operation (M. O.) of actual air cargo thieves. If one knows how a thief gained entry into an air cargo area, found the valuable cargo, extracted the cargo from its container, resealed the container so that no irregularity would be noticed, and made a clean getaway, preventive measures can be taken to control or prevent subsequent thefts. Many

successful criminal investigators put themselves in the "shoes of the thief" and study various aspects of his M. O. in that light.

Some thieves have a particular M. O., which they use each time they commit a crime; therefore, they are associated with it, somewhat like their fingerprints. Thieves usually do not change their M. O., unless it proves to be unsuccessful, because they consider it to be the best method of operation for perpetrating a particular crime and feel more comfortable using it. Thieves often acquire nicknames for a particular part of their M. O. which becomes known, such as "Glass Fingers," the nickname for a safe-cracker who uses sandpaper on his finger tips to make them smooth. Particles of sandpaper found at the scene of a safecracking might be an important clue.

Many large police departments have an M. O. section in their records division. Within minutes the M. O. files can be checked to see if the M. O. of a pending crime is similar to the M. O. of another crime on file; the name or names of persons that have used a particular M. O. in the past are also in the M. O. file. Someday, law enforcement agencies will feed all their M. O. files into a computer at a central location and the computer will be able to search all the M. O.'s in a matter of seconds, giving an answer on a case much faster than a person furnished with the same information.

What can be learned from an analysis of a collection of air cargo theft and loss cases? One can learn the following things about air cargo thieves: who they are, what they steal, how they operate, and where and when the thefts occur. A trained investigator can obtain information from a small number of theft cases that will help him prevent or solve a large

number of subsequent theft cases. When a theft occurs, the weak spots in a security system are usually exposed; however, if the difficulties that the thief encountered are also discovered, these difficulties can be used against subsequent thieves in the form of preventive measures.

II. SELECTION OF THE CASES

Criteria of selection. The main criterion used in the selection of the cases is that they be actual cases. The cases also had to demonstrate something significant, e. g., the type of item that was stolen, where the theft took place, who committed the theft, etc. Only accounts where the facts could be isolated into one incident were used. When the accounts only stated generalities, such as, "some thefts were reported at JFK Airport last night," or when several cases were lumped together, such as "ten shipments of furs were reported stolen at JFK Airport in in as many days," they were not used.

Another criterion used in the selection of the cases is that the reporting agent have actual firsthand knowledge of the case, either by working on it himself or knowing of the case, because it is on file in his company's records. This criterion is applicable to the cases from the book, journals, and questionnaires, but it does not apply to the newspaper accounts, official reports, or letter.

Sources. The cases were taken from a wide variety of sources: a book, journals, newspapers, official reports, airline and air freight forwarder questionnaires, and a letter written to the writer by an air cargo official. The 70 case histories that are presented in this chapter were collected between February, 1965, and the present; the cases

occurred between 1945-1965. One case, taken from a journal, dealt with an attempt to steal in-flight supplies and is used because it occurred in an air cargo warehouse building. Another case, taken from a newspaper article, was used, because it involved a theft from an air freight forwarder (REA Express). No cases were taken from personal interviews, because the interviewee was not always sure of the facts of a case. Only cases that were in printed form were used.

All literature that seemed appropriate was searched for air cargo theft or loss accounts, and every case meeting the previously mentioned criteria was used. Air cargo losses resulting from airplane crashes were for the most part excluded, because the newspaper accounts usually did not mention that the plane was carrying any cargo. There are many other air cargo theft and loss cases "tucked away" in newspapers, company files, law enforcement agencies' files, etc.; however, there is no systematic collection and analysis of cases taken from such a wide variety of sources as is in this chapter anywhere in print. It is hoped that these cases will suggest a need for an international M. O. file on air cargo thefts, which would greatly aid in preventing and solving subsequent air cargo thefts.

Cases that present points for analysis will be analyzed under a separate "Analysis" heading; however, not all cases will be analyzed, because the same point may have been discussed in an analysis of a previous case. The writer did not try to single out a company for any reason by mentioning its name in the facts of a case. The name of a particular airline or air freight forwarder appears in this chapter, only if it appeared in the published account.

III. MONEY CONVERSION RATES

Since the cases in this chapter took place in many different parts of the world, the following money conversion rates apply wherever applicable: 1 Hong Kong dollar=$.178 United States (U. S.) cents; 1 Swiss franc=$.23 (U. S.) cents; 1 florin=$.278 (U. S.) cents; 1 French franc=$.20 (U. S.) cents; 1 British pound (B. P.)=$2.80 (U. S.) dollars. All conversion rates were stated for November 12, 1965.[77]

IV. CASES DERIVED FROM A BOOK

All 15 cases presented in this section were taken from Donald Fish's Airline Detective and cover the period 1945-1961.

Case Number 1[78]

Facts. In 1945, the British Overseas Airways Corporation (BOAC) assigned Mr. Fish to investigate a missing diplomatic mail bag that vanished from Al Maza Airport just outside Cairo, Egypt. Mr. Fish learned that all cargo was unloaded on the apron (runway adjacent to terminal) and left unattended for periods of up to three consecutive hours. He later found the missing diplomatic mail bag, along with a sizeable amount of other mail, lying in an unused hangar. A few "decayed" watchmen had been hired to watch the aircraft, but anyone with a peaked cap could walk passed them and get on a plane. The strong room was used as a storage area for the janitor's brooms and floor polish.

---

[77] Telephonic interview between writer and Larry Fenton, Collections Department, Michigan National Bank, November 12, 1965.

[78] Fish, op.cit., pp. 52-54.

Analysis. The air mail unloading procedure was obviously not adequate, because Mr. Fish found more than one mail bag in the hangar. The inadequate watchmen were a drain on the company's payroll, because they were not doing the job for which they were hired. The strong room was built for valuables, but was used for brooms and cleaning supplies.

From the facts presented, it can be concluded that security at Al Maza Airport was a joke. Since security is clearly a management function, the lax station manager is responsible for the conduct of his employees. A security education program for all employees, including the following subjects, might solve some of the problems in this case: security of air mail, visitors, and valuables. Neglect and carelessness are probably responsible for as much air cargo loss as theft.

Case Number 2[79]

Facts. In 1947, for almost a year's time, there were a series of minor losses (including gold) from several BOAC shipments that passed through London from Singapore, Malaysia. Covered by insurance and being very small in financial value, the only thing making the losses noticeable was their regularity. Two Levantine mechanics were suspected, but nothing was ever proved.

Analysis. One reason for keeping accurate records of all thefts and losses, regardless of their size, is to detect the thief who regularly steals small amounts of air cargo. This type of thief relies on two facts: The losses will be so small that they will not attract any attention, and the insurance companies will pay the small claims, rather than inves-

---

[79] Ibid. pp. 60-61.

tigate them. Airlines and air freight forwarders who do not keep records of all thefts and losses are indirectly helping the thief escape detection, thereby encouraging his criminality. If a routine analysis of all theft and loss reports were made by security officials, a pattern of small losses would almost immediately come to the surface.

It is the small, regular claims that caused several insurance companies to raise their rates several years ago. Small, regular losses, if allowed to continue, might bankrupt some airlines or air freight forwarders or increase the thief's desire to steal more and more. If a thief perpetrates several thefts without getting caught, he will get braver and continue to steal, until he is caught. When other employees see an employee getting away with numerous thefts, it often causes a serious morale problem.

Case Number 3[80]

Facts. Since BOAC was the handling agent for Air France's cargo arriving at London Airport, it was reported to Mr. Fish that a French perfume shipment valued at 3,000 (B.P.) was missing from an Air France flight from Paris. A call was made to Air France in Paris, and it was learned that the perfume, not loaded due to an error, was supposed to arrive on the next flight. It never arrived. With Paris insisting the perfume had been sent and London insisting it had not been sent, it seemed that the perfume vanished somewhere over the English Channel.

Since BOAC had not dispatched the perfume originally, Mr. Fish could not investigate the case in Paris. The British police stated that

---

[80] Ibid., pp. 62-63.

the crime presumably happened in Paris, and the French police stated that the crime presumably happened in England; consequently, no police investigation was made. The insurance company knows about the crime, because they had to pay the claim. Because no one did anything about the crime, the thief learned that crime does pay, on occasion.

Analysis. This case dramatizes a problem of air cargo security that is not easy to solve: Which law enforcement agency should investigate a theft, if the place it occurred is not known or even suspected? Clearly a crime had been perpetrated, but no existing police agency had jurisdiction; therefore, no investigation was made. An international code of criminal law is needed.

Another possible solution to the problem would be to deputize airline security officers (investigators) in jurisdictions where their aircraft land. This would require a large amount of cooperation among the jurisdictions and the airlines-much more than exists now. If airline security investigators were especially trained and deputized, they could commence an investigation anywhere along the route, as soon as a report of a theft reached them. Until a satisfactory solution is reached, this problem area will continue to be an Achilles heel in air cargo operations.

Case Number 4[81]

Facts. In 1947, several air cargo thefts occurred just after BOAC introduced a new aircraft. From the pattern of the thefts, Mr. Fish narrowed their location down to London. The records of loading teams who worked on aircraft leaving the airport was examined, and one particular loading team was put under surveillance.

---

[81] Ibid., pp. 64-66.

This was the M. O.: The new planes all carried freight in a long, narrow belly-hold running the entire length of the fuselage under the passengers' seats, reached by a hatch opening from underneath. With less than four feet of headroom, the only way to pack the freight was for a loader to climb inside the hold and have it handed up to him. Once the loader was inside and out of sight from anyone on the outside, he was at liberty to pilfer any freight in the hold. To make it easier for themselves, the loaders would load the air cargo too fast, causing a pile-up at the mouth of the hold. This pile-up further screened the loader inside from the view of anyone outside.

One day as the four loaders had finished loading an aircraft, Mr. Fish "grabbed them" and found a jar of hair cream on one of them, enough for the police to issue warrants to search the men's houses. Found at the men's houses were 123 brand new silk neckties, cameras, shirts, toys, fountain pens, and field glasses. The most valuable article stolen was a "nailed-up" wooden box containing a 2,000 pound gold ingot; since the thieves were amatures and did not know what to do with the gold, they sold it for only a quarter of its real value. They were subsequently tried and convicted.

Analysis. The importance of keeping records on loading teams of aircraft leaving the airport is evident from this case. If it is discovered that a plane is pilfered everytime a particular loading team is involved, it is a good indication that the team needs to be watched. As was the case here, many thieves are free to operate, because their co-workers condone or actually participate in the crime with them. If one thief is discovered stealing air cargo, it is a good idea to watch him, if

possible, to see if he is working alone or with others. Catching one member of a gang may not stop the other gang members from committing subsequent thefts. In a case presented later, FBI agents followed a thief, after he had stolen an air cargo shipment, and caught the thief and the fence (receiver of stolen goods). In many air cargo theft cases, more than one person is involved.

Case Number 5[82]

Facts. When the Kano Police (Northern Nigeria, Africa) searched a local resident's house in connection with another matter and found a gold bar valued at 5,000 (B.P.), they asked a BOAC security officer, who had been sent to investigate a "run of pilfering" from planes using Kano Airport, if the gold had been stolen from BOAC. A check of all the gold shipments that had passed through Kano Airport in the last 12 months showed that no one had reported a loss. Since it is not a crime in Kano to possess a gold bar worth 5,000 (B.P.), and there was no claim made, the "finder" kept it.

Three months later a worried police officer, representing a large European airline, arrived in Kano in search of a stolen gold bar (from a Johannesburg, South Africa, flight) valued at 5,000 (B.P.), which had been lost for four months. Due to the "muddle" that often occurs with air cargo, the loss had not been reported, until a claim had been placed with the insurance company; the underwriters insisted on an inquiry.

Analysis. In some instances, the victim of a crime cannot be found. If an internal auditing procedure had been functioning properly, the airline would have known of the gold theft almost immediately, not months

---

[82] Ibid., pp. 66-68.

later. A comparison of the air bills with the delivery receipts would have shown that the gold shipment was never delivered; an investigation could have been launched four months earlier. It is a case of gross neglect, when an airline loses a gold bar valued at 5,000 (B.P.), an investigation is not launched until four months later, and an underwriter, not the airline, originates the theft investigation.

Case Number 6[83]

Facts. In 1948, in the hurry to make the new London Airport operational, security was at the bottom of the list of priorities; however, a security guard was always on duty in the BOAC air cargo warehouse. A BOAC security officer called Mr. Fish and told him that another man working in the warehouse had told him of a robbery plan. Someone was supposed to have approached the warehouseman with an offer of 500 (B.P.), if he would "dope" the coffee of the warehouse staff on the night of a valuable gold bullion shipment and let the gang into the warehouse. The warehouseman, who was approached by a gang member, told Mr. Fish the story, without hesitating and without changing any of the facts from the version the security guard told the night before. Mr. Fish instructed the warehouseman to "keep his ears open," to do exactly what the gang member said, and to report everything that occurred to him.

Five days later, the warehouseman told Mr. Fish that he had received a note two days ago fixing a meeting with the gang at 9:00 p.m. the previous night in a public bar. The warehouseman had met the gang and discussed the final details of the raid; it was scheduled for 1 a.m.

---

[83] Ibid., pp. 73-85.

on the night the next gold bullion plane arrived. Also, the warehouse was under constant watch from an all-night cafe across from the airport gates.

The warehouseman gave Mr. Fish a thorough description of all three men and the license number of the black Vauxhall they were driving. In checking with Scotland Yard's Criminal Records Department, the description of two of the gang members matched exactly with the descriptions of two men who had been in the files for many years. A check of the license number of the Vauxhall showed that it belonged to a man high in the London underworld. Mr. Fish learned that the next gold shipment was valued at 250,000 (B.P.) and was due in from South America via Madrid, Spain, in five days' time. Scotland Yard officially entered the case, and final plans were made. The thieves learned of the gold shipment from another accomplice working elsewhere in BOAC.

At 8:00 p.m. on a Wednesday night, the warehouseman went on duty with a package of barbiturate, which the gang had given him to use in the coffee. At 9:00 p.m. the bullion plane arrived, and the gold was placed in the warehouse's strong room. At 10:00 p.m. a BOAC van, usually used for transporting valuables, drove past the cafe near the gate and backed up to the warehouse's main entrance. The thieves probably noticed the uniformed security guard in the front seat of the van. A large packing case was unloaded, and while the van was blocking the view from the cafe, 14 policemen and Mr. Fish climbed out of it and took up their places in the warehouse. The driver of the van and the security officer were both police officers in disguise.

The surprised night staff were locked out of harm's way in a side

office, and four suitably dressed police officers took up their places. Nearby, at least a dozen other police officers were waiting in a parked van; Mr. Fish was hidden in a warehouse office, with an open line to Scotland Yard. When the thieves arrived, the alarm would be given, and four squad cars waiting at different points five miles away would converge on London Airport. At 12:40 a.m. the mobile canteen delivered the coffee for the night staff.

After the staff drank their "non-doped" coffee and assumed "knocked-out" positions, the warehouseman signaled the gang by raising the hangar door and leaving it ajar. When the gang drove up, Mr. Fish alerted Scotland Yard, and the four squad cars closed in on the airport. Each gang member wore a silk stocking over his head as a mask, and they shook the night staff to see if they were asleep. They slapped the guard with the keys and took them, when they were sure he was asleep. When the gang leader fitted the key into the strong room door, the police "pounced on them." After a fierce battle, all eight gang members were taken to jail. At the trial, the gang was sentenced to a total of 71 years to serve behind bars.

Analysis. Security is often sacrificed when a new facility is being built. In this case many valuables were at stake, yet security was put low on the list of priorities.

The gang used a previous acquaintance as a device to infiltrate the BOAC warehouse staff. A gang member, who had been in a World War II German prisoner-of-war camp with the warehouseman that he contacted, used this previous friendship to gain the man's help. Possibly, the only way to guard against an "inside job" is to screen employees thoroughly before

hiring them, instill all the company loyalty in them that is possible, expose them to a security education program, make periodic security checks (if possible), and hope they do not betray the company.

A policy of certain prosecution for those caught also acts as a deterrant; however, many companies discharge, rather than prosecute an employee thief. Some companies use periodic polygraph tests (erroneously called lie detectors) to see if their employees have harmed the company in any way, since they were first employed or since the last polygraph test was given. A polygraph test is not always the answer to the theft problems of a company, because it is expensive to administer, time consuming, and not always accurate (depends on the examiner's interpretations of the results).

The way BOAC and Scotland Yard exchanged information demonstrates that such an arrangement benefits both parties. BOAC learned what it was up against, and the police helped prevent a theft.

Scientific crime detection devices are helpful in some instances, but the ingenuity of the security director in determining which ones to use mainly determines their effectiveness. Because the gang wore stocking masks, a hidden surveillance camera would have only been partially helpful in identifying them, if any had escaped. The M. O. of the gang could have been studied from the developed pictures taken of the crime, if no advance notice had been given of the raid. Also, the police could have been alerted by a guard at a closed circuit television monitor in another location without the gang knowing it, if such a device had been installed. There was also collusion between a BOAC employee (notified the gang of the time of the gold shipment) and the gang, a common occurrence in air

cargo thefts; however, his identity was not disclosed in the facts.

Case Number 7[84]

In the autumn of 1948, an airplane loader, who was employed by BOAC, took 1,600 cigaretts from a Stratocruiser aircraft. He was subsequently convicted as charged and fined five (B.P.).

Case Number 8[85]

A watch valued at 250 (B.P.) was "lost in transit" from Manila (a Philippine island). Presumably, it was being carried by a BOAC aircraft.

Case Number 9[86]

Facts. In the summer of 1949, BOAC instituted a security check, which played a part in solving one of the first of the really expert thefts that occurred on BOAC's foreign routes. The security check consisted of a special steel strapping that encircled any valuable consignment; it was secured by an identifying metal seal; and each BOAC foreign station had its own identifying mark. As a standard practice, all valuable consignments shipped from a BOAC station were sealed immediately upon acceptance.

After being carried from Switzerland on a PAA flight to Karachi, Pakistan, a box of 100 valuable watches were transferred to a BOAC flight for the rest of the trip to Singapore, Malaysia. Upon arrival in Singapore, the lid, steel strapping, and security seal seemed intact; however, when Customs officials opened the box, they found no watches. In place of the watches were a roller skate (German, number 8 shoe) and

---

[84] Ibid., p. 87. [85] Ibid. [86] Ibid., pp. 88-91.

three bricks. Mr. Fish found that the nails had been expertly drawn and replaced, so no suspicion would be aroused until the box reached its destination, Singapore.

The security strapping's seal seemed intact and still bore the embossed "F," the code letter for Karachi. This seemed to indicate that the parcel was intact, when it entered the Karachi Customs area, and had not been visably tampered with after leaving there. As for the seal, it was impossible for the thief to have opened and resealed the box with the same seal. To be able to emboss the seal with the letter "F," the thief would have needed a special embossing tool, and only two were in existance: One was kept under top security at the Karachi station, and the other one was kept in Mr. Fish's safe at London Airport. Mr. Fish, in matching the seal on the strapping against his safe's embossing tool for Karachi, noticed that the lower arm of the "F" on the strapping seal was a fraction too long to be genuine; the seal on the security strapping was a skillful forgery.

Since the crime was pinpointed to the Customs area at Karachi, the watches must have been stolen after they had passed Customs and sealed originally by BOAC personnel. The two men responsible for the theft were employed in the BOAC bonded warehouse and had ample opportunity to study the security sealing procedure. They were convicted, and 70 watches were recovered.

Analysis. Any move that a company makes in trying to prevent subsequent thefts must be tested by time. BOAC instituted a security check, a security strapping and seal, that proved its value over a 100 times, according to Mr. Fish. The security check had only been in

operation several months, when it helped to solve this case. It is the duty of the security director of each air cargo handling company to continually evaluate his security operations, so that air cargo thefts and losses can be controlled.

The security strapping and seal helped the investigator with one of the hardest problems with which an airline security officer must cope: Where, along the thousands of miles of route that the aircraft traveled, was the crime actually committed? In this case the situation was further complicated by the fact that the first half of the watches' journey had not been in a BOAC plane.

An airline security officer must have had some previous investigative experience, if he is going to be of maximum service to the airline in an investigation of this type. Knowing what to analyze and how to go about it was very important in this case. Analysis of the seal, by Mr. Fish, and determining the location where the crime probably was committed was no accident. It took many years of police and investigative experience to provide the background for arriving at such an accurate answer. The airlines and air freight forwarders, with a few exceptions, do not train their security personnel in investigative techniques and police work, because they do not have the personnel or facilities to do so. Most expect the security officer to already have the necessary technical knowledge.

In an investigation of this type, the investigator must determine who had the opportunity to commit the crime and to whom the air cargo would appeal enough to steal it. In this case, watches were something that could easily be disposed of or used personally by the thief. All

employees working in an air cargo area should be bonded to protect the company against theft.

Case Number 10[87]

Facts. A small parcel of jewelry "went adrift" on a BOAC flight from Brussels, Belgium, to Johannesburg, South Africa; almost a month passed before it was reported missing. To add to the complexity of the case, the jewelry had been sent a roundabout way from Brussels via London, and the theft could have occurred at any of six airports.

The small wooden jewelry box had been opened, and some pieces of brick had been placed inside as a substitute for the weight of the jewelry. Mr. Fish, using a magnifying glass, discovered several tiny shells embedded in the mortar and sent it to a natural history museum, with a note asking its director two questions: Were the tiny things observed shells? If they were, where did they come from?

Three days later the museum reported that the shells came from a small mollusk which was found, conveniently, in only one place in the world: in the waters off the coast of the African shore of the Mediterranean Sea. This fact located the theft at one airport, Tripoli. When an investigator was sent from London, he found that the security men at Tripoli had been suspicious of two local employees for a long time. The missing jewelry was found hidden under a floorboard in a room belonging to one of the men.

Analysis. The sooner an air cargo theft is reported, the better chance the investigators have of catching the thief. If there is only a

---

[87] Ibid., pp. 91-93.

short delay between a theft and the reporting of it, there is also less chance that the evidence may be destroyed by some unknowing person. Fingerprints could be smeared or the cargo container could be thrown away as trash.

If a "status check" were made, the company could determine whether or not the shipment had been delivered, was being held for the consignee to pick up, or was missing. The check could take place just after the parcel was supposed to be delivered to the consignee or when the parcel arrives at the air cargo terminal to be stored. Due to the financial cost, a "status check" could function on a temporary basis at first, for valuable shipments and spot checks. If computers were used, the "status check" could be extended to all air cargo. The public wants efficiency and speed for the extra amount they pay for shipment by air. If air cargo is often lost or remains on the warehouse floor as much as six days at one time, the shipper will be forced to use surface transportation.

Outside experts can be used effectively, as was shown in this case, when the museum director was asked to identify the tiny shells found in the evidence. Often in air cargo theft cases, there is little, if any, evidence with which to work; therefore, it is very important to get as much evidence as possible as soon as possible. Many times the evidence will enable the investigator to pinpoint the location of the crime, as it did in this case. Cargo substitution, i.e., substituting bricks, etc., for the cargo, so the weight of the shipment matches the weight on the air documents, is a common occurrence in air cargo thefts, because the thief wants to prevent detection as long as possible.

Case Number 11[88]

Facts. In December, 1949, 500 valuable Swiss watches reached Bangkok, Thailand, four days ahead of a salesman who was to check on them. The box was kept under lock and key in the Customs warehouse and checked three times a day. The salesman arrived on the fourth day and inspected the box; the lid was in one piece, the label and all seals were in place, and the weight was correct to within two decimal places of the figure on the consignment note. Upon opening the box, the salesman and Customs officials found in place of the watches, the remains of some of the watch boxes, several large stones, and an empty ink bottle.

Mr. Fish discovered the thief's M. O.: Instead of prying open the lid and leaving the box to attract everyone's attention, the thief had taken the large address label (six by four inches) off the side of the case. Within the area where the label had been, the thief had used an extremely fine keyhole saw to cut a hole just large enough for his hand. After removing the watches, he had replaced the watch boxes and added the other materials, so the box's weight would match the weight on the air document. Then the thief replaced the piece of wood he had cut out of the hole and neatly glued the label over the top again.

Now that Mr. Fish knew how the crime had been committed, he had to find out where it had been committed. Mr. Fish decided to perpetrate an identical crime on a mock-up of the box full of watches. Since Customs officials had opened the box and counted the watches, it was easy to determine how they were packed. There was a layer of wood-wool on the

---

[88] Ibid., pp. 93-98.

bottom, and the red cardboard boxes containing the watches had been stacked on top of it. The three-inch gap around the sides had been packed tightly with wood-wool.

It took Mr. Fish three hours to perpetrate the mock crime. The box had been no problem, but the rough part was the way the watches had been wedged into the wood-wool. Because of this fact, the tiny saw had almost no play; only six of the teeth could cut at a time. The timing located the crime without any doubt; the only place the packing case had remained on the ground for any length of time close to three hours after it left the London Airport was inside the Customs warehouse at Bangkok. Mr. Fish cabled his findings to Mr. Buchanan (BOAC investigator) in Karachi.

