

Master Oficial:
Criminología y Sociología Jurídico Penal

Facultad de Derecho
Universidad de Barcelona

IV Bloque
Actividades metodológicas y de investigación

Effective Deterrence of White-collar Crime under
the New “Sanctions Act,” and
Reform of Criminal Justice System in Japan
(Final version in English)

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Abbreviation

AAIASB	Air Accident Investigation and Aviation Safety Board
AAIIB	Air Accident and Incident Investigation Board
ABWR	Advanced Boiling Water Reactor
ACC	AIDS Clinical Center
ADIF	Railway infrastructure management mechanism in Spain
AEC	Commission of Atomic Energy
AIDS	Acquired Immune Deficiency Syndrome
ANSV	Agenzia Nazionale per la Sicurezza del Volo (in Italy)
AOC	Air Operator's Certificate
APWR	Mitsubishi Advanced Pressurized Water Reactor
AQP	Advanced Qualification Program
ARAI	Aircraft and Railway Accidents Investigation Commission
ASFA	Anuncio de Senales y Frenado Automatico
ATC	Automatic Train Control
ATC	Air Traffic Control
AVE	Alta Velocidad Española, i.e. service of high-speed rail in Spain
BEA	Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation Civile
BOAC	British Overseas Airways Corporation
BSE	Bovine Spongiform Encephalopathy
BWR	Boiling Water Reactor
CAA	Civil Aviation Authority
CCAA	Cameroon Civil Aviation Authority
CDC	Centers for Disease Control and Prevention
CENIPA	Aeronautical Accidents Investigation and Prevention Center
CEO	Chief Executive Officer
CFIT	Controlled Flight into Terrain
CIAIAC	Civil Aviation Accident and Incident Investigation Commission
CJD	Creutzfeldt-Jakob disease
COSO	Committee of Sponsoring Organization
CRM	Crew Resource Management
CVR	Cockpit Voice Recorder
CWT	Center Wing fuel Tank
ECAA	Egyptian Civil Aviation Authority
EGPWS	Enhanced Ground Proximity Warning System
EPIC	Un établissement public à caractère industriel et commercial
FPTP	Flight Personnel Training Program
ETCS	European Train Control System
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FBW	Fly-by-wire
FDA	Food and Drug Administration
FDR	Flight Data Recorder
FEPC	Federation of Electric Power Companies
FSC	Food Safety Commission
FTC	Japan Fair Trade Commission
GCR	Gas Cooled Reactor
GPS	Global Positioning System
GPWS	Ground Proximity Warning System
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IAEA	International Atomic Energy Agency
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICJ	International Court of Justice
ILFC	International Lease Finance Corporation

INES	International Nuclear Event Scale
IRS	Inertial Reference Systems
JAL	Japan Airlines Co., Ltd.
JAS	Japanese Agricultural Standard
JAS Act	Act on Standardization and Proper Quality Labeling of Agricultural and Forestry Products
JIAAC	Junta Investigadora de Accidentes de Aviación Civil
JNR	Japan National Railways
JPDR	Japan Power Demonstration Reactor
JR West	West Japan Railway Company
KAIB	Korea Aviation Accident Investigation Board
KEPCO	Kansai Electric Power Company
LCC	Low cost carrier
LDP	Liberal Democratic Party
LOFT	Line Oriented Flight Training
LWR	Light-Water Reactor
LYCAA	Libyan Civil Aviation Authority
MAFF	Ministry of Agriculture, Forestry and Fisheries
METI	Ministry of Economy, Trade and Industry
MHLW	Ministry of Health, Labor and Welfare
MHW	Ministry of Health and Welfare, former ministry of MHLW
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
MMC	Mitsubishi Motors Corporation
MTI	Morton Thiokol, Inc.
NAA	National Aviation Authority
NAIIC	Nuclear Accident Independent Investigation Commission
NASA	National Aeronautics and Space Administration
NHK	Japan Broadcasting Corporation
NISA	Nuclear and Industrial Safety Agency
NSC	National Security Council
NSC	Nuclear Safety Commission
NTSB	National Transportation Safety Board
NTSC	National Transportation Safety Committee
NYC	New York City
OMB	Office of Management and Budget
OTC	Over the Counter
PTSD	Posttraumatic stress disorder
PWR	Pressurized Water Reactor
RECAT	Recategorization
REFF	Réseau Ferré de France
RICO Act	Racketeer Influenced and Corrupt Organization Act
RTV Act	Road Transport Vehicle Act
SAFO	Safety Alert for Operators
SBO	Station Blackout
SNCF	Société Nationale des Chemins de fer Français
SOP	Standard Operating Procedure
SRM	Boeing Structural Repair Manual
TAM	Táxi Aéreo Marília Airlines in Brazil
TCAS	Traffic Collision Avoidance System
TEPCO	Tokyo Electric Power Company
TOWS	Take-off Warning System
TSB	Transportation Safety Board of Canada
UCR	The Uniform Crime Reporting Program
UN	United Nations
WHO	World Health Organization
WOCL	Window of Circadian Low