For 21 days, only the local BOAC manager knew Mr. Buchanan was waiting in the Bangkok warehouse at night, alone. At 2:00 a.m. one morning, Mr. Buchanan's surveillance paid off. Carefully, a manhole cover inside the warehouse was raised, and a man carrying a flashlight crawled out from the sewer below. He seemed to know what he wanted and where to go in the warehouse. The day before, two large consignments of Swiss watches had arrived. Mr. Buchanan observed the man's M. O.: The thief removed the label from the box, drilled a small hole, and began to saw the box. After letting the man spend a half an hour working on the box, Mr. Buchanan captured him. In replying to Mr. Fish's question as to why he waited a half an hour before apprehending the thief, Mr. Buchanan stated that he had waited 21 days to see that thief in action, and he wanted to get his money's worth.

Analysis. Often electronic protection devices can be used to aid in the detection of a crime. Valuable cargo was stored in the warehouse overnight, but no mention was made of any electronic protection devices being installed or any security guards patrolling the premises to check for signs of forced entry, fires, or suspicious persons loitering in the area. If an ultransonic alarm or photoelectric alarm had been in operation, any thief would have "announced" his presence to a central station or the police (by tripping a silent alarm) the second he raised the manhole cover. Such electronic equipment is expensive, but not unreasonable, when one considers the amount of unprotected air cargo stored in warehouses overnight.

Direct costs and indirect costs result from an air cargo theft. The direct costs are the cost of the article stolen and the time and money spent on the investigation of the theft. The indirect costs are the loss of business from the shipper who had his shipment stolen, and the loss of business from anyone the shipper tells about his loss. Security can "pay its way" many times over, when one stops to consider all the costs involved in an air cargo theft.

One fact that is evident from this case is that some air cargo thieves use very complicated M. O.'s. Since no apparent check was made by a guard of the inside of the warehouse, and apparently no electronic devices were installed, the thief had ample time to commit the complicated and painstaking crime, undisturbed. If a security guard had been on patrol and detection devices had been installed, probably the thief would have been interrupted.

Case Number 12[89]

Facts. A series of diamond thefts occurred along the BOAC routes in 1955, when the new Jan Smuts Airport (South Africa) opened. Previously, diamond shipments had been shipped from Palmeitfontein Airport, just outside Johannesburg, South Africa. Between March and May, several diamond shipments disappeared from the mails, total value over 50,000 (B.P.). No pattern seemed to emerge from the thefts.

The first loss was reported from Hong Kong. A diamond shipment worth 7,000 (B.P.) disappeared from a registered mail bag, which had been cut at the neck; the Post Office seal around the neck of the bag was not broken. The rest of the registered mail was still inside the bag, along with the remains of the parcel which had held the diamonds. The second theft was at Amsterdam, Netherlands, and it seemed to have been perpetrated the same way as the first one. Subsequently, similar thefts took place in New York, Brussels, Hong Kong again, and London.

Mr. Fish flew to Amsterdam and studied the first Hong Kong and the Amsterdam thefts together. This was the thief's M. O.: The thief selected the registered mail bag from the other mail bags, a task made easy for him by the Post Office's clearly marked identification label around the neck of every bag containing registered mail. Eventhough British mail bags have a cord sewn into the neck that prevents the seal from being pulled over the top of the bag, this was not enough to stop the thief. He found a marked bag that was partially empty, with the seal tied a long way down the neck, and slowly edged the tightly-tied

---

[89] Ibid., pp. 109-115.

seal up to the top of the bag, by tugging patiently at the folds of the canvas. Then he manuvered the box of diamonds to the top of the mail bag, cut the bag inside one of the folds towards the neck, and put his hand in to get the diamonds. The thief felt around, until he touched a small parcel heavily covered with official seals and took it out. He tore open one end of the box's wrapping and pried up one corner, just enough to allow him to pull out the cotton-wood wrapped around the diamonds. After pocketing the diamonds, he put the torn packet back inside the mail bag and carefully worked the string and seal back to their original position, until the cut was completely hidden inside the folds of the neck of the bag.

Mr. Fish committed the crime three times in his office, and each time the crime took more than two hours. Since the diamonds were not on the ground more than two hours after they left Jan Smuts Airport, the airport was where the crimes were being perpetrated; however, the South African Police denied it.

A further clue was discovered in the London Airport diamond theft. Since the cut mail bag was approximately the first bag loaded on the plane, it was not accessible, until all the other cargo was unloaded. The cutting of the mail bag and the subsequent theft of the diamonds had to have occurred at Jan Smuts Airport, regardless of what the local police said.

The number of men who had access to the registered mail bags was small, but no one gave himself away. Due to strong reprecussions that occurred after the thefts, Jan Smuts' security was taken out of the hands of the South African Police and reorganized under the South African

Railways and Harbour Police. Since then, there have been no more registered mail bags cut and their diamond boxes pilfered.

Analysis. Today, a vast number of diamond shipments travel by air, due to the speed and relative security in the air. When diamonds are shipped by air, they are wrapped in cotton-wool, placed inside a tin box and then sealed and addressed on a simple green label. When particularly valuable diamond shipments are transported by air, they are usually carried by an airline security officer; however, most merchants send them by registered air mail.

When diamonds are sent by registered mail, the airline usually does not know what is in the mail bags; furthermore, the airline has only a small amount of liability, according to Post Office regulations. One might think this limited liability causes the airline to treat diamond thefts lightly, but such is not the case. Many airlines investigate all thefts, regardless of the value or items stolen.

One fact in this case that helped the thief select the mail bag containing the diamonds was the Post Office's clearly marked identification label around the neck of every bag containing registered mail. Another fact that the thief must have used is that the registered mail sack is usually half full, not entirely full like the others. The thief looked for a half-empty mail bag that was clearly marked and went to work extracting the valuable shipments.

By replacing the empty box, the theft was not discovered until the bag reached its destination. If the thief had taken the box and diamonds, the crime would have been more confusing, because the Post Office would have had to determine what had been stolen. The only

registered mail information kept by the Post Office is that there were a certain number of registered items in the bag. The Post Office would have to wait until the victim of the theft complained, before they would know exactly what had been stolen. The delay in discovering and reporting the theft would obviously hinder an investigation.

The thief's M. O. suggests two things: Air cargo thieves are smart enough to figure out complicated ways of committing an air cargo theft, and they often have enough time to perpetrate their crime without any interruption. Someone in a company should analyze theft reports, so future thefts can be guarded against by advance planning. Many thefts can be prevented by an alert air cargo supervisor, who strictly enforces air cargo handling procedures.

Case Number 13[90]

Facts. On September 21, 1961, eight airline employees at London Airport and two other persons were convicted in Central Criminal Court of stealing the following from air mail shipments: gold, diamonds, and currency, a total value of 250,000 (B.P.). During the course of the trial, it was brought out that the thefts were made possible by the Post Office's identifying labels attached to mail bags containing valuable items.

Analysis. The air cargo thief, in many cases, has the active cooperation of the people he is working with or the assurance that they will not inform on him. A Virginia manufacturing firm gave all its employees a stock option plan so tempting that the employees now own the entire business; under an arrangement such as this, thefts would probably

---

[90] Ibid., p. 111.

be fewer, because no one would steal from himself. This plan would probably be less effective in large companies, which have thousands of stockholders.

This case illustrates a weakness in the Post Office's procedure in Europe that the thief uses to his advantage, the identifying mark on the registered mail bags. Several suggestions have been advanced to remedy this situation, such as different colored mail bags, an outer bag made of thick, tough material in which to house the registered bag, etc., but none have been satisfactory. The United States Post Office's registered mail bags do not have an identification tag on them, and they have not used such a tag for several years.

Case Number 14[91]

Facts. At Christmas time in 1954, a BOAC aircraft missed the end of the runway at Prestwick Airport (Scotland) while attempting a landing, crashed, and caught fire, killing 28 people. Mr. Fish was routinely notified of the crash, but since the records indicated no valuable cargo was onboard, he was not officially called in on the case. Five days later Mr. Fish received an inquiry, on behalf of some New York diamond brokers, about an important registered parcel of uncut diamonds sent from London more than a week before that had not arrived. It was soon discovered that the uncut diamonds, worth over a million (B.P.) were in a registered mail bag aboard the plane that crashed. No one, not even the Post Office, took the trouble to inform BOAC's security department about the diamonds.

---

[91] Ibid., pp. 115-118.

The plane had been lying in the open for several days, with half of Scotland curiously looking through the wreckage. Mr. Fish, Post Office officials, and Diamond Corporation officials spent an entire day and part of a night looking for the uncut diamonds in the wreckage. Eventhough the mud was very thick, and the fire had discolored some of the diamonds, the small group found almost 200 of them. Later the Diamond Corporation and the insurance companies put on a massive search that lasted several weeks, resulting in a recovery of over 90% of the diamonds.

Analysis. An airline should be notified by the Post Office, when the Post Office knows a shipment of valuable cargo is about to be carried by the airline. When the shipper does not declare the cargo as valuable and in fact it is (not wanting to attract anyone's attention), this makes it very difficult for the Post Office and the airlines. A theft could be attempted by someone with "inside" information or a crash could occur, and the security department would not know of it, until the loss was reported.

In this case, it was only chance that someone working at the crash site did not discover the diamonds and take them. The airline's security department and/or cargo officials where the shipment originated should be routinely notified of all airplane crashes.

Eventhough BOAC was only liable for a small amount, under the postal regulations, Mr. Fish took it upon himself to help search for the missing diamonds. Since, Mr. Fish and BOAC went beyond their legal responsibility, this demonstrates the high quality of their organization.

Case Number 15[92]

Facts. Several days before Christmas 1955, Mr. Fish received two urgent cables from Mr. Buchanan in Rome, Italy. It seems that Mr. Buchanan had accidently met a BOAC man in a bar there, who told him about a strange event that occurred in Hong Kong, China, about a month previously. An unmarked envelope containing 4,000 Hong Kong dollars, neatly separated in bundles of small demonimations was discovered in a desk in the main freight office of BOAC's agents in Hong Kong. No one in Hong Kong had realized the significance of the money, but to trained security personnel, it meant a possible pay off to someone for doing something. Mr. Fish ordered a complete investigation into every detail of the work passing through Hong Kong.

The paper work connected with each flight is collected at BOAC headquarters into what is called the Ship's Papers File. Mr. Buchanan concentrated on the following file documents in his investigation in Hong Kong: the copy of the consignment note and the air cargo manifest. Mr. Buchanan sent his findings to Mr. Fish, and Mr. Fish and a BOAC investigator checked the information by cross checking the documents in the master file. After much hard work of examining a large number of almost illegible carbon copies, Mr. Fish was able to prove the following: The air cargo manifests and consignment notes were being altered, particularly shipments of antibiotics from a chemical manufacturing firm in the United States via London and Hong Kong to Formosa. In each case specific routing instructions had been given. Knowing that the shipments

---

[92] Ibid., pp. 165-170.

were very valuable and heavy, cross checking showed that the goods were being switched in Hong Kong; an air cargo shipment of antibiotics from the United States would eventually arrive in Formosa as powered milk or something different. Oddly enough, there had been no complaint from consignor or consignee.

The M. O. of the thieves was clever: A wealthy Chinese trader had succeeded in corrupting the entire freight office staff in Hong Kong, from the manager down to the porter. The cartons containing the drugs were being taken from the Hong Kong air freight warehouse, sent into town, opened, and the contents removed. Milk powder was packed into the carton, until the weight of the carton matched the weight listed on the air documents. The Hong Kong freight office staff were given enough advance notice of when the shipments were due that they could prepare the false documentation before the cargo arrived. It was also learned that the following items were being switched in addition to antibiotics: radio transmitter values, X-ray equipment, and other strategic goods. Because the operation was world-wide and venue was so widespread, prosecution was impractical. Mr. Fish took disciplinary action to clean up the Hong Kong freight office and reported the facts to interested law enforcement authorities around the world.

Analysis. To combat ignorance about security matters, a security education program for all employees is a desirable approach; however, in this particular case, a security education program would have had questionable effect, since all the employees were corrupted by the Chinese trader's influence. Thieves will go to any extremes, such as bribery and forging documents, to steal valuable air cargo. This is why the

internal auditing section of the accounting department should periodically check for forgeries and other discrepancies in air cargo documents. A spot check procedure is not out of the question, if the company already has an accounting department that is functioning adequately. If a routine internal audit had been made of the Hong Kong office's air documents, the theft would have been discovered much sooner. Computers will eventually check all significant paper work dealing with air cargo.

Since this case occurred in Hong Kong, and the stolen items' destination was Formosa, it is not hard to guess that the Communists were getting the stolen items (Mr. Fish's conclusion). All the items stolen were classified as "strategic material" by the United States, and their export was subject to the strictest control to prevent them from getting into the hands of the Communists.

The fact that all personnel in the freight office were "reached" by the Chinese trader demonstrates that often the thief does not work alone, but through collusion. Periodic personnel transfers would remedy this situation, but employees probably would not like to move so often. Periodic security spot checks (announced or unannounced) might reduce this type of wholesale corruption.

This case also shows that air cargo thefts are not "small stuff," when the efforts of so many go into the planning and execution of them. If the Communists were involved, as they probably were, it shows that air cargo security must be improved to protect it from wholesale thefts being perpetrated by the Reds. One tactic used by the Communists is to have their enemies fight among themselves. Naturally, repercussions occur in an airline when a whole freight office staff is corrupted. Once the

Communists see that air cargo is very vulnerable, they might try to use this as a source of income and also as an area in which they can produce confusion among airlines, air freight forwarders, shippers, insurance companies, and law enforcement agencies.

If law enforcement agencies would notify airline security departments of the disposition of cases that they work on together, security departments would have a better idea of what they are up against in the way of potential thefts or losses. In this case, Mr. Fish was not notified by any law enforcement agency of the outcome of any cases that resulted from the information he furnished them.

V. CASES DERIVED FROM JOURNAL ARTICLES

The seven cases presented in this section were taken from two security administration journals: one from Security World, an American publication; and six from Security Gazette, a British publication. Many other journals were searched; however, these two journals were the only ones which contained case histories that could be used. Only the bare facts were given in the journal articles, and no cases were analyzed by the authors.

Case Number 16[93]

Facts. A burglary suspect entered a liquor storeroom of a major airline at Los Angeles International Airport. He gained access through the roof, removed a panel from the storeroom ceiling, and lowered himself into the room. His feet disturbed a wave length that triggered an ultra-

---

[93]"Cover Story," Security World, 1:8, July, 1964.

sonic sensor. The control box set in motion a surveillance camera, which took pictures of the burglary suspect at one-second intervals. The suspect heard the clicking noises made by the control box and was immediately alerted. He went out of the room, turned off the hall lights, and crawled back into the liquor storeroom on his hands and knees; his purpose was to determine whether or not he could destroy the strange equipment. After deciding he could not destroy the equipment, he ran out of the room.

The suspect was identified as a member of the warehouse janitorial crew and was arrested by the police. The janitor said he heard someone in the storeroom and entered only to protect his employer's merchandise; however, when he was confronted with the photographic evidence, he readily admitted his guilt. In Los Angeles County Superior Court, Inglewood, California, the suspect pleaded quilty to second degree burglary and was sentenced on June 4, 1964.

Analysis. This case is presented, because it occurred in an air cargo warehouse, and it presents several points for analysis. After suspecting repeated losses from an in-flight supply warehouse at Los Angeles International Airport, warehouse authorities hastily installed a surveillance camera. An ultrasonic sensor device was also installed, so that any intruder would activate this device and start the camera operating. The camera is silent when operating, but the control box emits a slight clicking noise, when it is activated. Normally, the control box is installed in another location from the camera, but due to the haste to make the system operational, it was installed next to the camera. This case is an example of how hastily put together security measures,

only by chance, aided in the identification of a burglary suspect. If more patience had been taken with the installation of the equipment, the camera may have caught the thief actually stealing the goods, instead of only catching his entry into the building.

Electronic detection devices, properly used, can aid in the identification and capture of thieves. In the facts given, nothing was mentioned about the ultrasonic detection device sending an alarm to a central station or the police, but it is possible to install this type of detection device so the burglar does not know a "silent signal" was transmitted to the authorities when he entered the area. This particular surveillance system may be operated by a clock control, set to function automatically after regular business hours, or controlled manually. It is interesting to note that the suspect was apprehended and convicted from the evidence of the photographs taken by the surveillance camera.

One security device is not sufficient. The ultrasonic device would have been able to transmit a signal to the authorities; eventhough, the thief cut off the lights and made the camera temporarily ineffective. By using two devices, there is more of a chance the thief will be detected, even if he disables one. Unless the thief has previous knowledge, he has no way of knowing how many electronic detection devices are installed.

Case Number 17[94]

Facts. At London Airport, an air cargo shipment of notes valued at 25,000 (B.P.) was left unattended outside a strong room, because there

---

[94]R. C. J. Gordon, loc. cit.

was no one available to open the strong room's door. They were stolen sometime during the night.

Analysis. This case illustrates a very common situation in air cargo operations: Adequate security procedures were available, but due to inefficiency or carelessness, they were not used. In this case a strong room existed, but the person with the key was not available to open it. As a result of this inefficiency, a valuable shipment of air cargo valued at 25,000 (B.P.) was stolen.

In many air cargo operations, the company does not need a tighter security program, but they do need more competent air cargo supervisors who are more security conscious. Often a shipment of air cargo is lost through negligence or rough handling, not an actual theft. Many companies have adequate written air cargo security procedures, but they are not followed; often no check of these procedures is made, until a large theft occurs.

Case Number 18[95]

Facts. On a flight from Germany to Australia, an aircraft carrying air cargo needed to be serviced. The air cargo was unloaded and left unattended in the open for two hours, during which time some valuable notes were stolen.

Analysis. This is another case that illustrates that carelessness is one of the causes of many air cargo losses. Leaving valuable air cargo unattended is an open invitation to thieves; air cargo handlers were indirectly inviting or condoning the theft by their carelessness. Today,

---

[95] Ibid.

a large amount of air cargo is left unattended, because there is no space in the regularly designated cargo storage area for it. New facilities are being built; however, greater security is necessary in the interlude.

Case Number 19[96]

Facts. The crew of a far eastern airliner that was carrying a shipment of gold bullion was held up by armed men traveling as passengers. The gunmen forced the pilot to make an unscheduled landing where accomplices were waiting; they escaped with the gold.

Analysis. Cases such as this one do not happen frequently, but they have occurred, particularly where the "stakes" were high enough. Most aircraft hijacking cases involve passengers who want to be taken to another destination.

Bonanza Air Lines has recently installed a unique program which allows 20-30 of their approximately 100 pilots to carry .38 caliber snub nose revolvers with them in the cockpit for self-defense. The pilots carrying the revolvers must pass a 12-hour National Rife Association course, taught by a Las Vega Police Firearms Instructor, before they are allowed to go on duty armed. The local sheriff's department checks their background and, if acceptable, issues them a concealed weapon's permit. Because the pilots are highly selected before employment, no additional company screening is conducted of the ones who wish to participate in the voluntary firearms program.

The revolver barrel length is limited to two inches, and the

---

[96]Fraser, Security Gazette, 1959, op. cit., p. 301.

ammunition must be of no more than standard velocity; the slug is pure lead with a half-jacket of copper. There have been no incidents aboard any Bonanza aircraft since the start of the program.[97] Since pilots have all they can do to fly the aircraft, especially in areas of high traffic densities,[98] it seems that another solution should be sought, without resorting to arming them, such as a bullet-proof door between the pilot and the passengers that can only be opened from the passengers' side with a key (hidden by the crew).

Case Number 20[99]

Facts. Flashlight batteries, substituted for a shipment of watches, were traced by perforated numbers on them, from the manufacturer in Indonesia to a wholesale house in Singapore and subsequently to the point where the theft was perpetrated.

Analysis. This case demonstrates that often, the only evidence investigators have to work with is the material substituted by the thief for the original air cargo. The evidence, upon analysis, sometimes reveals the location where the theft might have taken place; therefore, it is very important that air cargo handlers be trained not to destroy any evidence they find, if it is involved in an air cargo theft or loss.

Case Number 21[100]

A jar of sand and gravel was substituted for the original cargo,

---

[97] Letter to writer from Gordon Kent, Director, Press Relations, Bonanza Air Lines, November 18, 1965.

[98] Speas, op.cit., pp. 60-61.

[99] Fraser, Security Gazette, 1959, op.cit., p. 303.

[100] Ibid.

and an analysis of the evidence revealed the bones of a particular fish, found only in the eastern part of the Mediterranean Sea. The analytical tests also showed traces of bettle-nut spittle. This analysis was sufficient to identify the station where the trouble was occurring.

Case Number 22[101]

When an air cargo shipment of watches arrived at Sydney, Australia, from Frankfurt, Germany, a house brick was found in place of the watches. Technical experts analyzed the evidence and identified it as having been made in Germany. This fact established that the theft must have taken place before the consignment was placed onboard at Frankfurt.

VI. CASES DERIVED FROM NEWSPAPERS

The 12 cases presented in this section were taken from three newspapers: The New York Times, the London Daily Express, and The State (Lansing, Michigan) Journal. The cases cover the period from 1964, to the present. A representative of the London Daily Express sent the writer clippings from his newspaper, but he did not always give the entire date or the page number. Where either the page number or date is omitted in the footnote, it is because it was not furnished with the clipping.

Case Number 23[102]

Facts. FBI agents, hiding in the shadows at JFK International Airport early one morning, watched two men load eight cartons of tape

---

[101] Ibid.

[102] News item in The New York Times, July 24, 1965, p. 37.

recorders and 10 cartons of women's coats into a truck and drive off. An FBI spokesman later stated that his agents had witnessed an operation by a band of thieves that had stolen goods valued at $150,000 in at least 11 raids on air cargo at JFK International Airport.

The FBI agents followed the car and arrested two men. In a search of one man's house, many items from earlier thefts were found; more arrests were expected. The two men were arraigned before a United States Commissioner. The man described as the fence (a receiver of stolen goods) was released on $2,500 bail; the other man was released on his own recognizance, pending jury action.

Analysis. A thief usually steals for one of two reasons: to use the article himself or to convert the article into cash. To do the latter, the thief must have someone who will give him cash for the stolen item; if it were not for the fence, the thief would have a difficult time getting cash for stolen items. Probably for this reason, the judge dealt more harshly with the fence, requiring a $2,500 bond, than he did with the actual thief, who was released on his own recognizance.

A lesson can also be learned from the actions of the FBI agents in this case. The FBI agents did not arrest the thief as he was leaving the air cargo area with the goods, because they knew he probably would lead them to the other items that had been stolen or to other conspirators in the crime. The tactics of the FBI paid off; the fence and the thief were apprehended, along with some of the stolen items. In some cases where lack of manpower is a factor, it may be advisable to arrest the thief when he emerges from the air cargo warehouse with the stolen goods, instead of risking losing him. This is a question of judgment and is

debateable.

As is evident from the facts of this case, air cargo thieves who get away with a crime get bolder and bolder; they commit several crimes, until they are eventually caught. At least 11 raids were successfully perpetrated in this case, before the FBI captured the ones responsible.

Case Number 24[103]

On July 23, 1965, PAA reported that three bars of gold bullion valued at $103,000 disappeared on June 19, 1965, somewhere between San Salvador, El Salvador, and Miami. A spokesman for PAA, which employs 35 employees in the cargo handling area at Miami International Airport, stated that he was not sure the gold ever reached Miami. This is what was supposed to have happened: The gold shipment originated at Managua, Nicargua, and was flown to San Salvador. From San Salvador it was supposed to have been placed aboard PAA Flight 504 to Miami. From Miami the gold shipment was supposed to have been sent to Montreal, Canada.

The gold bars (20 inches long and six inches wide) weighed a total of 227 pounds and were packed in three wooden boxes. The Miami office of the FBI confirmed that FBI agents were questioning the airline's employees. It is very common for gold shipments to originate in Latin America and be sent to different United States and Canadian locations via Miami.

Case Number 25[104]

Facts. Bandits robbed a mail truck in Bogota, Colombia, on August 22, 1965, and escaped with 57 sacks of air mail, including 19 bags from

---

[103] Ibid., p. 9.

[104] Ibid., August 24, 1965, p. 4.

the United States. The truck was robbed at the LaGlorieta Traffic Circle, Bogota's Columbus Circle, as it was proceeding towards the central air mail distribution center from Eldorado International Airport. Because there was supposedly nothing of great cash value in the overseas mail bags, it was thought that the holdup was the work of the Communist Army of National Liberation, which sought to embarass the government in Bogota. Other observers stated that the holdup may have been perpetrated by the supporters of Cornelio Reyes, whose resignation as Minister of Communications was accepted August 19, 1965, one day after he had attended the funeral of the notorious bandit known as Captain Poison.

Analysis. Again, in this case the Communists were highly suspected of perpetrating the crime; however, in the Hong Kong "strategic goods" case, the suspicion was stronger. To the writer's knowledge, no organized conspiracy against air cargo, of the airlines or air freight forwarders, by the Communists has been uncovered; however, the area of air cargo is very vulnerable to such a conspiracy: It is a valuable source of income; it is not protected very well; and it is full of investigative problems, e.g., police jurisdiction, notification of investigative personnel that a theft has been committed, etc.