Abstract

In this thesis, the author exemplifies many severe accidents caused by some white-collar offenders, which could be considered as crimes caused by the willful negligence, ignorance or misconduct. The white-collars, i.e. the organization leaders, have committed various crimes one after another without end, having a high recidivism in many cases. The criminal punishment against such white-collar crime consists of the punishment of the representative individuals and the economical penalty of fine to the organization. However, neither sanction does work as deterrence of white-collar crime. On the other hand, current administrative sanction also does not work as an effective measure, because it is too lenient as the punishment. Reviewing many accidents in Japan, the causes have been analyzed. Most of them were treated as the negligence of bottom operators, although behind such surficial causes, there were white-collar crimes of the executives and/or governmental negligence or corruptions. The root of white-collar crime is the insufficient power of the Public Prosecutors Office and the criminal act of punishment, which have been worn out since 60 years ago. Further, the knowledge and technical levels of administrative staffs in some ministries or institutions are lower than those of private corporations. Therefore, a revolutionary change is needed to deter severe accidents caused by white-collar crime. The proposals of this thesis are to establish a new prosecution system including citizens and to pass legislation of a new Sanctions Act, which cover the functions of both criminal punishment and the administrative sanction, and includes the advantages of both of them.

Key words: "white-collar crime," "criminal justice system," "prosecution," "accident," "sanction," "3-D crime model."

Prolog

The lack of consensus existing on matters pertaining to white-collar crime is reflected by disagreement over usage of the text's central term: should we use "white-collar crime" or "white collar crime"? Since the more common and from a strictly grammatical point of view, more correct usage is "white-collar crime," the author adds the hyphen in this thesis¹.

The author indicates many severe accidents caused by some white-collar offenders, which could be considered as the crimes based on the willful negligence, and the other culpability. Among those accidents, the disaster of the nuclear power station of Fukushima #1² of Tokyo Electric Power Company (TEPCO), as an example of white-collar crimes, is one of the heaviest incidents. It was a series of serious criminal offences, based on the willful negligence, and that the disaster occurred naturally by the conspirators of the people in the "Village of Nuclear Energy" including politicians, bureaucrats, corporate engineers, universities and some research institutes.

White-collars of the organization leaders have committed various crimes one after another without end. Needless to say, violent street crimes are also serious problems in the society. However, the losses of the white-collar crime are incalculable. In addition, the criminal justice system treats indulgently white-collar offenders. This phenomenon is probably the customs of not only in the U.S.A. and Japan, but also in almost all countries.