In a Latin American country such as Colombia, it is quite possible that the thieves were supporters of the Minister of Communications who had just resigned. The thieves may have struck at the government symbolically by attacking the air mail shipment, since the government handles the air mail. Political revolutions can be of great consequence to the air cargo industry, because air cargo service is usually interrupted

during a revolution.

Case Number 26[105]

Facts. On May 14, 1965, two sealed air cargo shipments of diamonds, one valued at 65,000 (B.P.) and the other valued at 14,000 (B.P.), were handed to a BOAC agent at Accra, Ghana, Africa; he checked and found both boxes locked. When the aircraft arrived in Rome, Italy, the diamond box for Tel Aviv was handed to a British European Airways (BEA) security officer, who subsequently handed it to a pilot for an airliner bound for Isreal. A BOAC official brought the other diamond shipment, valued at 14,000 (B.P.), to London Airport. It was later found that the 65,000 (B.P.) diamond shipment had been switched for a tin of biscuits, and the 14,000 (B.P.) one, for a biscuit tin full of sawdust. No one knows where or when or how the switch was made or who did the switching.

Analysis. There is a need for a quick way of checking to see that valuable cargo is intact. In this case, the tins were actually handled by security officials, but they had no way, other than opening the parcel, of checking to see if the diamonds were inside. It would be too time consuming and expensive to open and check each parcel containing valuables, but at the present time, that is the best approach.

One suggestion that could possibly aid in checking valuable air cargo shipments is to put a film or coating on the articles that would be detectable by a mechanical or electronic instrument. A person could make a quick survey of the articles, possibly done in the aircraft, thereby eliminating a time consuming unloading and reloading operation,

---

[105]News item in the London Daily Express, May 15, 1965.

but still accomplishing the purpose. As the volume of air cargo increases, time becomes more and more important.

Another suggestion for aiding in the checking of valuable air cargo concerns packaging. If a lightweight container with metallic-like qualities were available which could be opened and closed quickly by someone with a key or using another method, a person could check the valuable cargo while the aircraft was being serviced for take-off. Another idea is to develop a transparent container, so a visual inspection could be made. Usually the number of valuable shipments on any given aircraft would allow this inspection to be done without delaying the aircraft. The above security precaution would be defenseless against a thief who decided to take the entire container (unless it were attached to the aircraft); however, the location of the theft could be quickly determined, if the entire container were found to be missing.

The thief in this case obviously thought that he had a better chance of not being detected, if he substituted the biscuits and the sawdust for the diamonds and left the tins on the plane. If the thief had removed the tins somewhere along the journey, the location of the theft would have been pinpointed, and an investigation would have been started sooner. This is often the case in air cargo thefts, i.e., cargo substitution instead of taking the entire container. Certain air cargo thefts could be detected sooner, if the previously mentioned suggestions could be perfected.

Case Number 27[106]

FBI agents, London Police, and airline security officials investigated the disappearance of four boxes of platinum valued at 32,000 (B.P.) from an air cargo shipment sent to Detroit, Michigan, from London aboard a PAA flight. The four boxes of platinum were placed in a sealed valuables pouch and then put in the aircraft's hold. When the pouch was opened, after arriving in Detroit, two of the boxes contained lead.

Case Number 28[107]

Airport police investigated the disappearance of 100,000 Swiss francs from a 90-minute flight from Zurich, Switzerland, to London. The money was sealed in a brown paper package (weighing about 20 pounds) and put aboard a Swissair flight at night, bound for the Westminister Bank in London. On arrival at London, the package of Swiss francs was missing.

A spokesman for BEA, which handles Swissair aircraft at London Airport, stated that the money was missing from a special hold, and he did not see how it could have been stolen while the aircraft was in flight. London Airport Police searched the aircraft, which was on a passenger-cargo flight, but found no clues. Inquiries were also made at Zurich without any promising results.

Case Number 29[108]

In April, 1964, a package containing 21,000 (B.P.) was found to be missing when the aircraft (a Frankfurt, Germany-New York flight) thought

---

[106] Ibid., November 25, 1964. [107] Ibid., January 7, 1965.

[108] Ibid.

to be carrying it touched down at London Airport for a 50-minute stop.

Case Number 30[109]

Facts. A diamond merchant found that sand and wood shavings had been substituted for a consignment of diamonds valued at 18,000 (B.P.), which arrived in London from Accra, Ghana, Africa. The merchant stated that a fake packet must have been substituted somewhere between Accra and London. The packet, with a red seal of the face of President Nkrumah, was one of two packets delivered by BOAC security messengers to the merchant.

One packet containing diamonds valued at 14,000 (B.P.) had been opened by Customs officials at London Airport as part of a routine check; it was intact. The other diamond packet was not opened, until it reached the diamond merchant. It seems that both packets were in a high-value security safe in the Customs office at the airport, until they were released. The merchant stated that the switch could not have occurred at the Customs office and that the person who perpetrated the crime must have been clever, because the seal was perfect.

Analysis. This is the second case in this chapter involving a theft of diamonds from an Accra-London flight, with several similar facts. Both cases involved a diamond shipment being switched for sawdust; both shipments originated at Accra; both had London as a destination; both occurred in 1965; and both involved a shipment consisting of two packages. A difference was that only the diamonds from one of the packets, the larger one valued at 18,000 (B.P.), was stolen in this case.

---

[109] Ibid., 1965.

Case Number 31[110]

Facts. Industrial diamonds valued at 83,000 (B.P.) were stolen from a sfae in the import cargo shed of Aer Lingus at London Airport on April 5, 1965. A spokesman for the Irish airline stated that this was their biggest consignment, which had been flown from Shannon, Ireland, and stored over the weekend at London Airport.

While watchmen were on duty patrolling another part of the cargo area, a locked shed was left unguarded for a short length of time. The thieves took this opportunity to commit the theft. Police were called, when one of the doors to the shed was found forced open.

Industrial diamonds are of little value on the open market and few jewelers would buy them. Detectives and security officers interviewed the 200 employees of the Shannon Diamond and Carbide factory in Shannon. The company manager stated that he thought it was an "inside job" and that everyone was being questioned. The police took several statements from the company's employees.

On May 11, 1965, four men were charged with breaking and entering the Aer Lingus premises at the London Airport on April 5, 1965, and stealing industrial diamonds valued at 83,000 (B.P.). The four men were arrested at night by Scotland Yard detectives, who raided their houses in the Hayes area near the airport. They appeared in Uxbridge, Middlesex Court on May 12, 1965. The outcome of the case is not known. Of those arrested, one was a 21 year old airline freight clerk, one was a 20 year old airline movements clerk, one was a 23 year old professional

---

[110] Ibid., April 6, and May 12, 1965.

gambler, and one was a 46 year old car-breaker.

Analysis. This case illustrates that one security measure is not always sufficient to prevent air cargo thefts. Eventhough guards were on duty patrolling one part of the premises, they were not able to prevent a theft in another part. No mention was made in the source, but it is assumed that there was no electronic protection device, such as a burglar alarm, in operation to supplement the patrolling guards.

A supplemental electronic protection device is necessary to alert someone of a breaking and entering when guards are patrolling elsewhere, are diverted from the premises for some reason, are taken ill while on duty, or are knocked unconscious by thieves. There should be a box which sends a signal to the central station that the guard must "pull" periodically through the night. A "pull" refers to a lever in the box that the patrolling guard pulls to send a signal to a central station. Unless the box is "pulled" on time, a man would be sent to investigate. In case a guard was suddenly taken ill, knocked unconscious, etc., and could not make his "pull" on time, he would be found when the man from the central station was sent to investigate.

Case Number 32[111]

Facts. A thief with forged papers took 56 pounds of platinum, valued at 23,000 (B.P.), from London Airport. The platinum was flown from New York to London and placed in a strong room to await the arrival of a messenger from the firm handling the consignment. A van stopped outside the strong room, and the driver identified himself to the BOAC

---

[111] Ibid., February 24, 1965.

delivery clerk as being from the handling agent's firm. Since the driver showed the necessary papers, he was given the shipment of platinum. An hour later the real messenger called for the platinum and was told that his firm had already picked it up.

Analysis. More thorough identification of the truck driver impostor would have prevented a theft in this case. Persons who turn air cargo over to delivery truck drivers should not rely solely on papers that could easily be forged. If the air cargo handler does not know a driver, a quick phone call to the driver's company for identification purposes could prevent a theft. With the employee turnover that the air freight forwarders and airlines experience today and the large increase in volume of air cargo, personal identification of all drivers by all air cargo warehousemen is impractical. Eventhough time does not permit the drivers to become personally known to the warehousemen, there still is the problem of accurate identification of the drivers, before turning the air cargo over to them.

A gate pass procedure, where a guard checks the identification of each delivery truck driver and gives him a badge to wear while in the cargo area, would help in identifying and exposing impostors. No driver would be permitted to enter until his identity was established by a pass or a phone call, in the case of new employees who have not been issued gate passes. If this were done, the warehouse employees could look for the gate badge on each driver. Security would be more adequate, and the warehouse employees would not have to know the different drivers personally. Large plants in industry and most military posts use a gate pass procedure very effectively.

When air cargo volume was small, it may not have been necessary to use a gate pass procedure. Today, the large number of trucks that come and go at an air cargo terminal will have to be controlled in some manner, or thieves will seize upon this opportunity to perpetrate more and more air cargo thefts. The problem is more acute, when air terminals operate on a 24-hour basis, seven days a week.

Case Number 33[112]

Facts. In March, 1965, Joel Singer, 23 years old, from Chomedy, Quebec, Canada, visited his uncle, John Frank, a 33 year old mechanic, in Freeport, Long Island, New York. Mr. Frank took Mr. Singer to an arms store in Arlington, Virginia, where the two men purchased two .20-mm. antitank cannons and subsequently shipped them through REA as "machine parts" to a ficticious address in Plattsburg, New York. On April 12, 1965, the nephew and two of his friends, allegedly broke into the REA office in Plattsburg, New York, and stole the two cannons and a quantity of ammunition.

On October 24, 1965, the three Canadians (the nephew and his two friends) used one of the cannons to blast open the vault at a Brinks Armored Car Service Company branch office on the north side of Syracuse, New York, and escaped with approximately $350,000. Later, when Mr. Frank was given less than $200 in coins for his "trouble," the coins were still in a Brinks money bag.

This is the thieves M. O.: The thieves backed a truck with the

---

[112]News items in The New York Times, November 2, 1965, pp. 1, 25; The State (Lansing, Michigan) Journal, October 26, 1965, p. A-16, November 2, 1965, p. 1.

cannon and other equipment for the theft into a garage next to the Brinks office. They entered the Brinks office and lined the walls with matresses and blankets, apparently to muffle the sounds made when the cannon was fired. Thirty-one armor piercing shells ripped through at least 12 inches of concrete and steel and made an 18 by 28 inch hole in the vault. The thieves were well prepared, from the evidence the police found: a gun mount, four unused bottles of nitroglycerine, gas masks, acetylene torches, expended shells, and some unused rounds of ammunition.

After the FBI, U. S. Navy, and U. S. Coast Guard found a cannon in the East Bay, off Freeport, New York, near the Meadowbrook Parkway Bridge leading to Jones Beach, the FBI laboratory in Washington confirmed that it was the one used in the Syracuse Brinks theft. Mr. Frank gave himself up, was arraigned in Brooklyn, New York, before a United States Commissioner on a charge of conspiracy to violate laws concerning transportation of stolen property between states, and was held in lieu of $10,000 bail. The nephew and his two friends are still at large. Canadian and United States authorities believe a similar cannon, recovered after an attempted theft on February 20, 1965, in Quebec, Canada, may have been purchased by the same men who perpetrated the Syracuse theft. The Quebec theft failed, when the thieves were frightened off.

Analysis. This case is presented, because the thieves broke into an REA office, an air freight forwarder, before they robbed Brinks. The case also illustrates the kind of persons who perpetrate thefts from air freight forwarders and the fact that they will go to a great amount of trouble and planning to execute their complicated theft plans. No

mention was made of any electronic protection devices in the Plattsburg REA case; however, there are several devices on the market that would have sent a "silent signal" back to a central station, when the thieves entered the building.

Two questions in the Syracuse Brinks theft, which the newspapers did not fully explain, are what kind of electronic protection devices were installed in the Brinks office, and why did they not warn someone? One account stated that an electronics expert cut off the alarm system. It is not possible to turn off some alarm systems, because they sound an alarm in the central station, without the thief knowing it, when someone tries. The power is supplied by the central station, not by a circuit on the premises being protected.

The Brinks theft is similar to some air cargo thefts because of the amount of money that was involved: ($350,000) $100,000 in cash and $250,000 in checks. An air cargo shipment may involve, as the cases in this chapter show, many times that much, and stealing air cargo probably would not be as difficult as the Syracuse Brinks job. Once these types of thieves turn to air cargo for their illegal income, the airlines and air freight forwarders had better be ready for them, or be prepared to face disastrous results.

Case Number 34[113]

Facts. On June 16, 1965, a plastic bomb, weighing between an estimated 10-20 pounds, exploded in an Air France freight office over-

---

[113]News item in The State (Lansing, Michigan) Journal, June 16, 1965, p. A-4.

looking the main waiting room in the civilian air terminal of the Saigon, Viet Nam Airport; 34 Americans and 12 other persons were injured. The concrete building was showered with broken glass and debris; every window in the entire building was broken; and a section of the roof collapsed. The airport was closed to all commercial traffic for over 36 hours. No arrests were reported concerning the explosion, but the Vietnamese Police stated that any terrorist caught would be executed in public immediately.

Analysis. This sabotage case is an example of what could occur in any air cargo area, overseas or in America. If the Viet Nam War continues, more acts of sabotage can be expected in Viet Nam and in other parts of the world. The airline industry is particularly vulnerable to acts of sabotage, because it is a vital link in communications, in war and peace. Sabotage can easily cripple most air cargo operations today, because there is little or no protection (physical security) of air cargo areas. A saboteur could enter almost any air cargo area, plant his explosive, and leave, without anyone challenging him. It is management's responsibility to prevent acts of sabotage from occurring to air cargo, for which they are responsible.

In this case a great cost was paid: Many people were hurt; an airport was severely damaged; air cargo was damaged; and all commercial air service was completely stopped for over 36 hours. Explosive detection devices are on the market, and they should be used in air cargo areas, where there is a threat of sabotage.

Air cargo operations are also vulnerable to sabotage, because large warehouses are completely open inside; fire protection is often

inadequate. Small airports that use a room adjacent to the office for the air cargo area usually do not have adequate fire protection for the increasing volume of cargo that passes through their station, because the air cargo room was originally designed as an office area. Many large airports that have a separate air cargo area from the passenger area have fire extinguishers, but no sprinkler system. If a saboteur placed an incendiary bomb in a cargo room of a small airport or in one or two appropriate places in a large airport's air cargo area and an explosion spread inflammable material over all the other air cargo, fire extinguishers would be inadequate to save the cargo from destruction.

The relative cost of adequate fire protection equipment is small when compared to a fire loss. To make matters worse, shipments of inflammable liquids are adequately marked and the flash point is on the side of the container, but they are often stored right in with the other cargo. If an explosion from a saboteur's bomb ignited some inflammable liquids in with the other air cargo, destruction of the other cargo would almost be a certainty. Such potentially dangerous materials should be stored in a safe place, instead of mixing them in with the regular cargo.

VII. CASES DERIVED FROM OFFICIAL REPORTS

The 24 cases presented in this section were taken from the following three official reports: Report of the International Criminal Police Organization (Interpol) Conference at Madrid, Spain, in 1962, Report of the Interpol Conference at Berne, Switzerland, in 1949, and a report of an air cargo fire by the National Fire Protection Association, 1949.

Eighteen cases were taken from the first source mentioned, five from the second source, and one from the third source. The cases cover the period 1948-1962.

Case Number 35[114]

In 1957, an air cargo consignment of 25 kilograms (55 pounds) of gold was reported stolen by an insurance company to the General Secretariat of Interpol. One of the thieves was arrested in Bangkok, and Thailand complained of lack of cooperation and of having been informed too late. Later a total of six criminals, who had been employed at the airport, were arrested.

Case Number 36[115]

Facts. In 1958, one kilogram (2.2 pounds) of platinum was stolen somewhere between Hamburg, Germany, and Rio de Janeiro, Brazil. A notice of this theft was distributed to all National Central Bureaus of Interpol.

Analysis. Interpol, an information gathering and distributing center, has consented to notify and distribute a list of stolen items to all National Central Bureaus of any air cargo thefts that are reported to them;[116] however, the number of thefts reported to them each year are but a small percentage of the thefts that actually occur. A National Central Bureau is a special office established in a country, which is designated as such, so it can receive communications from Interpol.

---

[114] International Criminal Police Organization, op.cit., p.8.

[115] Ibid. [116] Ibid., p. 17.

Case Number 37[117]

Between Bombay, India, and New York, in 1958, an air cargo shipment of 3,152 pearls was stolen. A notice of this theft was distributed to all National Central Bureaus by Interpol.

Case Number 38[118]

Facts. In 1958, a consignment of gold was stolen somewhere between Paris and Saigon, Viet Nam. The Thailand authorities reported that no special precautions had been taken by the airline in this particular case.

Analysis. This case is a classic example of what not to do. Valuable air cargo shipments should be transported in accordance with strict handling procedures set up in advance. The fact that a particular airline or air freight forwarder has not had a theft of this type proves only that it has been lucky, not careful.

It seems that lack of security for valuable air cargo shipments is a routine occurrence in that part of the world. Gold bullion shipments arrive in Vientiane, Laos, aboard commercial aircraft with no special guards or security measures. The gold comes in wooden boxes containing 30 slabs of one kilogram each (total of 66 pounds). An employer usually sends an employee to the airport to pick up the gold bullion in a car, but no guard or armored car is used. A gold dealer in Vientiane said that he had never heard of any gold thefts, and it is not unusual for one flight to carry gold valued at $600,000. Annually an estimated 30 tons of gold bullion is imported for commercial use. The gold originates in Paris, London, and Geneva, and the major importers are

---

[117] Ibid., p. 8. [118] Ibid.

Chinese.[119]

Case Number 39[120]

In 1959, an air cargo shipment of $40,000 was sent by air parcel post from New York to Montevideo, Uruguay. It was stolen.

Case Number 40[121]

In 1959, an air cargo shipment of $95,000 in bank notes was stolen somewhere between New York and Frankfurt, Germany.

Case Number 41[122]

Facts. In 1959, an air cargo consignment of diamonds valued at 30,000 (B.P.) was stolen somewhere between Accra, Ghana, and London.

Analysis. This is the third case in this chapter involving a diamond theft from an Accra-London flight. The other cases occurred in 1965.

Case Number 42[123]

In 1960, two consignments of diamonds were sent by air parcel post to Hong Kong, one from Brussels and one from Tel Aviv. They both were stolen. Later, three thieves were arrested in Tehran, Iran.

Case Number 43[124]

In 1960, industrial diamonds were stolen from a London-Johannesburg flight. Interpol alerted all National Central Bureaus, and the thieves were arrested in London.

---

[119]News item in The State (Lansing, Michigan) Journal, May 12, 1965, p. C-2.

[120]International Criminal Police Organization, loc.cit.

[121]Ibid. [122]Ibid. [123]Ibid. [124]Ibid.

Case Number 44[125]

In 1960, nine gold bars weighing one kilogram each (total of 19.8 pounds) were stolen from a London-New Delhi, India, flight.

Case Number 45[126]

In 1961, an air cargo shipment of $100,000 was stolen somewhere between Paris and Buenos Aires, Argentina.

Case Number 46[127]

In 1961, an air cargo shipment of 20 gold bars was stolen somewhere between Amsterdam, Netherlands, and Bangkok, Thailand.

Case Number 47[128]

In 1961, an air cargo shipment of 10 kilograms (22 pounds) of uncut diamonds was stolen somewhere between Usumbura and Brussels.

Case Number 48[129]

In 1961, an air cargo shipment of 1,225 gold coins was stolen somewhere between Amsterdam and Montevideo, Uruguay.

Case Number 49[130]

Facts. In 1955, at Bangkok Airport, a Scandinavian Airlines System porter entered a plane to clean it. No passengers were on the aircraft, and he took this opportunity to steal an air cargo shipment of watches.

Analysis. If an aircraft will be on the ground for any considerable length of time, the air cargo should be protected during that period. Some airports are so large that it would be impractical to take

---

[125] Ibid. [126] Ibid. [127] Ibid.

[128] Ibid. [129] Ibid. [130] Ibid., p. 9.

the cargo to the air cargo terminal, up to two miles away from where the aircraft is being repaired or cleaned. In these instances, a guard should watch the plane; using field glasses, a guard could observe several planes. Another alternative is to hire honest porters and mechanics.

Case Number 50[131]

On March 27, 1962, at Frankfurt-am-Main Airport, Germany, an employee of the Middle East Airlines Company stole an air cargo shipment containing 25.8 kilograms (567.6 pounds) of gold coins, valued at 129,750 Swiss francs.

Case Number 51[132]

In New York (1959), a shipment of cameras was stolen by three employees of the Allied Fleet Service Company. The thieves were unloading air freight for Deutsche Lufthansa Airlines.

Case Number 52[133]

On December 10, 1960, a consignment of industrial diamonds was stolen somewhere between Johannesburg and London. British police investigated and learned that the diamonds were stolen at London Airport by a gang comprised of the following members: six BOAC air freight loaders, and an outside team, one of which was a costume jewelry wholesaler.

When one of the thieves was questioned, he admitted that he took part in 10 other thefts at London Airport during 1960 and 1961. The items stolen by this member and his accomplices were the following: industrial diamonds, banknotes, and consignments of gold grain.

---

[131] Ibid. [132] Ibid. [133] Ibid.

Case Number 53[134]

On February 3, 1949, 23 air mail bags were loaded aboard a TWA plane at Bombay, India, which was bound for New York via these stations: Cairo, Geneva, Paris, Ireland, and Newfoundland. One of the 23 bags contained $50,000 which was being transported to the Bank of New York. On arrival in New York, the $50,000 was missing. Later, it was learned that the bag in question had been put onboard in Bombay. Since the mail bags were not removed from the aircraft at Orly in Paris, the theft was presumed not to have occurred there. The aircraft did not stop at Shannon Airport as usual, but according to Irish police, it took another direction.

Case Number 54[135]

A well-known jeweler sent some jewels, valued at about 16,000 French francs, to a colleague in the Bahamas. The jewels were put in a wooden box, nailed-down; a sealed cord was put around it. Air France carried the box to London and then transferred it to a British South American Airways plane. Upon arrival at the Nassau Airport, the jewels were missing. The thief had removed a strip of wood from the bottom of the box, taken the jewels, and nailed the strip back in place. Local police investigated, but found no clues.

Case Number 55[136]

Facts. The diamond exchange in Amsterdam sent 1,200 diamonds by

---

[134]International Criminal Police Commission (Report of the Session of the General Assembly. Berne: International Criminal Police Commission, 1949), p. 5.

[135]Ibid., pp. 5-6.

[136]Ibid., p. 6.

air to Bangkok; After arrival at the Bangkok Post Office, it was found that the package had been opened, and 1,099 diamonds were missing. The larger outer postal bag and the smaller inner one, which contained the registered diamonds, were damaged. Two investigating officials from the Netherlands established that the theft must have taken place in the Bangkok Post Office.

The Bangkok Police arrested some Post Office employees and seized the knife used in opening the bags. The employees had opened the bags, stolen the diamonds, and cut the bags with a knife to disguise the theft.

Analysis. Thieves often use various methods to disguise their crimes; arson, malicious damage, etc., are some of the more frequently used ones. An air cargo handler may steal something out of a box and then ram it with a fork lift, to hide the theft by making the loss appear to be due to an accident. In this case, knife slits were used to disguise the crime. It takes a skilled investigator to tell when something was done to disguise a crime, and sometimes the good investigators cannot tell. That is why it is important that a security investigator have previous police and investigative training.

Case Number 56[137]

Several diamonds valued at 500,000 florins were stolen somewhere between the Netherlands and India. After an investigation, the Dutch Police concluded that the theft must have occurred in Karachi, and they suspected that the thief was employed by the postal service at the Karachi

---

[137] Ibid., pp. 6-7.

Airport. The aircraft always stopped overnight at Karachi, leaving the next day. During the night, the mail bag for Karachi remained at the airport Post Office and was taken to the General Post Office the next day. While the bag was at the airport Post Office (at night), the thief cut the cord that sealed the bag carrying the diamonds, took the diamonds, fastened the bag with another cord, and sealed it up again with the lead from old bags (prepared beforehand). The cord was found to be an Indian cord, a type not made in the Netherlands.

Case Number 57[138]

A small package containing $10,000 was sent by air mail from Geneva to Amsterdam; upon arrival in Amsterdam, the $10,000 was missing. Police officers found part of the $10,000 in a suitcase in the Geneva Station, where the thief was going to escape to France, and part of it behind a picture hanging on a wall in a person's home in Zurich.

Case Number 58[139]

Facts. On August 17, 1948, while an American Airlines Convair was being serviced at the Baltimore Municipal Airport, a 34-pound air express shipment was removed from compartment "A" (the rear fuselage baggage compartment) because of a strong acrid odor noticed by freight agents. Upon finding the package warm, it was taken to the ramp and opened. The contents, webbing belts for small machines, started to smolder upon exposure to the air, and heavy white smoke billowed upward. The contents burst into flames 45 minutes later. Eventhough a vaporizing

---

[138] Ibid. p. 7.

[139] National Fire Protection Association, "Spontaneious Ignition of Air Express Shipment" (Boston: National Fire Protection Association, 1949), 2 pp.

liquid and a carbon dioxide extinguisher were used to put out the fire, the mass of belts rekindled three times; each time the fire broke out after apparent complete extinguishment.

Analysis. The cotton belts had gone through the following process: They were immersed in a can of China Wood Oil (Tung Oil) containing a 3% drier of Cobalt salts in a solvent. Then the belts were wiped off and dried by air exposure on wood stretchers for four days, after which they were pressed, dried, and stretched again for a few hours. The belts were then given a final graphite treatment to make the surface of the belt conductive. After this treatment the belts were dried again. Normally the belts are dried five to seven days; however, on this particular occasion, the final drying period was shortened to two hours, to permit the fulfilling of a "rush order."

Sixty-nine of the belts were packed loosely in a corrugated cardboard carton (22½ in. long, 14 in. wide, and 12 in. high), and holes were made in the carton for ventilation. The shipment was made on an express waybill which was marked "webbing belts." There were no labels on the package to indicate that any hazard was involved. The shipment was turned over to REA by the manufacturer and was subsequently placed aboard the Convair at Wilmington, Delaware.

At 7:57 p.m. the flight arrived at Baltimore, and only the local cargo was unloaded; no irregularity was noted at this time. The plane's reverse circuit breaker kicked out, resulting in a complete failure of the electrical system. The flight was then held so that maintenance personnel from Washington could service it. At 11:00 p.m. it was decided to transfer all the remaining cargo to another carrier.

When the air freight agents entered compartment "A," a strong acrid odor made their eyes smart and prevented them from breathing comfortably. The package was removed about a minute later and REA authorized opening the package at 11:35 p.m. The contents burst into flames 45 minutes later, and the belts were eventually spread out on the ramp; a heavy rain extinguished them.

The National Fire Protection Association (NFPA) has stated that fibrous materials impregnated with Tung Oil may heat, unless they are adequately ventilated. The tendency to heat varies with the origin of the Tung Oil. The manufacturer stated that he thought the Tung Oil was the source of the trouble. Also there was the possibility that the use of the Cobalt drier may have had an influence, since the drying time had been shortened from four weeks to approximately five days by this method. It is probable that this shorter period influenced the rate of Tung Oil oxidation prior to shipment. It is almost certain that the brief final drying period had an influence in the spontaneous heating of the belts.

The Bureau of Explosives of the Association of American Railroads investigated the case thoroughly, and as a result, it devised methods for both the manufacture and transportation of this material that will eliminate future heating of the belts in transit.

This case illustrates that all loss cases should be collected for analysis, at least on a company-wide basis. From the analysis of this case, a safe method of transporting fibrous materials was formulated, thus helping all airlines and air freight forwarders. The airline business is a competitive one to be sure; however, business will decline

greatly, if accidents plague air cargo operations to the point that few persons are willing to ship their cargo by air. Lives can be saved by intelligent analysis of air cargo theft and loss reports, either on a company-wide basis or an international basis, and the customer will have more confidence in the various cargo handling companies.

VIII. CASES DERIVED FROM QUESTIONNAIRES

The 11 cases presented in this section were taken from the airline and air freight forwarder questionnaires that were mailed to the writer in connection with this thesis. Upon request, the names of the companies will not be mentioned.

Case Number 59

Facts. In 1964, a large European airline had an air cargo shipment of industrial diamonds valued at 103,000 (B.P.) stolen from their air cargo warehouse at Shannon Airport. A man, who said he represented the consignee, was given the diamonds by an unsuspecting airline employee. Later, it was discovered that the man was an impostor.

Analysis. This case illustrates the problem of identification of individuals that do not represent a company, but themselves, i.e., impostors. Proper identification should be required. The impostor in this case "represented" a company; therefore, a lack of good operating procedure, identification of strangers, prevented this impostor from being detected.

Case Number 60

In 1965, a European airline had a shipment of industrial diamonds valued at 83,000 (B.P.) stolen from their London warehouse. A former

clerical employee (cargo section) at London Airport was arrested and is now serving a prison term for his part in the theft.

Case Number 61

A European airline had three watches, from a shipment of 12, stolen from a Switzerland-Southwest African flight. The watches were stolen after shipment and before delivery.

Case Number 62

A United States airline had its air freight warehouse broken into at night, while the facility was closed. FBI agents arrested the perpetrators and the fence (receiver of stolen goods) and recovered many items.

Case Number 63

Cartage agent personnel were switching contents of air cargo, and the FBI was notified. FBI agents caught an individual in the act (later convicted) and recovered many items.

Case Number 64

A United States airline had an air cargo shipment of expensive watches stolen. This was the thief's M. O.: An air cargo loader kicked boxes containing valuable watches out of an aircraft cargo compartment onto a nearby mail cart and threw a tarpaulin over them. Later at night, when no one was around the area, the thief retrieved the valuable watches; he was subsequently arrested and is now serving a term in prison.

Case Number 65

An air freight forwarder suspected a driver of a cartage firm of taking air cargo from its facility at a large eastern airport, and a

surveillance was instituted. One night the cartage driver was observed as he made a delivery to the air freight forwarder's premises. The driver kicked a carton, which was lying on the air freight platform, towards his truck. Eventually, he worked the carton to his truck and put it in the rear. As he pulled out of the driveway, he was arrested with the carton in his possession.

Case Number 66

A large number of air cargo thefts were reported by an air freight forwarder at a large eastern airport. An air freight forwarder's security investigator was placed at a vantage point, where he had the entire area under close observation with field glasses. During the early morning hours, an employee, who had been suspected of stealing air cargo, was observed handling a small shipment and glancing around in a suspicious manner. The employee then removed a metal strapping, which sealed the carton, and extracted the contents. He then carefully replaced the metal strapping and put the carton on a shelf. As the employee left the air cargo area,he was arrested.

Case Number 67

At a midwestern airport, fur losses from an air freight forwarder became an increasing problem. All investigation at the facility had only negative results. There was a strong possibility that various airline employees were diverting the air cargo shipments. The area was placed under surveillance by security investigators with field glasses from a vantage point high above the ground.

During the early hours of the morning, an airline cargo cart, ostensively taking freight to an aircraft, was observed proceeding in

the direction of some parked cars belonging to airline employees. A shipment of air cargo was placed in one of the cars by an airline employee, and then the vehicle was driven towards the exit of the airport. Using walkie-talkies, information as to the movement of this individual and the automobile was radioed to a waiting security car. The security car intercepted the fleeing vehicle, before it left the airport gates, and the subject was arrested.

Case Number 68

An air freight forwarder's driver parked his vehicle on a one-way street to make a pick-up of an air cargo shipment on the 22nd floor of a building. The driver locked his truck, set the truck's alarm, and took the keys with him. When he returned to the street, the entire vehicle, which contained five to ten air cargo shipments, was missing. Local police found the truck in a lower part of the city, and all the air cargo shipments were missing. The thief had approximately 20 minutes to hijack a truck with the alarm set, in broad daylight, on a main street.

Case Number 69

An air freight forwarder's delivering agent, with three cartons on a hand truck, made a delivery to one account in a building where three separate deliveries were to be made. The driver left the hand truck close behind him, and delivered the first carton. When the employee turned around to get the hand truck, in approximately 60 seconds, one carton had been stolen. A subsequent polygraph test "proved" that the driver was telling the truth.

IX. CASE DERIVED FROM A LETTER

Case Number 70[140]

At a European airport, a large number of APO mail bags disappeared from one transatlantic air carrier and were found on another, approximately three to five days later. The bags had been carefully opened at the seam, and the thieves had taken only letters containing money. Later postal officials estimated that the thieves stole between $1,200 and $1,500 per mail bag, which weighed 25-30 pounds each.

X. SUMMARY

Air cargo thefts and losses are less mysterious, once they have been documented and evaluated. Many interesting facts are apparent from the 70 cases just presented that verify or deny the ideas and guesses which were so prevalent beforehand. The following questions have been answered, to some degree, by the cases presented in this chapter: Who are the perpetrators of air cargo thefts? What cargo is stolen? What is the value of the stolen cargo? Where and when do the thefts take place? How do the thieves operate (M. O.)?

Air cargo thieves. Below is a list of air cargo thieves who were involved in thefts in this chapter and whether or not they worked alone. According to the sources, it is believed that no women have been involved in any air cargo thefts in this chapter. An "outside" thief is one who is not employed by the airport, airline, or air freight forwarder. No claim

---

[140]Letter to writer from H. A. Zorbach, Manager Stations International, Ethiopian Airlines, February 3, 1965.

is made that only the persons listed below perpetrate air cargo thefts. The significance of this list is that these particular types of air cargo thieves around the world are now documented in a research study, where they have not been in the past.

The following list is comprised of numerous different types of air cargo thieves: aircraft loader (working alone); aircraft loaders (4-man team); airline employee (working alone); airline porter (working alone); airline employees (2-man team); airline employees (8-man team); airline freight office staff (entire staff working with a Chinese trader); airport employees (6-man team); air freight handlers (2-man team); air freight forwarder cargo handler (working alone); air freight forwarder employees (3-man team); air freight clerk, airline movements clerk, professional gambler, and a carbreaker (4-man team); 6 air freight loaders, costume jewelry wholesaler, other unknown persons, (at least a 7-man team); armed passengers working with accomplices on the ground (at least a 4-man team); cartage agent driver (working alone); cartage agent cargo handling personnel (team operation); outside thief (working alone); outside thief (representing consignee and working alone); outside thief, other unknown persons, fence, (a team operation); outside thieves (3-man team); outside professional thieves (8-man team); and Post Office employees (team operation).

Items stolen or lost. Below is a list of stolen and lost air cargo items, taken entirely from the cases in this chapter. No differentiation is made between "stolen" and "lost," because in many cases, the item was missing under suspicious circumstances and presumed stolen. Obvious losses occurred in the "Prestwick plane crash" case

and in the case in which the web belts were partially consumed by fire. Mostly, small items were stolen or lost, ones that were easily convertible into cash.

No claim is made that these are the only items that have been stolen or lost or that they are representative of all air cargo that has been stolen or lost, only that they are the items stolen or lost in the cases in this chapter. As in the preceding section, the significance of this list is that some particular types of stolen or lost air cargo are now documented in a research study, where they have not been beforehand. All total values, given in United States dollars, are approximate values based on addition of the individual values of all like items in the chapter, e.g., all the gold stolen or lost in the cases, all the diamonds, etc. No value is estimated for any items, if the source did not give them a value.

The following list is comprised of some air cargo items that have been stolen or lost: air mail bags-diplomatic, registered, regular (over $500,000); gold in various forms-ingot, bullion, coins, bars (over $1½ million); diamonds (cut-$700,000; uncut-22 pounds, but no value given; industrial-$620,000); platinum ($154,000); watches 600 "valuable" ones, but no value given, one shipment worth $700; jewelry (over $20,000); pearls (3,152 of them, but no value given); French perfume ($8,400); strategic goods-antibiotics, radio transmitter valves, X-ray equipment (no value given); furs; cameras; field glasses; tape recorders, women's coats, etc. ($150,000); silk ties (123 of them, but no value given); shirts, toys; fountain pens; hair cream; cigarettes; bank notes ($165,000); and money-100,000 Swiss francs, 21,000 (B.P.),

500,000 florins, and $150,000 (U.S.).

Locations of thefts and losses. No claim is made that these are the only places air cargo thefts and losses have occurred, only that they have occurred in these particular locations. Again, no distinction is made between locations where thefts and losses occurred. The following is a list of locations where air cargo thefts and losses in this chapter have occurred: JFK International Airport, New York, New York; Baltimore, Maryland; London Airport, England; Shannon Airport, Ireland; Amsterdam, Netherlands; Prestwick Airport, Scotland; Brussels, Belgium; Geneva, Switzerland; Frankfurt-am-Main, Germany; Al Maza Airport, outside Cairo, Egypt; Kane Airport, Nigeria, Africa; Tripoli Airport, Libya, Africa; Jan Smuts Airport, South Africa; Karachi, Pakistan; Bangkok, Thailand; Hong Kong, China; and Saigon, South Viet Nam.

Time of thefts. No general rule can be stated regarding the time most international air cargo thefts occur, because there are not enough facts or cases. When an air cargo area was open for business 24 hours a day, thefts occurred at different times during the entire 24-hour period. When an air cargo area was only open during business hours and closed during the night, most thefts seemed to occur when the area was closed; however, very few statistics were available to the writer regarding this point. One thief broke into an air cargo warehouse at 2:00 a.m., another put some cargo in his car in the company parking lot in the early morning hours, etc. The morning hours, 1:00 a.m. to 6:00 a.m., seemed to be the hours that a large number of thieves committed thefts, but more cases and facts are needed before any definite conclusions can be reached.

The safest statement that can be made about the time the thieves in this chapter committed air cargo thefts is that the thieves perpetrated the thefts, when they thought they had the least chance of being apprehended, i.e., where and when there were none or only a few people around to observe them. This "safe" time was while a warehouse was closed in one case, after the bulk of the cargo had been put on the planes in the early morning in another case, etc. The "safe" time varied in each case, because the time the thief found himself alone or almost alone varied for each thief.

Method of operation. Some of the thieves in this chapter had very complicated M. O.'s that suggested two things: extensive planning of the theft and knowledge of the air cargo area from which they stole. Although some thieves took literally hours to perpetrate their crimes, few were caught in the act, because there were few, if any, electronic devices or patrolling guards to sound an alarm and/or interrupt the thief. A large number of air cargo thefts were accomplished by teams numbering 2-8 men; however, there were also a number of thieves who preferred to work alone. The thieves capitalized on two facts: Small thefts of air cargo were acted upon slowly or not at all by management. The stolen items were usually insured, and small claims were paid, not investigated. In one case, small amounts of gold were stolen for almost a year's period of time, before any irregularity was noted.

Several thieves tried to camouflage their crimes in various ways. One thief cut an air mail bag, after he had taken some of its contents, so it would look as if it had been damaged in transit. Several thieves substituted various articles for the original air cargo, so the theft

would not be noticed, until the container reached its final destination. In one case, the label on the container was put back in the exact position from which it was taken, so no one would notice any irregularity. In another case, an empty diamond tin was put back into a mail bag, after the diamonds were removed from it, so no one would become suspicious.

Outside criminals used air cargo employees on the "inside" to aid them in perpetrating air cargo thefts. The most spectacular case was the "Hong Kong strategic materials" case, where the entire freight office staff was corrupted by a Chinese trader. An attempt was made in the "London Airport Raid" case, to "reach" the warehouse staff. The thieves in that case actually did "reach" an unknown employee in BOAC, who told them when the gold shipment was arriving.

Conclusion. The perfect murder is perpetrated when a theory is killed by a cold-blooded fact. The facts of the cases presented in this chapter kill the theories and speculations of numerous air cargo management officials that there have been few, if any, air cargo thefts and losses and that any which have occurred have been small in value. Numerous air cargo thefts and losses have occurred, and they have often involved large amounts of money. Air cargo valued at over $4½ million (U.S.), a conservative estimate, was stolen in the 70 cases presented in this chapter, and these are only a fraction of the actual number of air cargo theft and loss cases.[141]

---

[141]Letter to writer from Gordon S. Fraser, Former Chairman, International Airline Security Officers' Association, now Superintendent of Security, Quantas, August 13, 1965.

The above facts cannot be ignored safely. Air cargo top management officials must take a greater interest in air cargo security, so that adequate preventive measures can be taken to protect the ever increasing volume of air cargo from theft and loss. Investigating a theft or loss after it has occurred may have been adequate in the past, but such a procedure of "closing the door after the horse is out" is not adequate today, and it will not be adequate in the future.

CHAPTER VIII

SELECTED AIR CARGO SECURITY PROBLEM AREAS

All air cargo security problem areas cannot be discussed here, due to space limitations, among other reasons; however, selected air cargo security problem areas will be discussed, in order that an over-all view can be had of the subject. The problems presented in this chapter were drawn from the many sources of information used for this study, i.e., exploratory study, review of the literature, questionnaires, letters, personal interviews, personal observation, case histories, and personal knowledge of the writer.

I. THEFT OF AIR CARGO FROM VEHICLES, BUILDINGS, AND AIRCRAFT

Air cargo thefts from vehicles, buildings, and sometimes aircraft seem to be increasing in number, value, and complexity (method of operation). It is rare (almost impossible) for an airline or air freight forwarder to be free from thefts; although, many think they are, because they are not aware of any.

From vehicles. Many thefts occur during the time air cargo is being carried by a motor vehicle from the shipper to the airport or from the airport to the consignee. The majority of these thefts occur, because of the vehicle driver's carelessness. Drivers have done the following things, while transporting air cargo: forgot to lock the vehicle while eating a meal in a roadside diner, left the keys in the

ignition while out of the vehicle, drove from one shipper to another with the back of the vehicle open, parked the vehicle out of view while eating, and picked up a hitchhiker who took the cargo.

Often, when drivers have parked their vehicles in the shadows, thieves have taken advantage of the darkness to steal the cargo or hijack the entire truck. Drivers invite theft, when they boast about valuable cargo they are transporting. Conspiracy between a driver and an outsider has accounted for numerous thefts. Drivers have also falsified documents, in stealing air cargo.

From buildings. Poor physical security of air cargo buildings and surrounding areas accounts for a large number of thefts. In most cases, no security guards are posted at gate entrances and exits of air cargo areas, at the entrance to cargo buildings, or on loading platforms to prevent unauthorized persons from entering at will. An aviation-marine insurance executive told an airline security officers conference that he entered several cargo facilities at different airports and walked through them without anyone stopping him and asking who he was and why he was there. There was no gate pass procedure or other safeguards to prevent unauthorized persons from entering any of the locations which he visited.[142]

On his visit to two large airports in the midwest, the writer found that he could walk into more than 12 air cargo areas, without being challenged about who he was, what his business on the premises was, or why he was not with a company representative while on the premises.

---

[142] Harris, op.cit., p. 11.

Several reasons, possibly, explain why the writer was not stopped as he walked at will through numerous air cargo areas, even into two valuables cages: there were no security guards employed to stop unauthorized visitors; security equipment,if installed, was not functioning; the work force was rushed or undermanned, and did not pay any attention to him; in his business suit and hat, the writer appeared as if he were a "company official" and had some right to be in the air cargo area; the air cargo handlers saw him, but due to a lack of security training, did not speak to him; and no employee was in sight.

A most interesting experience involving the writer took place at one of the airports. As the writer was crossing a portion of the runway between two air cargo terminals, he found a small package marked, "Rush-emergency-electronics parts." Since the package was an equal distance from both air cargo areas, the writer decided to see if a cart from the airline he had not visited had accidently dropped the package. He went into the airline's cargo terminal and wandered around approximately three minutes with the box in plain sight, looking for an employee. Finally, a cargo handler was kind enough to say the box belonged to his airline, and he put it on a pile with some other cargo. The writer left the cargo handler and went to talk to the manager.

Upon finding the manager of the air cargo area, the writer explained who he was, that he had visited over 10 other airlines at the airport that day, that he wanted to interview the manager about his air cargo area, and that he was writing a master's thesis on air cargo thefts and losses. The manager, after the writer had just toured his air cargo area for over three minutes, unescorted, with a package of air cargo in his hands, told the

writer that he would not be able to interview him or take him on a tour of the area, until the "home office" security division "cleared the matter." In other words, his airline seemed to have the policy, "If we know you are coming, we will be cautious, but if you do not announce yourself, you can look around for three minutes, undisturbed."

Another problem at large air cargo terminals involves the large number of overhead loading platform doors which remain open, often on a 24-hour basis. One argument given by the airlines in support of this "open door" policy is that the doors must stay open for the truck drivers to unload their cargo. Another argument is that a potential thief would see the open doors, think someone was in the area, and not attempt a theft.

Anyone with a truck and a pair of coveralls with a name on the back could come into an air cargo area, take any cargo near the door, and leave without anyone knowing what he had done. In the winter, cargo handlers wear hooded parkas, which makes it more difficult to identify someone with his back to you. One cargo building, with over 10 open overhead doors for receiving cargo, was L-shaped; it was impossible for anyone to see from one end of the building to the other, and no mirrors or electronic devices (such as closed circuit television) were installed to aid in keeping all of the doors under observation.

The only valuables storage area in many of the cargo buildings was a wire cage (called valuables cage) or the supervisor's locked desk. Several of the "bonded cages" observed by the writer were left unattended for periods of one minute to 45 minutes. In one case, a man guarding a valuables cage went to the other side of the warehouse to help a truck driver unload his cargo, leaving the door to the cage wide open; it was

a rush period, and no other warehouse employees could help the driver. After the guard left, the writer entered the cage a few feet and observed several small packages on a shelf. He immediately left the cage and waited for the guard to return. Later, the guard was only too happy to inform the writer that one package in the cage (he had just left) contained precious metals valued at $160,000. The other packages also contained valuable goods, valuable enough to be marked, "transport only by armed guard."

In the air cargo areas at three of the four airports that the writer visited, the personnel on duty were very busy handling the large volume of air cargo. In several cases, cargo was unloaded from airplanes and left on carts outside the cargo building for over an hour, because personnel were not available to process it, or there was no room to put the cargo in the building (until other cargo was removed). This interim period affords a thief an excellent opportunity to steal the cargo, when it is left unattended, i.e., out of the sight of airline or air freight forwarder employees.

In the smaller airports, where air cargo remains at the airport only a short time before it is loaded onto the plane, almost no effort is made to protect the cargo; it is usually left on an open cart outside the terminal. Some cargo officials think cargo on unattended cargo carts is safe, because it is on the runway side of the air terminal.

At several airports, the employees' cars were parked close to the air cargo terminal, making it easy for an employee to put stolen air cargo into his car unnoticed. Cargo buildings at many airports have poor exterior lighting and have no electronic protective devices against

theft, holdup, etc.; they are an inviting situation for any thief. Where the air cargo area is one mile or more from the main passenger building, a thief could be miles from an air cargo area before an alarm could be turned in, simply by cutting the communication lines before he left the premises.

From aircraft. It is rare for a theft of air cargo to occur, while an aircraft is in the air; however, thefts have occurred, while an aircraft was on the ground. The great majority of the thefts occurring on the ground center around loading and unloading operations. The loading crew enters the aircraft, out of sight of the passengers, crew, and others, and pilfers the cargo; the theft is usually not discovered, until the plane reaches its destination. The rule of packing air cargo, "first on, last off," is used by the thieves to aid them in covering up their crime from criminal investigators. The time lapse before the theft is discovered and the fact that an aircraft made several short stops enroute work in favor of the thief.

Air cargo thefts have occurred while planes were being cleaned or repaired. When a mechanical failure is responsible for a plane's delay, air cargo is not always transferred to another plane or guarded. This situation invites theft, since mechanics and other persons have an excellent opportunity to steal the cargo.

II. LOSS OF AIR CARGO

Air cargo losses are increasing, as the volume of air cargo rises. Overburdened facilities, lack of adequate personnel, and carelessness in handling are major causes of air cargo loss today. Although no figures

are published periodically on the ratio of loss and damage expenses to the total revenue of the air carriers' cargo operations, special studies of various airlines indicate that loss and damage expenses, in some cases, equal one percent of a company's total revenue.[143]

Fire damage. Adequate protection against fire is lacking in most large air cargo terminals and especially in the small airports, where cargo is stored at irregular intervals and for various lengths of time. Make shift arrangements, poor housekeeping, and lack of adequate portable fire fighting apparatus or a sprinkler system are factors that are all too common in air cargo facilities today. Smoking is permitted in some cargo areas, and in many cases, no security guard or electronic protection devices are used to detect fire, after the regular staff lock the building for the night.

The "valuables cage" in one large air cargo area served as the "supply cabinet" and the location for some fire extinguishers. If the person with the key to the cage were unavailable when a fire started, the fire department would be too late for that air cargo area. The fact that a facility has never had a major fire proves that it has been lucky, not that there will never be a major fire there.

On a tour of a large airline's air cargo terminal, the writer noticed that there was no sprinkler system installed and that there were only a few fire extinguishers around the wall. There were no electronic fire protection devices, such as flame detectors, smoke detectors, or

---

[143]Stanley H. Brewer, Air Cargo-The Gold is in the Terminals (Management Series No. 5. Seattle: University of Washington, College of Business Administration, 1962), pp. 13-15.

fire alarms; thus the building, about half-full of cargo then, was unprotected, except for a few fire extinguishers. In response to one of the writer's questions, "Why don't you have a sprinkler system for fire protection?," the guide, an air cargo handling veteran of over 10 years, remarked, "The only thing that would really burn is the air freight. The building is steel, and even if the gas heaters near the ceiling caught fire, it would not hurt anything."