The term of white-collar crime was proposed in the 1930's by the criminologist Edwin Sutherland. However, the economic situation and the social construction have changed completely compared with the era of Sutherland. Today, there are many books on white-collar crime. Almost all of them, however, are writings on stories, criminals, processes of the crimes, and the results. In this thesis, the author explores the criminal background and present bold proposals of the fortification of the Public Prosecutors Office to prevent these crimes, through the inductive methodology.

¹ Interestingly, the criminologist Edwin Sutherland (1883-1950) used this hyphen in his original article in 1940 on white-collar crime.

² The disaster of Fukushima #1 nuclear power plant, occurred on March 11, 2011, consists of a series of events, such as explosions in the buildings that house nuclear reactors, failures in the systems of refrigeration, triple fusion nucleus and release of radiation to the outside of the plant. And it was registered, as a result of the damage caused by the Great Earthquake East of Japan, as category 7 (maximum level) on the international scale of nuclear accidents by International Nuclear Event Scale (INES). Radioactive contaminated water is being leaked into the sea, which will continue for another decades.

There are three purposes in this thesis.

The primary purpose is to make clear the criminality of various so-called accidents, as the white-collar crimes, which have been treated as a simple negligence, and not indicted criminally in general. The examples of the “accidents” are:

- (1) The disaster of the Fukushima #1 nuclear power plant of TEPCO;
- (2) The transportation accidents worldwide, including JR West Japan of Amagasaki (2005), which killed 107 persons, Spanish train crashes (2013), and the scandals of JR Hokkaido in Japan (2013);
- (3) The accidents of commercial aircraft worldwide;
- (4) Pharmaceutical disasters, which caused many patients dead;
- (5) Consumer product accidents caused by the manufacturers of the products and foods: Mitsubishi Motor Car troubles, and the disguising the origin of foods;
- (6) Crimes of Inspection Agencies: the incorrect seismic calculations of architects, and unqualified medical doctors.

Another purpose is to analyze why those executives, who have neglected the protections against such accidents knowingly, have not been accused criminally. The background and the reasons are analyzed, under the comparison with the street crime offenders. There are several objections when we try to impose disciplinary actions to those white-collar offenders at the equal level of the harm, which is severer than now, but balanced to those street crime offenders. Criminal Justice should always be the practice of justice. We should not allow wrapping murders in the cloak of accidents.

The last purpose is to make clear the crime of criminal justice and to propose an idea to improve the criminal justice system, especially the Public Prosecutors Office, in order to indict those white-collar offenders fairly and to deter such accidents as mentioned above. Currently the Public Prosecutors Office in Japan has various problems within it, such as wrong accusations, a bogus investigation report, a manipulation of an evidence, etc. On the other hand, the public prosecutors receive various pressures from politicians, business groups, and bureaucrats. These problems are based on the fact that the Public Prosecutors Office is the authoritative body that operates with an aura of exclusivity. In order to solve the deadlock,

- (a) Include civilians in the decision board of indict or drop the case;
- (b) Promote the Office to the equal level with the Cabinet, to avoid interferences from the government or bureaucrats; and

(c) Empower the functions to investigate the wrong-doers in the Office by a third party.

Additionally, the investigation of the suspects should be transparent and visible, through the video recording, among many other matters.

On this occasion, the author would like to say a word of thanks, for the donations from more than a hundred countries and areas, including Spain, for the disaster of the earthquake, tsunami and the Fukushima #1 nuclear power plant. Thank you very much.

Note: The units of currencies are indicated as the local units, in general. However, when necessary, the exchange rate of 141 yen per Euro is applied in the conversion, as the rate on Mar. 19, 2014.

Chapter 1: Criminality of the Accidents as White-collar Crime

Section 1. Introduction

Today, we are exposed to various risks, such as the risks of traffic accidents, aircraft accidents, medical accidents, environmental contamination, food additives, and natural disasters. Among these risks, the author believes that the most of so-called accidents could be prevented by our capacity, if we could treat them correctly in the improved criminal justice system. These accidents have generally been caused by one or more operators or staffs recklessly or negligently. Although the responsibility of these operators or staffs for the accidents cannot be denied, the author has to emphasize the responsibility of the executives of the organization (white-collar offenders) that caused the accidents. In most countries, those white-collar offenders of the responsible organizations have not been delivered a verdict of guilty at the court or even not indicted at all. The operators or the staffs who directly cause the accident generally belong to the bottom level of the hierarchy of an organization. They are definitely penalized and may be got fired by the management due to the accidents. It is really like a "lizard's tail off"³. It is clear that the measure of the autotomy of a lizard only cannot solve the problem and the similar accidents would occur repeatedly. In other words, white-collar crime tends to be recidivistic, because of the lack of fundamental change of the system.

There are some degrees of culpability for the white-collar offenders. Here is an example to help understand the legally recognized degrees of culpability. Suppose a private fitness club decides to construct an outdoor swimming pool, and subcontracts a civil company to construct it, under a tight schedule to meet the summer vacation season of that year. The president of the subcontractor orders the chief of the field works to meet the schedule, without any special warning of the accident that some children nearby may enter into the construction site. After the completion of the sealing internal surface of the swimming pool, they filled the pool with water fully, and left as it was for a week in order to confirm a non-leakage, without fencing around the site. One day, a child was drowned while playing in the pool. If the construction chief left the pool unfenced in order to kill a child, then

³ Some of the reptiles like lizards autotomize their tail off to get away from an enemy, and to survive. In the same way, when an organization is placed in a critical situation, the management tries to survive by cutting off their bottom employees who are guilty, which we say the "lizard's tail off," in Japan.

the death was caused “purposely.” But suppose that the pool was left unfenced not to harm a child, but merely knowing that children played in the area. Then the death was brought about “knowingly.” If filling water in the pool and leaving it unfenced were done without knowledge that children played in the area, but without making sure that they did not, then the death was brought about “willfully.” Finally, if the swimming pool is filled with water and left unfenced without the knowledge that children played in the area and some, but inadequate precautions were taken to make sure no child was there, then the death was brought about “negligently.”

Among the accidents that have been regarded as those caused negligently, the author believes that there are many criminal incidents that were caused knowingly or willfully. Those criminal managements who saved costs to prevent such accidents should not be treated as a simple violation of the safety regulation, but as the criminal offenders at a court.

Section 2. Origin of “white-collar crime” and the definitions

1. Sutherland as the origin of white-collar crime

More than 70 years ago, in 1939, Edwin Sutherland (1883-1950) stood before a gathering of the American Sociological Society to impress upon that group the need to expand the boundaries of the study of crime to include the criminal acts of respectable individuals in the course of their occupations. He labeled these crimes, for the apparent lack of a better name, “white-collar crimes” (Sutherland, 1940, p. 9). And thus was born a term soon to become an established part of the criminology. It seems to be clear that for Sutherland, the offender characteristics of respectability and high social status had little relevance as causal factors in explaining criminal behavior. Kip Schlegel and Weisburd (1992, p.5) advocate that the significance of an offender’s respectability or high social status lies primarily in the refutation of existing theories that look to the causes of crime in poverty and social disorganization. One’s respectability, occupational position, or access to wealth and power leads to and creates opportunity structures for crime that can be unique in and of them, or that may have corollaries to or spinoffs from what are often called common crimes.

Sutherland declared that a white-collar crime may be defined approximately as a crime committed by a person of respectability and high social status in the course of his

occupation (Sutherland, 1940, p. 9). He further added that the definition consequently excludes many crimes of the upper class, such as most of their cases of murder, adultery, and intoxication, since these are not customarily a part of their occupational procedures.