Water damage. The majority of air cargo damaged by water is due to carelessness in its handling. Cargo is left out in rain, snow, or in early morning mist unprotected; it is loaded and unloaded from aircraft in damp or wet weather unprotected; and it is not put on "skids" in the warehouse to protect it from the dampness of the warehouse floor. Water seeps into many warehouse basements after a heavy rain and sometimes damages air cargo just enough to cause a claim to be made for its replacement, but not enough to permanently injure it. Cargo is often sold by a carrier, after a claim has been paid on it. This is a fertile area for collusion between air cargo handling personnel, insurance company adjustors, and consignees.

Inadequate facilities. Today the volume and variety of products shipped by air is increasing tremendously. Most air cargo facilities are too small to accommodate the present volume of cargo; many airlines, such as PAA, UAL, and Seaboard, are building larger cargo terminals and are even allowing room for more expansion onto the new additions.

Strong rooms and safes are not available, for the safekeeping of valuable air cargo, at most airports today; valuables cages, which are subject to fire, theft, accidents with fork lifts, etc., are present,

but not adequate enough to take the place of a safe. No real protection is afforded valuables in these cages, if a thief has a pair of wire cutters and is intent on breaking into one of them. It is rare if any of these cages has an electronic protection device installed in or near it, such as a photoelectric cell projecting a beam, which can give an alarm when some unauthorized person passes through it at night or anytime the cages are unguarded.

Cold storage areas are not always available for perishable goods, because, the airlines argue, goods are only at the airport for a few minutes. If a power failure, or a low ceiling due to fog, or mechanical repairs forced a plane with perishable food or drugs to remain at an airport several hours, and no cold storage room were available, the perishables would probably be damaged.

Inflammable liquids, radioactive materials, and other potentially dangerous products are not cared for properly in many air cargo areas. At one large air cargo terminal, the writer observed two five gallon cans of highly inflammable liquids stored in the middle of the rest of the cargo, not off to one side or in another location as they should have been. If a fire had started in that area or an explosion had occurred from a saboteur's bomb, the inflammable liquids would have added to the fire's destructive powers considerably. If the inflammable liquids were placed behind a fire wall in the corner of a building or stored outside in a safe place, they would be less dangerous to the personnel and the cargo in the building.

At most airports, with few exceptions, there are inadequate facilities for livestock. Shipping livestock and pets by air is a common

thing today. Zoos ship animals from where they are caught to the zoo; owners ship pets by air; and research laboratories ship animals for experiments. With the increase in animals being shipped by air, special facilities are needed for them during their stay on the ground, especially during any delay caused by fog, mechanical failure, etc.

Improper handling procedures. Airline cargo handling operations are approximately 10 to 20 times as expensive as motor freight cargo handling operations, according to Mr. Stanley Brewer. Cargo handling crews, in some cases, work only 20 percent of the time they are on duty.[144] When a rush period comes, skeleton crews hurry to get the cargo processed; often cargo is damaged or stolen during this frantic period.

Carelessness, i.e., throwing, dropping, and otherwise damaging cargo, is a major cause of air cargo loss. Cargo handling personnel are rushed for time, sometimes poorly trained, and indifferent to security matters associated with the protection of air cargo. Cargo is sometimes piled so high in storage that the bottom items are crushed.

At one terminal visited by the writer, a particular shipment of air cargo remained on the warehouse floor for over five days. This delay caused several inquiries to be made by the shipper and the consignee, a very high U. S. Government official. If the shipper had sent the cargo by surface transportation, i.e., truck or train, it would have been in the consignee's hands much sooner; however, he thought air freight would get the cargo there faster. The shipper had to pay a higher rate to ship

---

[144] Ibid., pp. 6-7.

the cargo by air, but in this case, he "lost" his money, because he did not get quick service, as advertised by the airline. Having a plane that will fly 2,000 miles per hour and that will carry many tons of cargo is of no benefit, if the ground handling process of air cargo is inefficient and slow.

Air cargo containers are standardized, to some degree; however, all cargo handling procedures are not presently standardized. Pallets that fit into aircraft are being used more frequently, but small items and valuable items requiring special handling still cause problems for the airlines and air freight forwarders. The number of times air cargo is handled must be reduced to protect it from loss. Air cargo is sometimes damaged by fork lifts, where the cargo handling process is not automated. Automation of air cargo handling procedures is progressing slowly, possibly because the increased volume of air cargo has taken the airline industry by surprise. Little funds for the processing and protection of air cargo were available, when volume increased; however, the "handwriting is on the wall," and air cargo handling companies must adjust their budgets to allow for these vital services, or face an increase in air cargo losses.

Inadequate packaging. Inadequate packaging is a major cause of air cargo theft and loss; also, improper packing causes air cargo to become damaged very easily. Air cargo is not packed and wrapped by the shippers, in many cases, with the shipment's entire journey in mind. The shipper may protect the cargo from rough handling on the way to the airport, but not make it waterproof, in case it is loaded or unloaded in rain or snow. Loosely packed items that must change hands up to 10 times

in a 24-hour period, are tested for durability, when they are subjected to rough handling.

Documentation and government clearance requirements. As is evident from reading the 1929 Warsaw Convention articles, there are many documents required in connection with international air cargo operations. Simplier documentation, in form and number, are needed to produce less confusion and delay. The air cargo manifest, often many pages in length, presents two problems: It will be unusually long and time consuming, when the new and larger cargo carrying aircraft are put into service, if it lists the hundreds of items carried by the aircraft; and last minute substitutions will cause more problems.

Customs officials lose much valuable air cargo time by not allowing inspections at airports other than gateway airports, i.e., specific departure and destination points of a flight; however, Customs officials are willing, but they lack the manpower and budget to institute such a widespread program. An Air Transport Association of America (ATAA) official stated that lengthy documentation and other inspection procedures have delayed release of incoming air freight into JFK International Airport (over half of all incoming air freight to the United States is handled at JFK) to brokers, importers, and other receivers for many years. The problem is particularly acute on weekends, when the backlog of air freight is not released until the following Wednesday or Thursday.[145] This delay sometimes defeats the purpose of shipping

---

[145] News items in The New York Times, September 9, 1965, p. 69; September 11, 1965, p. 41.

products by air; speeding food and other perishables from one country to another is useless, if they will be stored at JFK for several days before delivery. The longer air cargo is delayed, the longer it is vulnerable to theft and loss.

In September, 1965, a test of new "immediate delivery" procedures for incoming air cargo from foreign countries to JFK International Airport was begun. Lester D. Johnson, United States Commissioner of Customs, stated that the new procedures were expected to do two things: reduce the delay at the airport in obtaining release of air cargo, and reduce the backlog of cargo on Monday, Tuesday, and Wednesday that results from weekend buildups. Under the new procedures, the broker or importer will present, along with other documents, a "request for immediate delivery" of his air cargo. He will be permitted to take, at once, his cargo that does not have to be appraised by an appraiser. A bond guarantees payment of all duties required. The actual presentation of formal entry documents and payment of duties may take place up to four days from the date the cargo was released by Custom's officials. This test was recommended by the Joint Customs-Airlines Working Group on Air Cargo, which was established by the United States Secretary of the Treasury in May, 1964. The new service, available from 8:30 a.m. to 5 p.m., Monday through Saturday, if successful, will be established at many other ports of entry throughout the United States.[146]

Misdirected cargo. Another problem causing air cargo loss is cargo misdirection due to two reasons: an error on the label, or an

---

[146] Ibid.

illegible label. Often an oversight on the typist's part can send a package to Alaska, instead of Hong Kong; careless handling may tear off the label or cause it to become too soiled to read. Such errors are problems because of the following reasons: handling the cargo is increased; the cargo is delayed from being delivered to the consignee; and it is more vulnerable to theft and loss, because it is exposed more than usual.

Special handling. Certain goods requiring special handling, e.g., animals, valuables, inflammable liquids, etc., do not always get the necessary care; therefore, thefts and losses result. Often the airline is not notified by the shipper or the Post Office that they are carrying valuable goods, because the shipper does not want to draw attention to the article, or the Post Office does not know the article is valuable (not having been told it was by the shipper).

Sometimes articles requiring special handling do not get it, because personnel are lax, or there is a lack of personnel. Dogs and other pets shipped by air require special cages (strong enough to withstand the trip) and special handling. On long flights, pets must be exercised, fed, and tended-to, if they become ill. If a plane carrying several dogs were grounded for a day because of heavy fog, quite a few animal handling problems would present themselves. In more cases than not, pets and their cages are mixed right in with the other cargo in the storage warehouse; since animals attract flies, lice, etc., this intermixing with the other air cargo is a problem and not desirable.

Valuables are not adequately protected, if, at any time during which they are in the possession of the airline or air freight forwarder,

their security is relaxed. Leaving the valuables cage door open, allowing unescorted visitors on the premises, not having electronic protection devices to detect burglars, not having adequate fire protection devices, leaving the keys in a vehicle, etc., all endanger valuables being shipped by air.

Sabotage. Air cargo is particularly vulnerable to sabotage, because it is carried on commercial aircraft, a vital link in our defense system. Travel by air is a target of sabotage for abnormal persons wanting to collect insurance money on a relative or for an enemy espionage agent wanting to destroy a link in our communication defenses. During peacetime and especially during wartime, commercial aircraft transport persons and important cargo. Several cases of air cargo sabotage have been reported in the newspapers, the most recent being the terrorist bombings occurring in the war in Saigon, South Viet Nam. In the United States, air cargo terminals, with their obvious lack of physical security measures, are particularly vulnerable to enemy or domestic sabotage.

Since 1933, 173 persons have died in United States airliner sabotage cases, and 59 persons have died in foreign airliner sabotage cases: all were killed by bombs aboard aircraft. Usually the newspapers do not mention whether or not any air cargo was lost. Scientists are now on the threshhold of perfecting a major weapon against airliner sabotage: a device that "smells" the presence of vapors and odors emanating from an explosive substance, such as dynamite, called the "Snifter." The FAA has awarded the Illinois Technical Research Institute

in Chicago a $176,962 contract to build a full size prototype model.[147]

Electrical power failure. An electrical power failure, such as the massive northeast power failure which occurred on November 9, 1965, could produce many problems for air cargo handling personnel. Air cargo terminals, which rely solely on commercial power sources for their electrical power, would not be adequately prepared for such a disaster. During a power failure, the electrically operated overhead doors on the loading platforms of most air cargo terminal buildings would not function; the perishables in the cold storage room and the ones onboard aircraft, which could not take-off, would be in danger of spoiling; and all lights in the area would be off, giving thieves and saboteurs an excellent opportunity to do as they pleased. An independent back-up power source operated by air cargo terminal officials would solve many, if not all, of these problems.

Human cargo. Periodically, a report of a person who hides in an air cargo box for a free plane ride reaches the public, through the newspapers, radio, or television. This problem is important, because a human life could be lost any number of ways, without anyone knowing a thing about it until it was too late, e.g., a plane crash in the ocean where the plane is never found, a fire in an air cargo terminal, suffocation of the person in the box, etc. This problem is very difficult to guard against.

A recent San Francisco stowaway case is most interesting. This is the stowaway's M. O.: A 23-year old former University of California

---

[147] Ibid., August 22, 1965, p. 65.

student, finding himself out of money on a round the world trip, decided that in order to get home by Christmas he would have to stowaway in an aircraft. He built a box, strapped himself and his belongings in it, and sent it by air freight from Sydney, Australia, to San Francisco, California. Immigration authorities found no one in the crate, but they did find a note written inside the crate: "Thanks for the ride-Dick the Fox."[148] A later article reported that Richard Earle Fox was arraigned in a San Francisco U. S. District Court for shipping himself in a packing crate from Sydney, Australia, to San Francisco aboard a plane. He was ordered to appear at a later date to plead to charges of being a stowaway.[149]

Labor-management disputes. During a labor dispute between airline employees and management, a strike for any length of time would present serious problems to air cargo officials, such as where to store cargo that is in the warehouse, which has not been transported yet, and where to store cargo that is continually coming in from shippers. If valuables, animals, or any cargo which required special handling were in the air cargo area during the dispute, air cargo handling problems would be more complex.

A recent strike against Air France demonstrates the type of problem that could occur during a labor dispute involving an airline. Over 2,800 Air France pilots, navigators, radio operators, and cabin attendants called a four-day strike for a pay raise, which was about 80 percent effective. France's internal air mail service stopped for the first time

---

[148]News item in The State (Lansing, Michigan) Journal, November 11, 1965, p. C-7.

[149]Ibid., November 28, 1965, p. G-13.

in 31 years, because of the strike, and only skeleton services were maintained, with aircraft chartered from foreign airlines.

III. INVESTIGATION OF AIR CARGO THEFTS AND LOSSES

The investigation of air cargo thefts and losses is an area of air cargo security which has its share of problems. This important area can help control thefts and losses and increase profits, if investigations are carried out swiftly and competently, and if the findings are intelligently applied to air cargo operations.

Reporting air cargo thefts. In many theft cases, it is not clear who should report a theft to the police: the airline, victim, air freight forwarder, airport authorities, special security police, or insurance company. The reporting of a theft usually depends upon the item lost, its value, whether or not it was insured, and how badly the victim wants it back. Many items are never reported stolen or lost; eventhough, a clear case of theft is present.

It is also difficult to determine where and when an air cargo theft has been committed. When a consignment of valuable watches is put aboard an international jet freighter in Stockholm, Sweden, stops 10 times enroute to Hong Kong, China, and the watches are found missing upon arrival in Hong Kong, the difficulty of determining where and when the watches were stolen or lost is enormous.

Law enforcement participation. In a situation such as the hypothetical watch case just cited, the local police at the departure, destination, and airports along the plane's route will not begin an investigation of the case, unless a complaint is made to them, and unless there

is some evidence that the crime was perpetrated in their jurisdiction. At present, there are no international or local criminal laws adequate to cover the situation in question. The person who stole the watches will usually make a "clean getaway," unless an airline security officer or an insurance investigator makes an investigation and determines where and when the theft occurred.

There is no one agency with international jurisdiction to investigate and compile records (M. O.'s, number of thefts, etc.) specifically on air cargo thefts. In the past there has been a growing need for such an organization, and in the future, it will become more of a need, as air cargo thefts and losses continue to rise. Interpol collects some air cargo theft records, as does the FBI (due to its tremendous size and because cases know no boundaries) and the U. S. Post Office Department; however, the FBI[150] and the Post Office[151] do not maintain a separate section for air cargo thefts.

Records of air cargo thefts and losses. Many airlines do not keep records of loading teams who work on aircraft leaving the airport. Many companies do not keep theft or loss records; therefore, they do not know how many air cargo shipments never reach consignees because of fire, water damage, careless handling, theft, etc. Several companies reported that they could not fill out the questionnaire, because their theft and loss records were not that complete.

If theft and loss records are kept, it is usually on a local basis;

---

[150]Letter to the writer from J. Edgar Hoover, Director, Federal Bureau of Investigation, United States Department of Justice, June 30, 1965.

[151]Letter to the writer from H. B. Montague, Chief Postal Inspector, United States Post Office Department, August 13, 1965.

one branch of a company seldom hears of a theft or loss in another location, unless it involves a large amount of money. Many companies do not send all theft and loss reports to a central company location for analysis. There are few, if any, companies that have M. O. files on former air cargo thieves. As is the case in most companies, air cargo thefts and losses are not distinguished from other losses in the companies' records; all losses, whether theft, fire, or any other cause, are usually included in the insurance claims records.

Company security division. Many airline and air freight forwarder companies do not have a company-wide security division. The security function, usually fragmented, is one of the many responsibilities of the cargo supervisor of an area. There are few companies with security guards who check unauthorized persons entering the cargo area, check fire and safety hazards, and see that air cargo security policies and procedures are carried out properly. Cargo, insurance, or claims personnel often investigate air cargo thefts and losses in companies, where there is no company-wide security division; where there is a security division, the above mentioned persons investigate on a local basis, with the security division's investigators only investigating after the preliminary investigation reveals that a large amount of money or cargo is involved.

In many areas, there is a lack of liaison between local law enforcement officers and cargo officials due to two reasons: there is no security investigator or guard with the specific duty of creating liaison with local law enforcement officials, or the cargo supervisor does not consider this important. Some companies do not have written air cargo security policies and procedures; therefore, when a cargo handler encounters

a situation that is new to him, he is at a loss. Others have written air cargo security policies, but do not enforce them.

Many security divisions investigate large air cargo thefts and losses and occasionally aid a staff policy writer in preparing company manuals, but there is little prevention work done by these security divisions, such as security education programs for all employees, fire protection and safety surveys, spot checks to see if cargo handling procedures are being followed, gate control, visitor control, background investigations, etc. Such a narrow scope of activities is the main fault with air cargo handling companies' security divisions.

Investigation problems. In some cases of air cargo theft, there was a delay in notifying the airline or local law enforcement officials, from one day to three months. Some airline personnel blame the 1929 Warsaw Convention when persons delay in reporting a theft, because (article 13, paragraph 3) a person must wait seven days before he can make a claim for lost goods. If a person waits seven days, the trail is "cold," when the investigators begin the case, and this delays the investigative process considerably.

Some theft victims fail to report not receiving their air cargo, for numerous reasons. Unless the airline has some way of checking to see that all cargo is delivered to or picked-up by the consignee, no one but the victim and the thief will know that the cargo was stolen. Lost cargo is also a problem when not reported, because the airline or air freight forwarder cannot guard against loosing other cargo the same way.

Security personnel are not always notified, when a cargo carrying aircraft crashes. This delays an investigation, because security

personnel may be the only ones who know that the plane was carrying valuable cargo. Often, outside experts in scientific crime detection are not used by companies when needed, especially when company security personnel are untrained in security work.

IV. INSURANCE ASPECTS

Most insurance companies pay air cargo claims, because the cases are difficult to investigate: They occur all over the world, are time consuming, and are costly to investigate. Often, by the time an investigator has completed his investigation of a case, more money has been spent than if the claim had been paid. If a pattern of thefts or losses is evident, or the insurance company wants to make an example of the thief, or the case is not too expensive to investigate, the insurance company will sometimes order an investigation before a claim is paid. Little investigation is made for small claims as a rule. Because the insurance companies cannot and do not investigate all air cargo thefts and losses, some thieves have a good chance that they will not be detected.

Sometimes the victim reports the theft or loss to the insurance company after seven days, but the airline does not learn of the missing cargo, unless the insurance company brings it to their attention. The victim, only wanting to place his claim with the insurance company, often does not inform the police, airline, or air freight forwarder of the theft; therefore, any investigation is started late.

V. MANAGEMENT ATTITUDES TOWARDS AIR CARGO SECURITY

Some companies regard security as a nonproductive function; therefore, they advocate it is not good business to have a company-wide security division. They forget that top management needs to know how many losses are due to thefts and how many are due to fire, water damage, etc., for planning and forecasting purposes. Through the use of a security division, top management can reduce losses, protect the image of the company, and make more profits.

Many companies take the view that their losses are "confidential;" however, when they do so, they look at their problems from only one viewpoint. Problems bothering them may be disturbing all the other airlines or air freight forwarders at one airport or in one area. By exchanging information on air cargo thefts and losses, such as M. O.'s, patterns of losses, etc., the companies can view the problem from many viewpoints. There are few, if any, who are looking at the problem from an overall view. One of the purposes of this study is to look at the air cargo theft and loss problem from an overall view; however, some companies took the narrow view, and did not fill out a questionnaire, because their losses were "confidential."

When companies assign security as one of the cargo manager's functions, they do not have at least one man in each area who is only responsible for security. With the increase in air cargo volume and the shortage of personnel to process it, the cargo supervisor has enough to do, without having to administer the security function also. When things are rushed, the security function usually "takes a back seat" to cargo processing, because security is a nonproductive function. In the rush to

get the cargo processed, no one is concerned with visitor control, theft, fire and safety hazards, etc. Because they are busy with "special orders" and reports, cargo supervisors often do not supervise their personnel adequately, much less administer the security function. The security function is too important and complex to be on a part-time basis.

Another problem in some companies is the selection of the security director. Many top management officials think of him as a policeman and not as a businessman also; therefore, many company's first few security directors are ex-law enforcement officers who have had no business experience or security administration training. On the other hand, just because a man has been a good ticket supervisor or traffic manager for many years, this alone does not qualify him for the security director's job. The most qualified security director has a combination of law enforcement, security administration, and business administration training, including college training and on the job experience.[152]

The security function in an airline or air freight forwarder company is somewhat like skin diving: It does not take much knowledge to put on an oxygen tank and breathe through a mouthpiece, nor does it take much knowledge to tell a security guard to report all fire hazards in an air cargo area. The problem emerges, when things start going wrong; that is when special training, knowledge, and experience separate the neophyte from the professional.

---

[152]At present, the School of Police Administration and Public Safety at Michigan State University, East Lansing, Michigan, is the only academic institution that offers a Bachelor of Science (B.S.) and Master of Science (M.S.) degree in security administration.

VI. SUMMARY

This chapter demonstrates that there are numerous air cargo security problem areas, and they are serious ones, i.e., they could cause an air cargo handling company serious financial difficulty, if allowed to continue unchecked. Air cargo management officials, who keep abreast of their field, would be wise to initiate an air cargo security program in their company to control or eliminate their problems, some of which may have been mentioned in this chapter. Air cargo volume has been relatively small in the last 20 years, and still there have been numerous air cargo thefts and losses; if not controlled, thefts and losses in the next 20 years will dwarf those of the previous 20 years.

CHAPTER IX

ADMINISTRATIVE ROLES OF THE SECURITY DIRECTOR

I. INTRODUCTION

A person is many things to many people, i.e., he plays numerous roles every day. A man is a father to his children, husband to his wife, son to his parents, volunteer fireman to his neighbors, customer to his grocer, employee to his employer, etc. A role may be defined as the way a person acts in relation to other persons or things in a given situation. This chapter attempts to explain the role of a man in a business setting, i.e., the security director of an air cargo handling company, hereafter called "director."

The director plays many roles within his company; he is a subordinate to his superiors, a contestant in the annual company golf match, a superior to those in the security division, a company official to visitors, and an employee to the payroll clerk. The director is many things to many people; however, the success of the security division and even his personal career depends upon his ability as an administrator.

The director is, above everything else, an administrator; eventhough, he may be called upon to play other roles, such as investigator, valuables courier, public relations official, etc. Many companies use the director only as an investigator; therefore, they get the erroneous impression that the security function is only an investigative one. The

director should have whatever combination of education and experience that is necessary for him to do his job. The role of an administrator contains certain elements common to the behavior of all administrators, e.g., supervising employees, decision-making, etc.; therefore, the security director of an airline has a lot in common with the security director of an air freight forwarder. This chapter discusses the role each plays.

The director should have the ability or power to get things done, i.e., he should have sufficient power to accomplish the tasks that are required of him. Without this power, the director is nothing but a "figure-head;" he is the director of security only on the organizational chart, while someone else or maybe no one is actually operating his division. There are several ways to obtain power, such as formal authority, expertise, seniority, personality, access to information, identification with a power group, etc.; however, the important thing is not so much how he obtains power (whether he uses one or more of the above ways), but the fact that he has it and can use it to administer the security function.

The director should be a professional and be known as an authority on security administration in his area. He should be thoroughly familiar with the security field and related police subjects; he should subscribe to a code of ethics; he should have a combination of formal education and experience; and he should keep abreast of current developments in the entire security field, at home and abroad. The director should be thoroughly familiar with all of the departments in his company, accounting, marketing, sales, etc., so that he can integrate the security function into the overall company plan. The company should operate because of the

security division, not in spite of it.

The director should be acquainted with security directors in other air cargo handling companies and also be aware of mutual security problems. He should establish liaison with local law enforcement and fire officials, so that they can be familiar with his company's problems, physical arrangement, and operating processes. Cases have arisen where a plant was almost destroyed by fire, because the fire department did not know the location of the company's water connections.

In the air cargo industry (world-wide in scope), the director should be acquainted with the local authorities (police and fire) at each company branch location. This can be accomplished through the local cargo supervisor or other representative of the company making the contact. The director should belong to and attend meetings of a professional security organization, such as the American Society for Industrial Security (ASIS) or the International Airline Security Officers' Association; at these meetings ideas and information are exchanged, which often help to solve mutual security problems.

The personal role played by a director away from the job is important, because his job performance is often related to his personal value system. If the director is interested in community affairs, sports, and cultural activities, he is reasonably well-rounded off the job and probably on the job as well. On the other hand, if the director has a "closed mind" and does not try to improve himself off the job, his performance on the job may be parallel.

If company policy needs to be changed or amended, regarding air cargo security matters, the director should be the one to propose it.