The most straightforward definition that Sutherland offered appeared in the “Encyclopedia of Criminology” (1949, p. 511), in which he wrote that “the white-collar criminal is defined as a person with a high socioeconomic status who violates the laws designed to regulate his occupational activities.” He added that such laws could be found in the penal code, but also included federal and state trade regulations, as well as many other regulations. Thereafter, he observed that the white-collar criminal should be differentiated, on the one hand, from the person of a lower socioeconomic status who violates the regular penal code or the special trade regulations; and, on the other hand, from the person of a high socioeconomic status who violates the regular penal code in ways not connected with his occupation (Sutherland, 1949, p. 511).

His definitions are uncrystallized and, at times, contradictory. Geis (1992, p. 35) suggests that what stands out is a sense that Sutherland was most concerned with the illegal abuse of power by upper-class businessmen in the service of their corporations, by high-ranking politicians against their codes of conduct and their constituencies, and by professional persons against the government and against their clients and patients⁴.

2. Multiple definitions

The term “white-collar crime” has been widely incorporated into popular and scholarly language throughout the world, though the designation “economic crime” tends to be preferred in socialist countries and is also widely used elsewhere. The United Nations (UN) has adopted the phrase “abuse of power” for those behaviors that correspond to white-collar crimes. In addition, other designations, such as “upper-world crime,” “crime by the powerful,” “crime in the suites,” and “organization crime” have their devotees (Geis, 1992, p. 35).

Summarizing the early days of white-collar crime scholarship, Donald Newman (1958) maintained that the chief criterion for a crime to be white-collar is that it occurs as a part or as a deviation from the violator’s occupational role. Newman insisted that technically

⁴ Further, Sutherland believed that all crime could be understood by a single scheme – his theory of differential association – and therefore, he saw no compelling reason to distinguish sharply between various forms of illegal activities.

this is more crucial than the type of law violated or the relative prestige of the violator, although these factors have necessarily come to be major issues in the white-collar crime controversy. Newman, further, argues that this had happened because most of the laws involved were not a part of the traditional criminal codes, and because most of the violations were a cut above the ordinary criminal in social standing.

Herbert Edelhertz (1970, p. 3) proposed that a useful definition of white-collar crime would be “an illegal act or series of illegal acts committed by nonphysical means and by concealment or guile, to obtain money or property, to avoid the payment or loss of money or property, or obtain business or personal advantage.” The American Bar Association (ABA) adopted the term “economic offense” for behaviors within the white-collar crime realm set forth by Edelhertz, and modified the term “nonviolent” with the footnote observation that this referred to “the means by which the crime is committed” even though “the harm to society can frequently be described as violent” (Saxon, 1980, p. 5).

Clinard and Quinney (1973, p. 188) put forward what has become a widely accepted distinction in scholarship on white-collar crime, that between occupational criminal behavior and corporate criminal behavior. The former means to include persons at all levels of social structure and was defined as the “violation of criminal law in the course of activity of a legitimate occupation.” The category included offenses of employees against their employers. Corporate crime for its part was to consist of offenses committed by corporate officials for their corporation and the offenses of the corporation itself.

Richard Sparks (1979, p. 172) preferred to abandon the law as the essential ingredient of a white-collar offense and, instead, to incorporate both deviancy and illegality within its purview.

Reiss and Biderman (1980, p. 4) suggested the definition of white-collar crime in a monograph to establish some basis for counting in a systematic manner the number of such offenses committed annually.

The Federal Bureau of Investigation (FBI) has opted to approach white-collar crime in terms of the offense. FBI has defined white-collar crime as “those illegal acts which are characterized by deceit, concealment, or violation of trust and which are not dependent upon the application or threat of physical force or violation. Individuals and organizations commit these acts to obtain money, property, or services; to avoid the payment of money or services; or to secure personal or business advantage (Cynthia Barnett, 2002).” According to Barnett, some experts have criticized defining white-collar crime in terms of type of

offense, because this definition emphasizes the nature of the acts rather than the background of the offender. Within the FBI definition, there is no mention of the type of occupation or the socioeconomic position of the “white-collar” offender. Further, there are no measures of corporate structure in the Uniform Crime Reporting (UCR) Program data elements.