The director is supposedly the final authority in the security division; therefore, when the company's board of directors request a spokesman from that division, they want him to speak to them. Because the director is the official spokesman for the division, the position he takes on an issue will be taken as the security division's position. If the director makes it a practice to send junior security management officials to speak to the board of directors for the security division, he may be looking for a new job as a result of his poor judgment.

The director should know his company's security problems. By constantly gathering information, he can keep his finger on the pulse of the company and protect it from any harmful situations, which might develop without the knowledge of top management or anyone who could take quick enough action to lessen their effect on the company. This information gathering process enables the director to "head off" problems, before they get out of control, and anticipate the needs of his division and the company. Security work in an air cargo handling company is difficult when the director knows the situation with which he is dealing; it is twice as difficult, when he is totally unaware of the situation. An air cargo supervisor, obviously, is not able to administer the security function adequately, in addition to his normal duties.

The main task of the director is policy making and goal setting. This is still true, even when the security division is a small one; the only difference is that the director has less time to devote to these tasks. In a small or medium size division, the director may conduct air cargo theft and loss investigations, but his main task is that of an administrator.

II. ADMINISTRATIVE ROLES

The director should plan and set goals for the security division. Most divisions do not have long range plans beyond the company's fiscal plans, and problems emerge, when thefts or losses increase faster than expected. Through advanced planning, resources can be shifted to meet immediate demands on the security division.

Abolishing all air cargo thefts is a nice planning goal, but a dangerous situation is present, when a company's top management thinks they have that now. Most security divisions do not have an M. O. file on air cargo thieves or a central company location for analyzing theft and loss reports, even after years of operation. Many have never even conducted a company-wide security education program.

The training of security investigators, guards, and clerical employees should be planned, so that they are familiar with all phases of the company's operations, not just security operations. Planning of the training period will enable it to be compact and rewarding to the employees and profitable to the company; rambling training periods with no central theme bore employees and also cause the employer to be without their services. The reason a company needs trained security personnel is because the company's and the security division's progress depends on their actions.

Because the security function is a specialized function requiring special training and handling, and the director is responsible for the actions of security personnel, the director should organize and staff the security division, within certain limits established by the company. The director should educate top management officials as to which functions

in the company the security division should handle and which ones it should not, so the division will not be overburdened with non-security tasks and neglect its basic tasks, such as physical security, personnel security, etc.

The director should be familiar with finances and budgetary matters involving his division and the overall company. The director's main budgetary task is to justify his division's existence to top management. This process of justification is a continuing one, and he must be familiar enough with the company budget to ask for a reasonable amount of money each year, keeping in mind the needs of his division in relation to the needs of the company. The director must determine the odds that he will get a certain amount of money, but have an alternate plan ready, in case he does not get the first amount he requests.

The director should be able to communicate his division's position to top management and other company officials. He must be a skilled interpreter of trends and company events, i.e., he must allow for company expansion, new ideas in the security field, changes in attitudes towards security by company employees, etc. Doing security work is about 90 percent of the job; telling the company what the security division is doing makes up the other 10 percent.

The director must see that the proper information gets to the proper source at the proper time. If his company has experienced a large number of thefts and losses, e.g., 2,000 of them in one year, he must see that the board of directors is advised of that fact, when deciding on the budget for the security division or planning for future expansion of that division. He must be a skilled enough communicator to

explain facts to the proper persons and to see that those facts are understood.

The director should direct and coordinate all security programs in the company. If a security education program is being given to all employees or to a certain group of employees, such as foremen and other supervisors, the director should consult with instructors of the program regarding the way the material should be presented, what material should be presented, etc. The director, or a security official under him, should interview each company employee about security matters, when he enters and leaves the company. In a remote location, the local manager could perform this task. The director should direct and coordinate all security matters in the company, such as presenting the security division's annual budget, investigating an air cargo theft or loss, determining if new fire protection equipment is needed, etc.

The director should be a leader and innovator, i.e., he should create new ideas within the security division and the company. He is one of the few company officials who knows almost as much about the overall company as top management does, because he has a chance to correlate all that he sees and hears in planning and reviewing the security function. In order to protect the company's personnel, buildings, processes, image, etc., the director must know the company better than any other management official on his level. Where the accounting department, marketing department, etc., are theoretically, only on duty about eight hours a day and no holidays (there are exceptions), the security division is on duty 24-hours a day, seven days a week (holidays included). With this chance to see the company in all of its

moods, the director is almost under a duty to be a leader in creating new ideas and ways of better carrying on the company's business.

The director should delegate and control all activities of the security division. He should not take part in the actual investigation of cases, fire protection surveys, etc., unless there is a problem which can only be handled by him, because the director's main task is policy making. The director should have control over his division to the extent that he knows where each person is, in case they are needed to complete a special or emergency task. In many companies, the security division is given an assignment, mainly because no one knows which department should handle the task. The director should have sufficient control over the security activities of the company, so that he knows what is occurring, where it is occurring, and its present status. Naturally he must rely on his subordinates a great deal.

The director should make all policy decisions regarding the security division's activities, especially the ones involving the most risk. Decision-making is one of the most important areas in the life of an administrator; it is also the most difficult area, because a wrong decision could mean a loss of profits for the company or even cost the director his job. The director should be as thorough as possible in clarifying a problem, gathering facts, selecting alternatives, making the decision, implementing the decision, and following it up. The only way to learn how to make decisions is to make them. As a result of the decision-making power afforded the director, he is responsible for all the decisions made in the security division.

The director is also responsible for appraising and evaluating the security function. By comparing his division with others in the

company and with other security divisions in other air cargo handling companies, he can determine how his division is doing on an overall basis. The director cannot compare his division on a productive basis with other operating departments, because his is a nonproductive function; however, he can determine if his division is meeting its goals, completing its assigned tasks, and contributing to the overall company purpose.

Constant review is needed to keep abreast of the increasing volume of air cargo, the increasing number of new employees being hired, and the new "money-saving" techniques in the field of security. Security in an air cargo handling company, as in other companies, is relative, because a rash of thefts or losses, plus a rapid increase in business, plus a new group of cargo handling employees being hired, could change "good" security on Monday to "bad" security on Friday. On Monday, it may have been proper procedure to have almost all personnel on duty as security guards, but in view of the increased investigative load which accumulated during the week, a change in assignments is warranted. A good director should evaluate a situation, e.g., an increased workload, and take action, before the situation gets out of hand.

The director should reorganize and make changes in the security division, if they seem to be necessary. For companies experiencing a constant flow of new employees, background investigations will take up much of the security division's time. If a company expands, and more fire protection measures are needed, the director should plan for this need. It is the director who should study the security situation and

propose changes necessary to insure that his division will do its part in helping the company obtain its goals.

III. SUMMARY

When one attempts to narrow down the role of the director of security in any air cargo handling company, it is this: The security director is an administrator who makes policy decisions, which will aid the company in obtaining its goals. He is responsible to top management for the security function in the company; therefore, he organizes and staffs the security division and is responsible for the actions of all security personnel. The director represents the security division and is in charge of all company security programs. In short, he directs those functions and services which protect the company's personnel, cargo, and other tangible and intangible assets.

CHAPTER X

RECOMMENDATIONS

This chapter deals with security recommendations for air cargo handling companies, whether airline or air freight forwarder. The recommendations presented should be used as general guidelines in dealing with various air cargo security situations, since all recommendations will not be applicable to all air cargo handling companies. Each organization will have to apply the guidelines to its particular situation, i.e., according to size of the company, location, scope of operations, union contract, applicable laws, employment conditions, etc.

I. SECURITY DIVISION

Functions. The main function of an air cargo handling company's security division is to aid the company in carrying on its business by protecting its assets (tangible and intangible ones). A company's assets include anything its management considers valuable, e.g., personnel, buildings, equipment, air cargo, reputation, image, etc. The security division should deal with physical security, i.e., security guards, fences, lighting, electronic protection devices, lock and key administration, vehicle and visitor control, etc.; personnel security, i.e., background investigations, fingerprinting, security entrance and exit interviews, etc.; civil defense and emergency planning, i.e., continuity of business, major disaster, nuclear attack, etc.; security education

programs, i.e., for top management, other management levels, and employees; and theft and loss investigations.

The security division should also advise top management, regarding security measures to be taken in erecting new buildings or enlarging existing ones, e.g., the need for a strong room, safe, cold storage room, animal area, fire protection equipment, anti-intrusion devices, etc. The company should have an overall security plan, one where various systems complement each other.

The security division should conduct periodic security surveys to detect deficiences in the security system. A company's security needs change from day-to-day, as its business activities change, e.g., an increase in air cargo shipments might necessitate extra security precautions. The security division should also make periodic reports to management on security conditions and operations throughout the entire company. These reports should be based upon written security reports received periodically from the company's different locations and written reports of periodic inspections made by security management personnel.

The security division should maintain liaison with other departments in the company, so the department heads know of its functions and will call on it for assistance, if the need arises. It should also maintain liaison with security departments in other air cargo handling companies and exchange information on common security problems.

It should maintain liaison with appropriate trade associations, such as the International Air Transport Association (IATA), American Air Transport Association (AATA), etc., and with law enforcement and security associations, such as Interpol, International Airline Security Officers'

Association, American Society for Industrial Security (ASIS), etc. The security division should maintain liaison with appropriate law enforcement agencies, so these agencies will be familiar with the company's air cargo operations and problems.

The security division should prepare or aid in the preparation of company-wide policy manuals regarding security measures and operations. Security "memos" should be prepared and distributed periodically by the security division, to keep the employees conscious of the importance of security. The security division should also prepare a written statement regarding the role shippers and consignees should play in air cargo operations, including such items as packing cargo for shipment, accepting damaged cargo, etc., and see that shippers and consignees are furnished with copies; a newspaper announcement, leaflets, information on pocket calenders, etc., are a few ways of accomplishing this task.

Organization. Security is a managerial function; therefore, the security division should report to top management. The very nature of the security function, dealing with company-wide problems on all levels of the organization, practically demands a top management source of authority. Many security divisions are ineffective, because top management does not support them.

There should be a central security division on the corporate staff level, which directs area, regional, or local security branches in the field. These branches in the field are line operating units, which report periodically to the corporate security office. In some companies the security officer in charge of uniformed guards, investigators, and secretaries on the local level reports directly to the local manager.

He sends monthly reports to the corporate security office, which acts in an advisory capacity only. In other companies, the local security officer reports directly to the corporate security officer, not to the local manager.

In some companies there are only corporate level security officers who investigate thefts, losses, ticket frauds, claims, etc.; in other companies there are only local security officers (no central security office), who report to the local manager. The type of security organization depends upon the size of the company and the desires of top management. Regardless of the organizational plan followed, the security division should be established, so that its operating members are effective in carrying out the security function.

There are several reasons why there should be a central security office in addition to area or local security officers. Local security officers in the field would be more effective, if a central security office furnished them with standard procedures to follow regarding investigating techniques, report forms, and methods of communication. A central security office would be able to get in touch with all of its security officers, day or night, in case of emergency. The security officers could get in touch with the central office, in case they wanted to work with another company security officer on a case and did not know his present location. The central security office, by knowing of security and other significant developments which have occurred in the organization, could report to security officers, other departments, and top management, when it is necessary or when an inquiry is made. Company-wide theft and loss reports should be analyzed by the central

security office, so theft and loss patterns can be detected.

Cost and number of personnel. The cost of operating the security division and the number of personnel employed by it depends upon top management's decision. A security division must justify its existence, just like any other company department; therefore, many do not cost more than the value of the things they protect. The value of the things the security function protects is also determined by top management. If an air cargo theft involving a small amount of money ($88.14) is not investigated by a security investigator making much more ($8,800), the company may think that it has saved money; however, thefts that go unchecked breed more thefts. It would not be long before thefts totalling the investigator's salary would be occurring. Small thefts should be investigated, or the thief will get the impression that he can perpetrate an unlimited number of them.

Operating efficiency is one criterion, i.e., the cost of the security function should not inhibit the company's operations, except to a certain degree. That point is determined by top management, when it determines whether or not the security division is contributing enough to the total company operation. The security division's relevance, in comparison with other company departments, is also a criterion which undergoes constant scrutiny. Thus operating efficiency and the security division's relevance, as determined by top management, are the criteria used to determine the cost and number of personnel in that division.

Regarding the number of personnel, there should be at least one director of security with company-wide duties, with additional area, regional, or local security officers appointed as necessary. All members

of the security division should operate on a full-time basis.

Selection of personnel. The security director should be a man who is familiar with the following areas: security, police, and business administration. In addition to college training, he should also have practical experience in criminal investigation and personnel management. Many security directors have served as local and state police officers, FBI agents, military intelligence officers, etc.

It should be remembered that the security function is mainly an administrative one; the investigative function is only one phase of security. Just because a man has been a police patrolman 10 years, it does not necessarily follow that he will be a good security director. On the contrary, he may be unsatisfactory, because he might see the security division as the most important unit of the company, to the exclusion of the others. If a security director cannot see the relationship between his division and the other company divisions, his demands may be fixed and unreasonable, and conflict will result between the security division and other departments as well as top management.

Security investigators should possess similar qualifications to a police patrolman, in addition to the college training qualifications mentioned for the security director. Some companies deputize their guards and investigators, after they have attended a local police academy and met other state requirements for a police commission. If an investigator does not have previous experience, he is of limited value to a company, because most do not have the facilities or personnel to train him. Experience as a police officer, Secret Service agent, FBI agent, plant security guard, military intelligence officer, etc., will aid the security

investigator in investigating air cargo thefts and losses. The main criteria is previous college training, plus experience as a criminal investigator or personnel background investigator. Maturity is a must, since the investigator is often working alone and could embarass the company easily. It is also important to get well-qualified security investigators, because the investigator pool is an excellent source from which to recruit a security director.

Security guards should have qualifications similar to a police patrolman, plus some college training, if they will be used occasionally as investigators. If the company hires its own guards, it will usually be able to select a highly qualified employee. If a contract security organization is relied upon to furnish guards, the company runs a greater risk of getting guards who will perform below the desired level of proficiency. The image projected by the worst security guard is often taken as the image of the entire security division. There are, however, many excellent contract security guards.

The criteria in selecting personnel for the security division depend upon their duties. If a guard is expected to investigate criminal cases and do background investigations on new employees 70 percent of the time and monitor a closed circuit television camera and handle the communications network 30 percent of the time, he must have the investigator's qualifications in addition to the guard's qualifications. On the other hand, if he is monitoring the television camera or stationed at the main gate checking trucks and visitors in and out 100 percent of the time, he need not have as many qualifications as the investigator. Over a period of time, a guard could work up to the

investigator's position; however, unqualified employees should not be placed in more responsible security positions, unless the security director is willing to assume full responsibility.

II. PHYSICAL SECURITY

Badge and identification system. All regular employees and regular visitors, such as salesmen, truck drivers, etc., should be required to have an identification card with them and to wear an identification badge in full view, while they are in the air cargo area. The identification card should contain their picture, signature, fingerprint, and other pertinent descriptive data. If an identification system is in operation, anyone can tell by glancing at a badge, whether a person in the cargo area is an employee, vendor, truck driver, visitor, etc. Different colored badges can be used for different categories, such as one color for air cargo employees working in the area, another for security investigators, another for company management personnel, etc. An impostor would find unauthorized entry quite difficult, if the above precautions were in effect.

Security guards. Security guards should be posted at the main gate and at regular intervals throughout the air cargo area to see that unauthorized persons are properly identified, employees are following proper air cargo handling procedures, and fire and safety hazards are detected. The security guard should check doors, windows, skylights, etc., for signs of attempts at entry and also check portable fire and safety equipment to be sure they are operable. The guard should supervise the loading and unloading of air cargo from aircraft (if possible)

and vehicles, and see that the driver stays in the area of his truck during the loading or unloading. Guards should also administer first aid to injured persons and assist specially trained employees, if a fire occurs. Security guards should also submit daily activity reports and/or "incident reports," i.e., reports of specific incidents observed while on duty which should be called to management's attention, such as "patch of oil on the floor by the valuables cage," "broken skylight," etc.

Visitor and vehicular control. All visitors should sign the visitor's record (name, time in and out, person visited), wear a visitor's badge and/or be escorted while inside the air cargo area. Security guards should stop all trucks entering and leaving the cargo area and check their contents, as time and traffic permits. Careful records should be kept by the guards regarding the trucks (time in and out, make, model, year, and license number), and the driver should sign in and out.

Dogs in security work. German Shepards (the most reliable and widely used) have proven their worth in a variety of ways in many law enforcement agencies throughout the world and are being used increasingly by private industry for security work, especially in Europe. Dogs are especially good for detecting a burglar in a large air cargo warehouse or trailing one from a warehouse, because of their extra keen sensory perception. A dog patrolling an air cargo area with a security guard is a psychological deterrant to a potential thief; the thief may be able to predict the behavior of the guard, but he cannot predict the dog's. A dog can watch several prisoners, while the guard calls for assistance;

detect a prowler before the guard can; and out-run a man fleeing from the scene of a crime. A dog can be trained to search places in or near a warehouse that would be dangerous or impractical for a man to search alone, e.g., storm sewer, rafters of a building, under cargo carts, etc. Also, a security guard-dog team can replace one or more extra security guards at a substantial savings to the company; a dog cannot claim workman's compensation, vote for a strike, or ask for a pay raise.

Fences and lighting. The cargo area should be fenced-off and well lighted. Fencing is impossible in many cases; however, it should be done, if possible. Lighting of the area (inside the building as well as outside) is possible and practical; a thief does not like light and will hesitate before he trys a place "lit up like a Christmas tree." There should be a "clear area" between the fence and the air cargo terminal, if possible, so any movement can be readily detected.

Electronic protection devices. Most electronic protection devices are of little use to detect thieves in a large air cargo terminal that operates on a 24-hour basis; however, closed circuit television has been used very successfully in spotting irregularities. Television cameras (can be mounted on a high vantage point) which turn a full 360 degrees, can keep an entire warehouse under surveillance. A "zoom lens" enlarges and brings closer any object on the screen. Pictures on a television screen can be photographed and used as evidence against the thief.

If the air cargo area is closed for the night, that is another story. Aluminum foil, with a fine wire in it, can be placed at the edges of a window; when a thief cuts the glass, the glass breaks in a "spider-

web" pattern, breaks the foil and the wire, and an alarm is sent to a central station. The thief does not hear the alarm and is surprised, when the police arrive. Electromagnetic contacts sound an alarm when a door, window, skylight, etc., are opened, because an electrical circuit is broken. Photoelectric cells throw an invisible beam across a room or warehouse and sound an alarm, when someone passes through the beam.

Probably the one best electronic protection device for a closed warehouse is an ultrasonic system. The warehouse is flooded with ultra high frequency sound waves, and an alarm is sent, upon any movement in the area. In most cases, power is supplied by the central station; therefore, a power failure in the air cargo area would not affect its security. One electronic protection system should not be used alone; a back-up system is highly recommended.

The security director should use electronic protection devices as part of the overall security plan, not as the entire security plan. These electronic systems are able to replace some, but not all security guards.

Fire protection. The entire air cargo terminal should be covered by a sprinkler system, and fire alarms should be at various locations in the building. Portable fire fighting equipment, such as fire extinguishers (both water and CO_2), should be readily available in addition to stand pipe hoses. The fire department should be familiar with the location of the air cargo area's hose connections, and a fire plan should be worked out in advance.

In case of low water pressure from the public source, the air cargo area should have its own water source, such as an above-ground water

tank or underground tank with a pump.

If the facility is large enough, a few employees should be trained in fire fighting and have a plan of action in case of fire. Fire blankets, portable high expansion foam units, and several different types of portable fire extinguishers (water and CO_2, or dry chemical) should be subjects of fire training classes. Draft curtains and ceiling monitors should also be installed in the building. Liaison should be maintained with the National Fire Protection Association (NFPA) for the latest techniques in fire protection. Smoke detectors and flame detectors that give an automatic alarm are available, but of little use in a large, drafty air cargo warehouse open on a 24-hour basis. Installation of automatic fire protection devices reduces insurance rates considerably.

Lock and key administration. Locks provide relative security and should be selected with that in mind. A locksmith can advise the security director on the different types of locks to be used, according to the relative degree of security that is desired; however, the security director should have a lock and key program in his overall security plan, not as his only security plan. A lock and key receipt system should be in operation, to control their use and identify their exact location.

Combinations and keys should be changed periodically. Locks with interchangeable cores provide excellent security and are inexpensive to maintain; instead of changing an entire lock, one can replace the core and have the desired security in seconds. Locks should be locked when not in use, to prevent a thief from substituting his lock for the company's lock, returning later, and helping himself to any air cargo in

the building. Only certain personnel should have duplicate keys. Keys should have, "DO NOT DUPLICATE," stamped on them, and local locksmiths should be called upon to help maintain the company's policy.

Locks, safes, etc., should be checked periodically to see if anyone has tampered with them. A master key system should be used, and keys should not be on pegs in obvious locations, with the location of the lock it opens written on a tag attached to the key.

III. PERSONNEL SECURITY

Background investigation. All potential company employees should have a background investigation done on them, so the company can have an accurate picture of the person they are considering for employment. Often management considers an investigation unnecessary or too expensive, but thefts and losses can be prevented at this stage, and many have been. Potential employees who cannot afford to have their past examined will not bother to apply, if they know an investigation will be made. On the other hand, potential employees with special skills can be placed in positions that are agreeable to them and to the company, if a thorough background investigation report is intelligently utilized by management personnel.

Employees should be fingerprinted and photographed. This is a deterrant to potential employees who are not suitable, and it helps to identify persons in case of injury or death. Many companies (with the union's approval) now require these two items as part of the pre-employment screening process, and people are beginning to relax their negative attitudes regarding these procedures. All air cargo handling employees

should be bonded.

Other investigations. Investigations of suspicious employees, potential supervisors, and supervisors being considered for key executive positions should be done by the security division, in addition to pre-employment investigations. These investigations save the company and the individual many worries; investigations of this type are seldom discussed, do occur frequently, and are usually necessary.

IV. CIVIL DEFENSE AND EMERGENCY PLANNING

In case of a nuclear attack, each air cargo handling company should have a civil defense plan. This plan should provide for the safety of all personnel and the continuity of services and be familiar to all employees. Drills should be held, and liaison should be maintained with the local civil defense director.

A disaster or emergency plan, for power failures, a major fire, an explosion, floods, etc., should be familiar to all employees. The air cargo area should have its own electrical power supply, in case the public power fails. Most air cargo areas presently do not have their own power source, but the FAA is studying the situation.

V. SECURITY EDUCATION PROGRAMS

A security education program should be a continuous project in all air cargo handling companies, because most companies have too many branches to employ a security guard at each location. By educating each employee regarding security, relative security is possible. This is the only preventive method used in many companies. Employees should also be given

safety education. In some cases, a security education program year-after-year makes an employee one-sided. By alternating security and general safety, the employee is taught how security and other fields are integrated with each other.

VI. THEFT AND LOSS INVESTIGATIONS

Theft and loss investigations should be started immediately, using the best investigators available. In theft investigations outside experts, law enforcement agencies, and other air cargo handling company security officers, where applicable, should be consulted. All thefts and losses should be investigated so that subsequent ones can be controlled. Patterns of thefts and losses should be spotted by persons on the corporate and local levels who analyze theft and loss reports regularly. Scientific crime detection methods should be used, where applicable, and investigators should attend technical schools teaching criminal investigative techniques, such as various "short courses" taught by many colleges and law enforcement agencies.

An internal auditing system should use a computer, to insure that proper air cargo handling procedures are being carried out and to spot any trouble areas quickly, e.g., air cargo that was not picked-up or delivered when it was supposed to have been, etc. Methods of operation (M. O.) of criminals should be stored in a computer to aid security officials in identifying M. O.'s in unsolved crimes. A company with its central record system filed in a computer can accomplish much more than it previously did with a manual system; however, the relative cost of using a computer should be considered.

Instead of sifting through hundreds of M. O.'s of previous criminals and hoping the investigator would not be too tired to recognize the right one when he came to it, a computer could search its data and write out an answer in seconds. In the future, law enforcement agencies will be able to search many computers around the world in seconds, using an advanced communication system, and pick out an air cargo thief's M. O. in a matter of minutes. This type of investigative aid is slowly becoming available.

Air cargo theft and loss records should be collected as soon as the incident occurs and be stored in the central security office, separate from claims records. Now, most companies do not know how much they are losing in thefts and losses, because they do not separate records or they do not keep adequate records. The main reason most companies could not fill out the "number and value of thefts" category in the questionnaire was because they did not know.

VII. RECOMMENDATIONS TO SHIPPERS AND CONSIGNEES

Air cargo handling companies, to increase efficiency and reduce claims on air cargo, should cooperate with shippers and consignees by advising them regarding the packing and packaging of air cargo.

Advice to shippers. Shippers should pack their cargo, so it will withstand surface and air travel. Shippers should anticipate the conditions under which their packages might travel (rain, snow, etc.) and prepare them accordingly. The correct information should be on all air documents accompanying a consignment of goods. By conducting follow-up tests, i.e., checking the condition of a package at its destination, etc., improvements can be made in routes or packaging.

Advice to consignees. The consignee should report a damaged package to the air cargo handling company's office or refuse to accept it. More care will be taken in future packaging, if several packages in a row were returned to a shipper. Prompt claims should be filed with the air cargo handling company (airline or air freight forwarder), to facilitate investigation. A consignee should insist that valuable cargo be locked in a strong room or safe, during its stay in the cargo area.

VIII. SUMMARY

Each air cargo handling company should establish a separate security division to deal with physical security, personnel security, civil defense and emergency planning, security education programs, theft and loss investigations, and other requests from top management. Most companies have found that a separate security division, even if only one to five full-time employees, is a management necessity that contributes to overall company efficiency. The security function is becoming an ever important one, with air cargo increasing in volume and value, with thefts increasing in number and value, and with the increasing number of personnel being hired to handle air cargo. Ignoring air cargo thefts and losses may have been a solution in 1945 or 1950, but in 1966, it is a disastrous course to chart. The need for air cargo security, like the need for airline security, is here to stay and will increase in the future.

CHAPTER XI

SUMMARY AND CONCLUSIONS

I. SUMMARY

Air cargo volume has increased tremendously since 1945, because of several factors: public demand for fast cargo transportation; larger cargo carrying aircraft; industry's discovery that it can save "total costs" by shipping by air, thus eliminating warehousing, tie-up of capital for long periods of time, etc.; and increased advertisement of cargo services and benefits by air cargo handling companies (airlines and air freight forwarders). This unprecedented increase in air cargo volume has caused an unprecedented number of air cargo security problems.

A recent air cargo theft[153] illustrates why this thesis was written and also what can happen when the security of a valuable air shipment is relaxed. On March 1, 1966, two men stole 12 wooden boxes of partially refined gold bullion, weighing 800 pounds and valued at $207,000; after further refining, the gold could be worth $670,000. Trans Air Limited carried the gold from Red Lake, Ontario, to Winnipeg, Manitoba; Air Canada was supposed to have taken it to Ottawa, Ontario, for further refining. At 10:00 p.m., while three Trans Air employees

---

[153]News items in The State (Lansing, Michigan) Journal, March 3, 1966, p. F-6; Detroit Free Press, March 3, 1966, p. 16-C; The Flint Journal, March 3, 1966, p. 1; The Milwaukee Journal, March 2, 1966, p. 2.

were unloading the gold from their aircraft, two young men, wearing Air France parkas and white air cargo handlers' pants, drove a stolen Air France truck up to the loading dock at Winnipeg International Airport. They presented forged air freight documents, claimed the gold, loaded it into their truck, drove a short distance from the airport, abandoned the truck, and vanished with the gold. At midnight, an Air France official called to inquire about the gold, and the theft was discovered.

This theft was the fourth unsolved gold theft from a Canadian airport in the last 14 years; the last theft ($100,000 in gold taken) occurred in December, 1964, at Montreal International Airport. An official of the Royal Canadian Mounted Police summarized the most recent Winnipeg gold theft when he stated, "It was almost a comedy of errors; it was all so easy."

Although there have been thousands of air cargo thefts and losses involving large sums of money, many air cargo handling companies still do not have adequate air cargo security programs. The research findings presented in this chapter, hopefully, will aid in controlling potential air cargo thefts and losses. This thesis is not an attack on the management of air cargo handling companies or an attempt to persuade the public not to ship their cargo by air; it is simply a research study to identify variables in air cargo thefts and losses, so that future thefts and losses can be controlled for the good of all concerned, i.e., air cargo handling companies, the public, law enforcement agencies, insurance companies, etc.

The main purpose of this 16-month research study of international air cargo operations was to identify variables in air cargo thefts and losses. Except in a few cases, the findings did not indicate how often

each variable occurred, i.e., to what extent each variable affected air cargo thefts and losses. This study only shows some of the variables that are present in air cargo thefts and losses, not to what degree they are present. For example, the study shows that air cargo is left unattended on carts outside air cargo terminals, but it does not show how many thefts have occurred as a result of this practice.

The 79 variables that were identified from the findings are presented in this chapter under three headings: theft and loss variables (22), theft variables (35), and loss variables (22). This particular arrangement of the variables was necessary, because there were some which applied only to thefts, others which applied only to losses, and still others which applied to both thefts and losses.

II. AIR CARGO THEFT AND LOSS VARIABLES

The following 22 variables pertain to both air cargo thefts and losses of airlines and air freight forwarders and are combined into one section.

1. Lack of stand-by electric power.
2. Lack of adequate personnel security.
3. Lack of investigation of small claims.
4. Lack of electronic protection equipment.
5. Lack of permanent investigative personnel.
6. Lack of employee security education programs.
7. Lack of adequate space for processing air cargo.
8. Lack of separate company-wide security division.
9. Lack of prompt pick-up of air cargo by consignee.

10. Lack of a periodic security survey to detect defects.

11. Lack of policy of investigating all thefts and losses.

12. Lack of enforcement of air cargo handling regulations.

13. Lack of adequate supervision by air cargo supervisors.

14. Lack of adequate size and scope of activities of security division.

15. Lack of written policies and procedures regarding air cargo security.

16. Lack of knowledge on management's part regarding the security function.

17. Lack of records kept on loading teams who work on aircraft that leave the airport.

18. Lack of knowledge on management's part regarding the number of thefts and losses in their company.

19. Lack of cooperation with law enforcement agencies and other security officers in investigating thefts and losses.

20. Lack of immediate notification of investigative personnel upon discovery of a theft or loss and upon learning of a plane crash.

21. Lack of procedures for having theft and loss reports made and for sending these reports to a central company location for analysis.

22. Lack of personnel assigned the exclusive task of periodically checking to see if air cargo policies and procedures were being carried out properly.

III. AIR CARGO THEFT VARIABLES

The 35 variables presented in this section pertain to air cargo thefts of airlines and air freight forwarders. Each variable presented is documented by evidence gathered during the study.

1. Approximately 90% of all stolen items were relatively small, not heavily packed, easily concealable, easily converted into cash, and able to be used personally by the thief or his friends.

2. Approximately 10% of all stolen items were large.

3. Approximately 60% of all thefts were perpetrated by air cargo handling employees.

4. Approximately 40% of all thefts were perpetrated by persons other than air cargo handling employees.
5. Air cargo documents were forged.
6. Stolen air cargo was usually insured.
7. Cargo and the vehicle carrying it were stolen.
8. There is almost no surveillance of air cargo areas.
9. Drivers picked up hitchhikers who stole their cargo.
10. Some air cargo buildings have poor exterior lighting.
11. Air cargo is put on unattended carts outside buildings.
12. Drivers boasted about valuable cargo they were carrying.
13. Collusion was present in many air cargo thefts.
14. There is a lack of visitor and vehicle control programs.
15. There was a lapse of time before the theft was discovered.
16. Management acted slowly or not at all, regarding small thefts.
17. The insurance company failed to inform the airline of the theft.
18. Special handling procedures for valuable cargo were not followed.
19. The thief replaced the empty cargo container to prolong detection.
20. Drivers parked vehicles in shadows, while eating in a roadside diner.
21. All thefts were not reported to the appropriate law enforcement agency.
22. The thief tried to disguise the theft by damaging the cargo container.
23. Valuables cages are left open, and janitorial supplies are stored in them.
24. Drivers left vehicles unlocked and keys in the ignition, while out of them.
25. Most thefts occurred between 2 p.m.-6 a.m., especially during rush periods.
26. Drivers drove from one shipper to another, with the back of the vehicle open.

27. A majority of thefts occurred, when the thief was alone or with a few people.

28. There is a lack of international law, regarding air cargo theft investigation.

29. Thieves took literally hours to perpetrate some thefts, but most were not disturbed.

30. There is a lack of protection of air cargo while planes are being cleaned or repaired.

31. The victim reported a theft only to the insurance company for the purpose of making a claim.

32. There is a lack of procedure requiring identification of the person picking up air cargo, especially valuables.

33. There was a 1-7 day time lapse between the time the thefts occurred and when they were reported to the companies.

34. The thief substituted various articles for the original copy, so the weight of the shipment would match the weight on the label.

35. The thief removed the label, took the contents, and put the label back in the same position on the container, to prolong detection.

IV. AIR CARGO LOSS VARIABLES

The 22 variables presented in this section pertain to losses of the airlines. Each variable presented is documented by evidence gathered during this study.

1. Sabotage.

2. Overcarried.

3. Careless handling.

4. Poor housekeeping.

5. Lack of a fire plan.

6. Inadequate packaging.

7. Lack of an animal care area.

8. Lack of a cold storage area.

9. Perishables delayed too long.
10. Left out in weather unprotected.
11. Accidentially loaded on wrong flight.
12. Air cargo removed short of destination.
13. Smoking permitted in the air cargo area.
14. Lack of a fire protection sprinkler system.
15. Misdirection due to error on air documents.
16. Lack of employees trained in fire fighting.
17. Inadequate portable fire fighting equipment.
18. Lack of adequate storage area for valuables.
19. Air cargo piled too high crushing bottom ones.
20. Loaded or unloaded in adverse weather unprotected.
21. Inadequate storage of potentially dangerous air cargo.
22. Failed to get special handling because carrier not properly notified.

V. CONCLUSIONS

More research is needed to control the problem of air cargo theft and loss. Studies of air cargo patterns for a company or a region of the world would yield profitable results. A more detailed study of case histories would also be rewarding. There is a need for an organization with a large number of air cargo theft cases, such as the FBI, to take advantage of their capabilities by conducting an intensive study of air cargo theft cases, to identify more air cargo theft variables, and to determine the extent that each variable affects air cargo thefts.

Air cargo management officials must realize that the archaic methods of air cargo protection, which were used in the past, are no longer

adequate today, because air cargo volume is rapidly increasing. More air cargo than ever before is being exposed to the criminal element. Only through continued research and a sensitivity to the problem, on air cargo management's part, can air cargo thefts and losses be adequately controlled.

BIBLIOGRAPHY

A. BOOKS

Bigham, Truman C., and Merrill J. Roberts. Transportation. New York: McGraw-Hill Book Company, Inc., 1952.

Black, Henry Campbell. Black's Law Dictionary. St. Paul: West Publishing Company, 1951.

Brink, Victor Z., and Bradford Cadmus. Internal Auditing in Industry. New York: The Institute of Internal Auditors, 1950.

Campbell, William Giles. Form and Style in Thesis Writing. Boston: Houghton Mifflin Company, 1954.

Curtis, S. J.. Modern Retail Security. Springfield: C. C. Thomas, Publishers, 1960.

Cushman, Frank M. Transportation for Management. New York: Prentice-Hall, Inc., 1953.

Davis, John R. Industrial Plant Protection. Springfield: C. C. Thomas, Publisher, 1957.

Fish, Donald. Airline Detective. London: William Collins Sons and Company, Ltd., 1962.

Gocke, B. W. Practical Plant Protection and Policing. Springfield: C. C. Thomas, Publisher, 1957.

Knight, Paul E., and Alan M. Richardson. The Scope and Limitation of Industrial Security. Springfield: C. C. Thomas, Publisher, 1964.

Rudintsky, Charles P., and Leslie M. Wolff. How to Stop Pilferage in Business and Industry. New York: Pilot Industries, Inc., 1961.

Selltiz, Claire and others. Research Methods in Social Relations. Revised one-volume edition; New York: Holt, Rinehart, and Winston, 1965.

Speas, R. Dixon. Technical Aspects of Air Transport Management. New York: McGraw-Hill Book Company, Inc., 1955.

Tullett, Tom. Inside Interpol. London: Frederick Muller, Ltd., 1963.

Weaver, Leon H. Industrial Personnel Security. Springfield: C. C. Thomas, Publisher, 1964.

B. BOOKS: PARTS OF SERIES

Brewer, Stanley H. Air Cargo--The Gold is in the Terminals. Management Series No. 5. Seattle: University of Washington, College of Business Administration, 1962.

C. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS

Air Transport Association of America. A Half Century of Progress in Scheduled Air Transportation. Washington: Air Transportation Association of America, 1963.

Committee on Cargo Loss Prevention. Cargo Loss Prevention Recommendations. New York: International Union of Marine Insurance, 1964.

International Criminal Police Commission. Report of the Session of the General Assembly. Berne: International Criminal Police Commission, 1949.

International Criminal Police Organization. Theft of Goods During Their Carriage by Air. Report of the 31st Session of the General Assembly. Paris: International Criminal Police Organization, 1962.

National Fire Protection Association. Spontaneous Ignition of Air Express Shipment. Boston: National Fire Protection Association, 1949.

Norair Systems Analysis Group. Air Freight Trends 1946-1970. Hawthorne: Northrop Corporation, 1960.

United States Office of the Federal Register. United States Government Organizational Manual. Washington: Government Printing Office, 1965-1966.

D. PERIODICALS

"Aerospace Technology: Stimulus to Progress," Aerospace, 2:10, Winter, 1964.

"Cover Story," Security World, 1:8, July, 1964.

Dorian, George. "Airport Security at Los Angeles International," Security World, 1:40-43, November, 1964.

Fraser, Gordon S. "Airline Security Officers Answer Insurance Challenge," Security Gazette, 6:87-88, 90, March, 1964.

_____. "Australian Airline Security," Security Gazette, 1:301-303, September, 1959.

_____. "Australian International Airline Security," Police, 8:30-32, September-October, 1963.

Gordon, R. C. J. "Problems of Air Cargo Security," Security Gazette, 6:47-48, February, 1964.

Harris, Harvey T., Jr. "Air Cargo Security," Industrial Security, 9:4-15, August, 1965.

International Year Book Encyclopedia of the Newspaper Industry. 45th Annual edition; New York: Editor and Publisher, 1965.

"Latest on the 'Superjet'--Why U. S. is Lagging," U. S. News and World Report, 59:108-109, November 1, 1965.

Official Airline Guide. World-wide edition, 21:A-5-A-10, May, 1965.

Slater, Ellis D. "The Effect of Air Freight on Company Policies." Michigan Business Review, 16:25-27, March, 1964.

"Specialist Guard on Airports," Security Gazette, 3:11-12, January, 1961.

E. UNPUBLISHED MATERIALS

Larkins, Hays C. "A Survey of Experiences, Activities and Views of the Industrial Security Administration Graduates of Michigan State University." Unpublished Master's thesis, Michigan State University, East Lansing, Michigan, 1966.

F. NEWSPAPERS

Detroit Free Press, October 1, 1965; January 28 and March 3, 1966.

London Daily Express, November 25, 1964; January 7, February 24, April 6, and May 12, 15, 1965.

The Flint Journal, March 3, 1966.

The Milwaukee Journal, March 2, 1966.

The New York Times, July 24, August 22, 24, September 9, 11, October 17, 22, 31, and November 2, 12, 1965.

The State (Lansing, Michigan) Journal, May 12, June 16, October 26, and November 2, 11, 28, 1965; March 3, and April 17, 1966.

The Wall Street Journal, May 12, June 15, and November 2, 5, 1965; February 18, 1966.

APPENDIX A

FORM LETTER MAILED TO NEWSPAPERS

Please address all correspondence to:

1229 Weber Drive
Lansing, Michigan 48912
August 16, 1965

Dear Sir:

I am a graduate student in the School of Police Administration at Michigan State University working towards a master of science degree. In connection with my master's thesis, "AIR CARGO THEFTS AND LOSSES: A DIMENSION OF AIRLINE SECURITY," there is some information that I need from your newspaper.

Can you tell me if your paper happens to have ever published anything on air cargo thefts or losses, such as accounts of thefts from air cargo warehouses, fires on board aircraft, crashes where cargo was lost, fires in air cargo warehouses, etc.? It is most important that I obtain some case histories of air cargo thefts and losses. Please send reprints or copies of the articles. Any accompanying photographs of air cargo would be greatly appreciated, such as a fire in an air cargo warehouse, or a picture showing items stolen, or a point of entry for an air cargo burglar.

For the purpose of my thesis, air cargo includes air mail, air express, and air freight, but it does not include passengers or passenger's baggage. The thesis covers the period from 1945 to 1965.

Thank you very much for any help you can give me.

Very truly yours,

Harvey T. Harris, Jr.
Graduate Student
Michigan State University

APPENDIX B

LIST OF 34 NEWSPAPERS TO WHOM FORM LETTERS WERE MAILED

The New York Times, 229 W. 49th Street, New York, New York.

The Wall Street Journal, 44 Broad Street, New York, New York.

The Miami Herald, 1 Herald Plaza, Miami, Florida.

The London Daily Express, London, England.

The Abendpost, Frankfurt, Germany.

The Sydney Daily Mirror, Sydney, Australia.

The Sun-News Pictorial, Melbourne, Australia.

The South China Morning Post, Hong Kong, China.

The Los Angeles Herald Examiner, 1111 S. Broadway St., Los Angeles, California.

The Chicago American, 445 N. Michigan Avenue, Chicago, Illinois.

The Detroit Free Press, 321 W. Lafayette Street, Detroit, Michigan.

The St. Louis Post Dispatch, 1133 Franklin Avenue, St. Louis, Missouri.

The Dallas Times Herald, Herald Square, Dallas, Texas.

The Stockholm Expressen, Stockholm, Sweden.

The Il Messaggero, Rome, Italy.

The France-Soir, Paris, France.

The Buenos Aires Herald, Buenos Aires, Argentina.

The A Noticia, Rio de Janeiro, Brazil.

The El Mercurio, Santiago, Chile.

The Excelsior, Mexico City, Mexico.

The Daily Gleaner, Kingston, Jamaica.

The El Mundo, San Juan, Puerto Rico.

The East African Standard, Nairobi, Africa.

The Al Bassir, Alexandria, Egypt.

The Al Akhbar, Cairo, Egypt.

The Aksam, Istanbul, Turkey.

The Amrita Bazar Patrika, Calcutta, India.

The Times of India, Bombay, India.

The Asahi Shimbum, Tokyo, Japan.

The China Post, Taipei, Taiwan, China.

The Bangkok Post, Bangkok, Thailand.

The Cach-Mang Quoch-Gia, Saigon, South Viet Nam.

The Honolulu Star Bulletin, P. O. Box 3080, Honolulu, Hawaii.

The National Observer, 1015 14th Street, N. W., Washington, D. C. 20005.

APPENDIX C

LIST OF 89 LETTERS SENT TO WRITER REGARDING AIR CARGO SECURITY

Secretary General, Legal Affairs Department, Air France, Paris, France, September 20, 1965.

Louis P. Haffer, Executive Vice President and Counsel, Air Freight Forwarders Association, Washington, D. C., August 5, 1965.

Jacques Mbandja, Manager, External Relations, Air Guinee, Conakry, Republic of Guinea, Africa, September 10, 1965.

William T. Raymond, Corporate Secretary, Airlift International, Inc., Miami, Florida, February 3, 1965.

Marianna Moore, Secretary, Air Line Pilot's Association, Washington, D. C., February 23, 1965.

D. H. Thompson, Traffic Controller, Air New Zealand, Ltd., Auckland, New Zealand, September 1, 1965.

James F. McCarthy, Information Services, Air Transport Association of America, Washington, D. C., August 20, 1965.

Director of Commerical Service, Alitalia, Rome, Italy, February 15, 1965.

H. G. Foster, Vice President, Audits and Security, American Airlines, New York, New York, April 1, 1966.

William D. Wright, Jr., Executive Director, American Society for Industrial Security, and Editor, Industrial Security, Washington, D. C., June 7, 1965.

C. F. Hooper, Marketing Manager, Fire Protection Products Division, The Ansul Co., Marinette, Wisconsin, August 26, 1965.

Dr. W. Norden, Public Relations, Austrian Airlines, Vienna, Austria, March 17, 1965.

L. M. Hayes, Assistant Director, Public Relations, Bell Helicopter Co., Fort Worth, Texas, February 8, 1965.

Berlin Police Department, Berlin, Germany, August 24, 1965.

J. F. O'Regan, General Sales Manager, Rockwood Division, E. W. Bliss Co., Worcester, Massachusetts, August 30, 1965.

Larry Curns, Tariffs and Claims Analyst, Bonanza Air Lines, Las Vegas, Nevada, February 2, 1965.

Gordon Kent, Director, Press Relations, Bonanza Air Lines, Las Vegas, Nevada, November 18, 1965.

Chief of Security, British Overseas Airways Corporation, London Airport, England, February 4, 1965.

T. C. George, Director and Chief Inspector, Bureau of Explosives, Association of American Railroads, New York, New York, December 28, 1965.

J. E. Belanger, Chief, Department of Investigation, Canadian Pacific Railway, Montreal, Canada, April 4, 1966.

Laura Carson, Investigator, Service Complaint Section, Bureau of Enforcement, Civil Aeronautics Board, Washington, D. C., August 25, 1965.

W. R. Williamson, Chief, Trunkline Section, Routes and Agreements Division, Civil Aeronautics Board, Washington, D. C., August, 1965 (approximately).

Reference Room, Chicago American, Chicago, Illinois, August, 1965 (approximately).

D. E. Lohmeyer, Manager, Security and Investigations, Continental Airlines, Los Angeles International Airport, California, February 12, 1965.

R. A. Pugh, Readers' Letters Department, Daily Express, London, England, August 25, 1965.

T. E. Sealy, Editor, The Daily Gleaner, Kingston, Jamaica, August 30, 1965.

Morgan Oates, Librarian, The Detroit Free Press, Detroit, Michigan, September 3, 1965.

Dr. Gert Behrsing, Public Relations, Deutsch Luthansa, Hamburg, Germany, February 19, 1965.

Security Department, Deutsche Lufthansa, Hamburg, Germany, March 18, 1965.

Niels Reuter, Editor, Die Polizei (German law enforcement magazine for entire Federal Republic of Germany), Berlin, Germany, August 28, 1965.

E. F. Lucas, Field Support Manager, Aircraft Division, Douglas Aircraft Co., Inc., Long Beach, California, January 6, 1966.

King Forde, Sales Manager, Eastern Provincial Airways, Ltd., Gander, Newfoundland, Canada, February 5, 1965.

H. A. Zorbach, Manager Stations-International, Ethiopian Air Lines, Inc., Addis Ababa, Ethiopia, February 3, 1965.

Walter G. Corcoran, Vice President, Secretary and Treasurer, Emery Air Freight Corporation, Wilton, Connecticut, February 18, 1965.

R. C. Anderberg, Factory Insurance Association, Grand Rapids, Michigan, August 16, 1965.

Leo Turgeon, Assistant District Manager, Factory Mutual Engineering Division, Southfield, Michigan, August 19, 1965.

Fritz L. Puls, Associate General Counsel, Federal Aviation Agency, Washington, D. C., October 12, 1965.

Robert L. Dunne, Public Relations, General Dynamics Corp., New York, New York, February 3, 1965.

Library, Herald Examiner, Los Angeles, California, September 1, 1965.

N. F. Carrington, Home Office, London, England, January 19, 1966.

The Honorable Charles E. Chamberlain, D-Michigan, House of Representatives, United States Congress, Washington, D. C., August 12, 1965.

D. D. Gordon-Carmichael, Chief Investigator, Air Canada, Honorary Secretary, International Airline Security Officers' Association, Montreal, Canada, August 26, 1965.

Don B. Pengelly, Information Officer, International Air Transport Association, Montreal, Canada, February 3, 18, 1965, June 30, 1965.

R. Dean Smith, Director, Research and Development, International Association of Chiefs of Police, Inc., Washington, D. C., April 13, 1966.

E. G. K. Adjorlolo, Public Information Officer, International Civil Aviation Organization, Montreal, Canada, February 5 and September 2, 1965.

J. Nepote, Secretary General, International Criminal Police Organization, Paris, France, September 22, 1965.

Director General, Iraqi Airways, Baghdad, Iraqi, September 14, 1965.

The Honorable John Edgar Hoover, Director, Federal Bureau of Investigation, United States Department of Justice, Washington, D. C., June 30, 1965.

Fred M. Vinson, Jr., Assistant Attorney General, Criminal Division, United States Department of Justice, Washington, D. C., October 5, 1965.

A. Taylor, Public Relations Department, Kaman Aircraft Corp., Bloomfield, Connecticut, February, 1965 (approximately).

Pat Mackenzie, Walter Kidde, and Co., Inc., Oak Park, Michigan, August 26, 1965.

Salah Rustum, Assistant Ground Services Manager, Kuwait Airways, Fahad As-Salem Str, Kuwait, Arabian Gulf, February 13, 1965.

Fernand Nakhle, Commercial Director, Lebanese International Airways, Beirut, Lebanon, November 9, 1965.

Catherine S. Corry, Analyst in Astronautics and Transportation, Economics Division, Legislative Reference Service, The Library of Congress, Washington, D. C., August 30, 1965.

Robert H. Land, Chief, Reference Department, General Reference and Bibliography Division, The Library of Congress, Washington, D. C., December 27, 1965.

Neil Harrison, Manager, Customer Service Division, Lockheed-California Co., Burbank, California, February 23, 1965.