3. Conception of Friedrichs

David Friedrichs (2007, p. 2) indicates several common features of white-collar crime:

- a. They do not include the forms of crime that typically come to mind when people think of the street crimes, such as murder, rape, aggravated assault, etc.
- b. The offenders or offending organizations enjoy a relatively high level of trust and respectability, at least when compared with street criminals.
- c. These situations have not been a traditional focus of the law and the justice system, which have responded to them in various ways.

He illustrates by an example of white-collar crime which arises in unexpected circumstances. The many deaths associated with an earthquake in the state of Gujarat, India⁵, would appear to be a natural catastrophe, wholly unrelated to white-collar crime. However, the Indian government report indicated that much of the loss of life could be attributed to shoddy building construction, a consequence of greedy developers paying off corrupt government inspectors to evade proper building codes (Bearak, 2001, p. A3).

Criminologists who study white-collar crime have generally been in agreement that it (1) occurs in a legitimate occupational context; (2) is motivated by the objective of economic gain or occupational success; and (3) is not characterized by direct, intentional violence (Friedrichs, 2007, pp. 4-5). According to Friedrichs (2007, pp. 6-7), the principal criteria for differentiating between various typologies of white-collar crime are as follows:

- Context in which illegal activity occurs, including the setting (e.g., corporation, government agency, professional service) and the level within the setting (e.g., individual, workgroup, organization);

⁵ A powerful earthquake of magnitude 6.9 on Richter-Scale rocked the Western Indian State of Gujarat on Jan. 26, 2001. It caused extensive damage to life and property. This earthquake was so devastating in its scale and suffering that the likes of it had not been experienced in the past 50 years, leaving thousands seriously injured, bruised and handicapped, physically, psychologically and economically. (Consulted on Jul. 21, 2013, in <http://saarc-sdmc.nic.in/pdf/Earthquake3.pdf>.)

- Status or position of offender (e.g., wealthy or middle class, CEO or employee);
- Primary victim (e.g., general public or individual clients);
- Principal form of harm (e.g., economic loss or physical injury);
- Legal classification (e.g., antitrust or fraud).

Under the above criteria, Friedrichs summarized criminal activities in some white-collar crimes, as follows (Friedrichs, 2007, p.7).

a. Corporate crime: Illegal and harmful acts committed by officers and employees of corporations to promote corporate or personal interests. Forms include corporate violence, theft, financial manipulation, and political corruption or meddling.

b. Occupational crime: Illegal or harmful financially driven activities committed within the context of a legitimate, respectable occupation. Forms include retail crime, service crime, crimes of professionals, and employee crime.

c. Governmental crime: A cognate form of white-collar crime; a range of activities wherein government itself, government agencies, government office, or the aspiration to serve in a government office generates illegal or demonstrably harmful acts. Forms include state crime and political white-collar crime.

d. State-corporate crime, crimes of globalization, and finance crime: Major hybrid forms of white-collar crime that involve in some combination of a synthesis of governmental, corporate, international financial institution, or occupational crime. Finance crime specifically refers to criminal activity in the realm of high-level finance, from banking to the securities markets.

e. Enterprise crime, entrepreneurial crime⁶, techno-crime⁷, and avocational crime⁸: These crimes are “residual” forms of white-collar crime, or a variety of miscellaneous illegal activities that include more marginal forms of white-collar crime.

4. Trust, respectability, and risk of white-collar crime

Barbara Misztal (1996) offers a comprehensive overview of past and present theories about the role of trust as a means of creating solidarity. Misztal shows how in

⁶ Entrepreneurial crime refers to swindles, scams, and frauds that assume the guise of legitimate businesses.

⁷ Techno-crime involves the intersection of computers and other forms of high technology with white-collar crime.