T. E. Mason, Manager, Customer Service Division, Lockheed-California Co., Burbank, California, January 5, 1966.

S. T. Kelsey, Jr., Manager, Transportation Relations, Martin Marietta Corp., New York, New York, February 1, 1965.

Peter J. Sant, Vice President, William H. McGee and Co., Inc., marine underwriters, New York, New York, February 19, 1965.

Armine Dikijian, Librarian, Information Center on Crime and Delinquency Library, National Council on Crime and Delinquency, New York, New York, May 3, 1965.

George H. Tyron, Technical Secretary, National Fire Protection Association, Boston, Massachusetts, September 7, 1965.

J. L. Smith, Sales Department, National Foam System, Inc., West Chester, Pennsylvania, August 24, 1965.

Don Carter, Managing Editor, The National Observer, Silver Springs Maryland, August 23, 1965.

Kathy Threlkeld, Production Department, Official Airline Guide, Chicago, Illinois, January 26, 1965.

F. A. Cardman, Manager, Insurance and Claims, Pan American World Airways, Jamaica, New York, September 2, 1965.

Richard C. MacNamara, Division Security Officer, Pan American World Airways, Rome, Italy, February 26, 1965.

R. L. Guerriero, Supervisor of Billing and Traffic, Piper Aircraft Corp., Lock Haven, Pennsylvania, February 6, 1965.

John Legan, Assistant Chief, Aviation Economics Division, Aviation Department, The Port of New York Authority, New York, New York, February 19 and August 17, 1965.

H. B. Montague, Chief Postal Inspector, United States Post Office Department, Washington, D. C., August 13, 1965.

Office of the Managing Director, Post Publishing Co., Ltd., Bangkok, Thailand, September 9, 1965.

Gordon S. Fraser, Superintendent of Security, Quantas, Sydney, Australia, August 13, 1965.

Leslie Scott, Editor, Security Gazette (British industrial security magazine), London, England, August 12, 1965.

Mary Margaret Hughes, Editor, Security World, Los Angeles, California, February 23, 1965.

A. P. Sturrock, Editor, South China Morning Post, Ltd., Hong Kong, China, August 24, 1965.

Janice Kubasek, Editor's Secretary, The Sun, Melbourne, Australia, August 31, 1965.

W. Imhof, Section Cargo Traffic, Swissair, Zurich, Switzerland, September 24, 1965.

F. G. Hill, District Manager, Tasman Empire Airways, Ltd., Auckland, New Zealand, February 17, 1965.

Robert S. Eisenhower, Vice President, Textron, Providence, Rhode Island, February 2, 1965.

Arun Gandhi, Information Officer, The Times of India, Bombay, India, October 20, 1965.

B. P. Wilks, Superintendent, Sales and Traffic, Mainline Division, Trans Air, Ltd., Winnipeg International Airport, Canada, February 16, 1965.

William H. Sevager, Acting Director of Security, Trans World Airlines, Inc., Kansas City, Missouri, February 19, 1965.

L. J. Vandegrift, Director, Cargo Service, Trans World Airlines, Inc., New York, New York, February 10, 1965.

L. P. Johnson, Assistant Deputy Commissioner, Entry and Value, Bureau of Customs, United States Treasury Department, Washington, D. C., August 25, 1965.

E. B. Musil, Chief of Cargo Service, O'Hare Field Station, United Air Lines, Chicago, Illinois, September 21, 1965.

Philip Wisner, Inquiry Department, The Wall Street Journal, New York, New York, August 20, 1965.

George J. Malloy, Manager, Cargo Services-Procedures, Western Air Lines, Inc., Los Angeles, California, February 4, 1965.

APPENDIX D

LIST OF 35 PERSONS INTERVIEWED BY THE WRITER REGARDING AIR CARGO SECURITY

Personal Interviews

Edward W. Bawden, Agency Department, Aetna Casualty and Surety Company, Grand Rapids, Michigan, October 12, 1965.

John Cooper, Air Freight Supervisor, American Airlines, Detroit Metropolitan Airport, Detroit, Michigan, August 17, 1965.

William G. Patricks, Supervisor, Cargo Services, American Airlines, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

Ray Vorce, Air Freight Sales Agent, American Airlines, Detroit Metropolitan Airport, Detroit, Michigan, August 17, 1965.

Harry Rakowski, Cargo Supervisor, British Overseas Airways Corporation, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

Bruce Angell, Chief of Police, DeWitt Township, Michigan, April 23, 1966.

Lester E. Grice, Supervisor of Security, The Dow Chemical Co., Midland, Michigan, and Chairman, Detroit Chapter, American Society for Industrial Security, January 20, 1966.

Manager, Eastern Air Lines, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

FBI agents: Richmond, Virginia, March, 1965; Lansing and Detroit, Michigan, May, 1965. (Total of four interviewed).

James Danek, Sales Manager, Flying Tiger Lines, Inc., O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

William Pavlek, Locksmith, Plant Protection Department, Oldsmobile Division, General Motors Corp., Lansing, Michigan, July 6, 1965.

Homer E. Purchis, Director of Plant Security, General Motors Corp., Oldsmobile Division, Lansing, Michigan, January 20, 1966.

James Retzloff, Fire Marshall, Plant Protection Department, Oldsmobile Division, General Motors Corp., Lansing, Michigan, July 6, 1965.

Alex Jedynak, Chief of Airport Police, Wayne County Road Commission, Detroit Metropolitan Airport, Detroit, Michigan, August 17, 1965.

Fredrick E. Davids, Director, Michigan State Police, East Lansing, Michigan, February 21, 1966.

Dave Bergemann, Ground Operations Officer, North Central Airlines, Capital City Airport, Lansing, Michigan, August 18, 1965.

Fruad Jubran, Cargo Manager, Pan American World Airways, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

W. B. Foote, Director, Prevention and Security Services Division, REA Express, New York, New York, January 26, 1966.

B. B. Hayes, Manager, Security Services, REA Express, Chicago, Illinois, January 26, 1966.

Frank Westalow, Assistant Chief Clerk, Air Express Division, REA Express, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

Charles A. Sanford, Vice President and Manager of Security Services, Sanford Security Services, Inc., Ann Arbor, Michigan, August 17, 1965.

Harry A. Witte, Midwest Cargo Sales Manager, Scandinavian Airlines System, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

Philip Hitchcock, Station Agent, United Air Lines, Capital City Airport, Lansing, Michigan, August 18, 1965.

Joe Huemmer, Claims Investigator, United Air Lines, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

George Kraynak, Manager, Customer Service, United Air Lines, Capital City Airport, Lansing, Michigan, July 9, 1965.

Don Moller, Air Freight Agent, United Air Lines, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

H. E. Wright, District Sales Manager, United Air Lines, Lansing, Michigan, September 7, 1965.

G. H. Cummins, Supervisor, United States Post Office, O'Hare Airport Station, Chicago, Illinois, September 24, 1965.

Telephonic Interviews

Frank Sicklesmith, Manager, Capital City Airport, Lansing, Michigan November 12, 1965.

Larry Lyman, Federal Aviation Agency, Area Coordinator and Chief of the Control Tower, Capital City Airport. Lansing, Michigan, Nov. 12, 1965.

Judi Ward, Secretary, Merrill Lynch, Pierce, Fenner and Smith, Inc., Lansing, Michigan, January 6, 1966.

Larry Fenton, Collections Department, Michigan National Bank, Lansing, Michigan, November 12, 1965.

APPENDIX E

FIELD OBSERVATION DATA FORM

GENERAL

Date: Place Observed:

Name of Interviewee: Title:

Who Has The Security:

No. Ft. of Floor Space: Cargo Piled How High: Height From Floor to Ceiling:

Strong Room?: Animal Facilities?: Refrigerated Room?: Heated Room?:

Cargo Area Separate?:

PHYSICAL SECURITY

Security guards?: No. on each Shift?: Deputized?:

Duties of Guards?: Gate Check: Dock Check: Night Patrol:

Fence Around Cargo Area?: Height of Fence?: Type of Fence?:

Lighting Outside Cargo Area?: Type :

Electronic Protection Devices

Fire: Brand Name: Type:

Burglary: Brand Name: Type:

Hold up: Brand Name: Type:

Lock and Key System: Brand Name:

SPECIAL FEATURES

APPENDIX F

LIST OF 16 AIRLINES AND 2 AIR FREIGHT FORWARDERS CONTACTED DURING VISITS TO AIRPORT CARGO AREAS

Airlines

Air Canada

Air France

Alitalia

American Airlines

Braniff International Airways

British Overseas Airways Corporation

Continental Airlines, Inc.

Deutsche Luthansa

Eastern Air Lines

Lake Central Airlines

Swiss Air Transport Co., Ltd.

Northwest Airlines, Inc.

Ozark Air Lines, Inc.

Pan American World Airways

Swiss Air Transport Co., Ltd.

United Air Lines

Air Freight Forwarders

Emery Air Freight Corporation

REA Express

AIRLINE LETTER

1229 Weber Drive
Lansing, Michigan 48912
August 16, 1965

Dear Sir:

I am a graduate student in the School of Police Administration and Public Safety at Michigan State University working towards a master of science degree. In connection with my master's thesis, "AIR CARGO THEFTS AND LOSSES: A DIMENSION OF AIRLINE SECURITY," I am asking for information on air cargo thefts and losses. The enclosed questionnaire is being mailed to the Chief Executive Officer of every cargo carrying airline in the world that is a member of the International Air Transport Association. I did not address this letter to the Security Officer, because some airlines do not have a separate Security Officer, and because of the extreme importance of this unique study. For the purpose of my thesis, air cargo includes air mail, air express, and air freight, but it does not include passengers or passenger's baggage. The thesis covers the period from 1945 to 1965.

The main purpose of this research study is to bring together some of the most vital information on air cargo thefts and losses, so that it can be analyzed and presented in such a way that it helps control future air cargo thefts and losses. No study of its kind has ever been done before by any person or organization in the world. If I can obtain your cooperation in filling out the questionnaire and returning it in the enclosed envelope and persuade the other airlines to do likewise, the results of my study will be of value to the airlines and other interested agencies, such as air freight forwarders, law enforcement agencies, etc.

Through this study, I am trying to create an interest in the area of air cargo security, so that thefts and losses can be controlled in the future as air cargo increases in volume and value. Personally, the return of the questionnaire is important to me, because without it, I have no evidence for my thesis. If you so indicate in the first question, I will not mention the name of your company in my thesis.

I must start writing my thesis on September 10, 1965; please return the questionnaire as soon as possible. I will accept the questionnaire anytime before or after September 10, 1965, since I will continue to study air cargo thefts and losses after I finish writing my thesis.

Thank you very much for participating in this study and for helping me obtain my M. S. degree.

Very truly yours,

Harvey T. Harris, Jr.
Graduate Student
MSU-School of Police Administration and Public Safety

AIRLINE QUESTIONNAIRE

DATE_____

NAME (of person filling out questionnaire)_____

TITLE (of person filling out questionnaire)_____

COMPANY_____

PLEASE READ ENTIRE QUESTIONNAIRE BEFORE ANSWERING QUESTIONS.

GENERAL

1. In connection with this study: (circle one)

do not mention the airline's name	mention the airline's name, if necessary

2. What percentage of your total business is air mail, air express, and air freight when all are combined together?_____

3. Circle the areas that are increasing in volume of business in your company. Give percent of increase from last year.

air mail_____%	air express_____%	air freight_____%

4. Does your company have a separate Security Division? (circle one)

Yes No

5. If your company does have a separate Security Division, how many employees does it have, not counting clerks, stenographers, secretaries, and typists?_____

6. Does your company have written policies and procedures regarding air cargo security? (circle one) yes no

7. How many persons are assigned the task of checking periodically to see if air cargo policies and procedures are being carried out properly?_____

NUMBER AND VALUE OF THEFTS (fill in the number and value of thefts for each year.)

1945 number____ value ____	1946 number____ value ____	1947 number____ value ____	1948 number____ value ____
1949 number____ value ____	1950 number____ value ____	1951 number____ value ____	1952 number____ value ____
1953 number____ value ____	1954 number____ value ____	1955 number____ value ____	1956 number____ value ____
1957 number____ value ____	1958 number____ value ____	1959 number____ value ____	1960 number____ value ____
1961 number____ value ____	1962 number____ value ____	1963 number____ value ____	1964 number____ value ____
1965 number____ value ____		TOTAL number_____ value _____	

ITEMS TAKEN (circle the items that have been taken.)

watches pearl jewelry gold coins uncut diamonds gold bars platinum bars pearls radios

currency industrial diamonds banknotes cameras small jewelry electronics parts

books air mail automotive parts newspapers typewriters fresh fruits livestock

small office supplies chemicals radioactive isotobes drugs steam generators automobile engines

data processing equipment hand tools photographic film automobiles rare coins lighting fixtures

optical products heavy farm equipment clothes foam rubber tape recorders

(fill in if other.) _____ _____ _____

TIME OF THEFTS (circle when theft took place.)

while loading while unloading while in flight while in storage awaiting transit while aircraft being repaired

while aircraft being cleaned while in storage after transit

10 PM to 6 AM | 6 AM to 2 PM | 2 PM to 10 PM | (fill in if other.) _____ _____ _____

(Put time when thefts most frequently occur.) 1st_____, 2nd_____, 3rd_____.

LOCATION OF THEFTS (circle where the thefts occurred.)

departure airport | destination airport | airport along the route | (fill in if other.) _____ _____

(Put where thefts most frequently occur.) 1st____, 2nd____, 3rd_____

PERSONS WHO COMMIT THEFTS (circle persons who commit thefts.)

pilot | co-pilot | stewardess | male flight officer (engineer) | steward | loading crew | cleaning crew

repair crew | freight office staff | night guards | person not connected with airline, airport, or air freight forwarder | airport janitor

(fill in if other.) _____ _____ _____

(Put persons who most frequently commit thefts.) 1st____, 2nd____, 3rd____.

CIRCUMSTANCES ACCOMPANYING LOSSES (circle the circumstance that has accompanied an air cargo loss.)

fire | water damage | left out in weather unprotected | loaded in bad weather unprotected | unloaded in bad weather unprotected

items piled too high crushing bottom ones | inadequate packaging | sabotage | accidental explosion | perishables delayed too long

misdirection due to error on air documents | failed to get special handling due to lack of personnel | failed to get special handling because airline not notified properly

inadequate facilities for perishables | erroneous labeling | accidently loaded on wrong flight | overcarried

cargo removed short of destination | delayed by need to fill out numerous documents | delayed by customs authorities

vaccine required for live animals | stored in damp area | airplane crashed | (fill in if other.) _____ _____ _____ _____

(Put circumstance that has accompanied a loss most frequently.)

1st_____,2nd_____,3rd_____

INVESTIGATION OF THEFTS AND LOSSES

1. Does your company make its own investigation of: (circle appropriate ones.)

all thefts | all losses | only thefts ordered investigated by management | only losses ordered investigated by management

(fill in if other.) _____ _____ _____

2. Who conducts your company's air cargo theft and loss investigations? (circle appropriate ones.)

security personnel | cargo personnel | none conducted by airline personnel | outside law enforcement agency

(fill in if other.) _____ _____ _____

3. If you conduct your own investigations of air cargo thefts and losses, do you work: (circle appropriate ones.)

alone | with appropriate police officials | with other airline security men when necessary

(fill in if other.) _____ _____ _____

4. Which type of thefts and losses are reported to appropriate police agencies? (circle appropriate ones.)

all thefts | no thefts | thefts under $100 | thefts between $100-400 | thefts over $400

thefts where it is known thief has stolen items in his possession | thefts where it is not known if thief has stolen items in his possession

all losses | no losses | losses under $100 | losses between $100-400 | losses over $400

(fill in if other.) _____ _____ _____

5. Are all theft and loss reports sent to a central location in your company for analysis? (circle one) yes no

6. Are your company investigative personnel notified immediately upon discovery of a theft or loss? (circle appropriate one)

yes | no | majority of the time | only if very valuable cargo involved

7. What is the time lapse that occurred between the time the thefts took place and the time they were reported to your company's investigative personnel? (circle appropriate ones.)

1-7 days | 7-10 days | 10-15 days | more than 15 days

(Put time lapse that most frequently occurs.) 1st_____, 2nd_____ 3rd_____

8. Does your company ever receive air cargo that no one claims? (circle one) yes no

9. Regarding the cargo that no one ever claims, does your company?

store it until it is claimed | try to find the owner | sell it after storing it a reasonable length of time | send it back to shipper

10. Are records kept on the loading teams who work on the aircraft that leaves the airport? (circle one) yes no

11. Are investigations hindered by the fact the theft report never reaches the investigative personnel because: (circle the appropriate ones.)

the airline settles small claims quickly to foster good public relations | the victim reports the theft only to the insurance company when he makes a claim | the insurance company fails to inform the airline of the theft

(fill in if other.) _____ _____ _____

12. Are security personnel or cargo personnel routinely informed of each aircraft crash as soon as it is learned? (circle one) yes no

13. Do law enforcement agencies advise your company of the outcome of cases that you jointly work on? (circle the appropriate ones.)

always | never | sometimes, if future airline help is needed by police

CASE HISTORIES (Please relate any interesting case histories you are familiar with, either by working on them or obtaining them from actual cases in your files, in four or five sentences. The more details the better.)

CASE HISTORY #1

CASE HISTORY #2

CASE HISTORY #3

APPENDIX H

AIR FREIGHT FORWARDER LETTER

1229 Weber Drive
Lansing, Michigan
August 16, 1965

Dear Sir:

I am a graduate student in the School of Police Administration and Public Safety at Michigan State University working towards a master of science degree. In connection with my master's thesis, "AIR CARGO THEFTS AND LOSSES: A DIMENSION OF AIRLINE SECURITY," I am asking for information on air cargo thefts and losses. The enclosed questionnaire is being mailed to the Chief Executive Officer of every air freight forwarder in the Air Freight Forwarders Association. I did not address the letter to the Security Officer, because some air freight forwarders do not have a separate Security Department, and because of the extreme importance of this study.

For the purpose of my thesis, air cargo includes air mail, air express, and air freight, but it does not include passengers or passenger's baggage. The thesis covers the period from 1945 to 1965.

The main purpose of this research study is to bring together some of the most vital information on air cargo thefts and losses, so that it can be analyzed and presented in such a way that it helps control future air cargo thefts and losses. No study of its kind has ever been done before by any person or organization in the world. If I can obtain your cooperation in filling out the questionnaire and returning it in the enclosed envelope and persuade the other air freight forwarders to do likewise, the results of my study will be of value to the air freight forwarders and other interested agencies such as the airlines, law enforcement agencies, etc.

Through this study, I am trying to create an interest in the area of air cargo security, so that thefts and losses can be controlled in the future as air cargo increases in volume and value. Personally, the return of the questionnaire is important to me, because without it, I have no evidence for my thesis. If you so indicate in the first question, I will not mention the name of your company in my thesis.

I must start writing my thesis on September 10, 1965; please return the questionnaire as soon as possible. I will accept the questionnaire anytime before or after September 10, 1965, since I will continue to study air cargo thefts and losses after I finish my thesis.

Thank you very much for participating in this study and for helping me obtain my M. S. degree.

Very truly yours,

Harvey T. Harris, Jr.

AIR FREIGHT FORWARDER QUESTIONNAIRE

DATE_____

NAME (of person filling out questionnaire)_____

TITLE (of person filling out questionnaire)_____

COMPANY_____

PLEASE READ ENTIRE QUESTIONNAIRE BEFORE ANSWERING QUESTIONS.

GENERAL

1. In connection with this study: (circle one)

   do not mention the company's name — mention the company's name, if necessary

2. Does your company have a separate Security Division? (circle one)

   yes no

3. If your company has a separate Security Division, how many employees does it have, not including clerks, stenographers, typists, and secretaries?_____

4. Does your company have written policies and procedures regarding air cargo security?(circle one) yes no

5. How many persons are assigned the task of checking periodically to see if air cargo policies and procedures are being carried out properly?_____

NUMBER AND VALUE OF THEFTS (fill in the number and value of thefts for each year)

1945 number____ value ____	1946 number____ value ____	1947 number____ value ____	1948 number____ value ____
1949 number____ value ____	1950 number____ value ____	1951 number____ value ____	1952 number____ value ____
1953 number____ value ____	1954 number____ value ____	1955 number____ value ____	1956 number____ value ____
1957 number____ value ____	1958 number____ value ____	1959 number____ value ____	1960 number____ value ____

NUMBER AND VALUE OF THEFTS (CONT'D)

1961 number____ 1962 number____ 1963 number____ 1964 number____
value ____ value ____ value ____ value ____

1965 number____ TOTAL number_____
value ____ value _____

ITEMS TAKEN (circle the items that have been taken)

watches pearl jewelry gold coins uncut diamonds gold bars platinum bars pearls radios

currency industrial diamonds banknotes cameras small jewelry electronics parts books

air mail automotive parts newspapers typewriters fresh fruits livestock small office supplies

chemicals radioactive isotobes drugs steam generators automobile engines data processing equipment

hand tools photographic film automobiles rare coins lighting fixtures optical products heavy farm equipment

clothes foam rubber tape recorders (fill in if other) _____
_____

TIME OF THEFTS (circle when thefts took place)

while driver was eating a meal

while driver was picking up another shipment on the way to the airport

while driver was delivering another shipment coming from airport

10 PM to 6 AM 6 AM to 2 PM 2 PM to 10 PM (fill in if other)_____
_____

(Put time when thefts most frequently occur.) 1st_____,2nd_____,3rd_____

LOCATION OF THEFTS (circle where thefts occurred)

when vehicle was parked in an alley

when vehicle was parked on the street

when vehicle was parked in a parking lot

when vehicle was parked on the highway

when vehicle was parked in a private driveway of a home

when vehicle was parked at the airport loading dock

LOCATION OF THEFTS (CONT'D)

When vehicle was parked at the shipper's loading dock (fill in if other) _____

(Put where thefts most frequently occur.) 1st_____,2nd_____,3rd_____

PERSONS WHO COMMIT THEFTS (circle persons who commit thefts)

truck driver | one of shipper's employees | outside person not connected with shipper, airport or air freight forwarder | airport loading dock personnel

(fill in if other)_____ _____ _____

(Put persons who most frequently commit thefts.) 1st_____,2nd_____,3rd_____

CIRCUMSTANCES ACCOMPANYING THEFTS AND LOSSES (circle the circumstance that has accompanied a theft or loss of air cargo.)

driver left vehicle unlocked | driver parked vehicle in a dark spot while eating | driver was in auto accident

driver parked vehicle so he could not see it at all times while eating | entire vehicle was stolen | driver drove from one shipper to another with the back of the vehicle open | vehicle caught fire

driver left prescribed route during working hours | driver was in collusion with an outsider | driver falsified documents and took cargo himself

sabotage to vehicle | driver picked up hitchhiker who took cargo | (fill in if other)_____

(Put circumstance that has accompanied a theft or loss most frequently)

1st_____2nd_____3rd_____

INVESTIGATION OF THEFTS AND LOSSES

1. Does your company make its own investigation of: (circle appropriate ones.)

all thefts | all losses | only thefts ordered investigated by management | only losses ordered investigated by management

INVESTIGATION OF THEFTS AND LOSSES (CONT'D)

2. Who conducts your company's air cargo theft and loss investigations? (circle appropriate ones)

security personnel	cargo personnel	none conducted by the company	outside law enforcement agency

(fill in if other.) _____ _____ _____

3. If you conduct your own air cargo theft and loss investigations, do you work:

alone	with appropriate police officials	with other air freight forwarder security personnel

(fill in if other.)_____ _____ _____

4. Which type of thefts and losses are reported to the appropriate police agencies?

all thefts	no thefts	thefts under $100	thefts between $100-400	thefts over $400

Thefts where it is known thief has stolen items in his possession

Thefts where it is not known if thief has stolen items in his possession

all losses	no losses	losses under $100	losses between $100-400	losses over $400

5. Are all theft and loss reports sent to a central location in your company for analysis? (circle one) yes no

6. Are your company investigative personnel notified immediately upon discovery of a theft or loss?

yes	no	majority of the time	only if very valuable cargo involved

7. What is the time lapse that occurred between the time the thefts took place and the time they were reported to your company's investigative personnel? (circle appropriate ones.)

1-7 days	7-10 days	10-15 days	more than 15 days

(Put time lapse that most frequently occurs.) 1st_____,2nd_____,3rd_____

INVESTIGATION OF THEFTS AND LOSSES (CONT'D)

8. Does your company ever receive air cargo that no one claims? (circle one) yes no

9. Regarding the cargo that no one ever claims, does your company?

store it until it is claimed	try to find the owner	sell it after storing it a reasonable length of time	send it back to shipper

10. Do law enforcement agencies advise your company of the outcome of cases that you jointly work on? (circle appropriate ones)

always never sometimes, if future company help is needed by police

11. Does your company conduct spot checks by following a driver on his route to see if he follows established procedures? (circle one)
yes no

CASE HISTORIES (Please relate any interesting case histories you are familiar with, either by working on them or obtaining them from actual cases in your files, in four or five sentences. The more details the better.)

CASE HISTORY #1

CASE HISTORY #2

CASE HISTORY #3