⁸ Avocational crimes are illegal but nonconventional criminal acts, including income tax evasion, insurance fraud, loan/credit fraud, customs evasion, and the purchase of stolen goods.

sociological debates, which run from the founding fathers to the critics of mass society, social order and solidarity were assumed to be self-evident goods emerging in a spontaneous way. One of the central features of the modern world is that people typically spend much more time interacting with or are dependent on many individuals and organizations with which they have narrower and more instrumental relations. This applies to corporations that employ us, banks where we deposit money, stockbrokers with whom we invest, retail businesses from which we purchase goods, physicians from whom we seek treatment, and so forth. Trust has become much more problematic in the modern world.

Donald Cressey (1980) argued that we must confront a fundamental paradox: if we attempt to curtail sharply the extension of trust in business relationships in the interest of reducing opportunities for white-collar crime, we will also severely jeopardize legitimate business relationships and other interpersonal transactions. Trust and its violation are certainly key element of white-collar crime. Sutherland (1940, p. 3; 1949, pp. 152-58) characterized white-collar crime as involving a “violation of delegated or implied trust.”

Susan Shapiro (1990, p. 350) argued that the central attribute of white-collar crime is the violation of trust, which then takes the form of misrepresentation, stealing, misappropriation, self-dealing, corruption, and role conflict. It is especially difficult to prosecute successfully the violations of trust that occur behind the closed doors of “suites,” and the parties involved can often manipulate the organizational structure to conceal their misconduct (Shapiro, 1990, p. 355). Shapiro argues that white-collar offenders may be able to secure egress from the criminal justice system or at least lessen their exposure to punishment by making a deal with enforcement officials. The secrecy and ambiguity of abuses of trust that render principals unwitting and therefore unable to assist in prosecution, the fact that suspects tend to have custody of crucial evidence against them, and the lack of situationally specific behavior or of inculpatory evidence of misconduct frustrate investigators’ efforts to build a case. As a result, prosecutors often have to “turn” one or more insiders to secure necessary evidence for legal action. They typically find the leverage to induce culpable insiders to cooperate in the investigation or to testify against their associates with grants of immunity from prosecution, plea negotiations, or reductions in sentence (Katz, 1979, p. 805; Hagan et al., 1980, pp. 805-6). The social organization of trust abuse, therefore, often requires a promise of leniency to some in order to prosecute others successfully. Leniency also arises from limitations in and dilemmas over the choice

of sanctions for those convicted of abuse of trust. Few criminal sanctions effectively reach blameworthy organizations. Neither capital punishment nor imprisonment is available for criminal corporations; fines tend to be small and viewed as a cost of doing business; larger fines tend to be passed along to others; legal threats directed at corporate profits must compete with more powerful market threats these organizations face (Shapiro, 1990, p. 355). The idea of respectability has been closely associated with white-collar crime. As mentioned above, Sutherland identified white-collar crime as the “crime in the upper or white-collar class, composed of respectable or at least respected business and professional men.” Shapiro, however, has criticized this identification, because “respectability” is not easily defined, and is not linked with specific norms for acceptable behavior (Shapiro, 1990, p. 347). It is generally agreeable that the more respectable people to be, the more likely they are to be trusted, and the more respectable people appear to be, the less likely they will be suspected of committing serious crime. Similarly, organizations such as corporations typically strive to be regarded as legitimate and respectable, with the view that such a perception will contribute significantly to their ability to compete effectively and maximize their profits.

The risk of white-collar crime is the chances of being caught and punished, which are quite remote compared with the benefits that accrue from committing the crime. Though such calculations can be made in most forms of crime, it is especially likely to be a central feature of many white-collar crimes, because the probability of detection, prosecution, and sanction is typically low. Another type of risk is the chances of dangerous (even catastrophic) consequences of corporate and executive decision-making. One of the distinctive elements of many white-collar crimes is the absence of the specific intent to cause harm. Rather, the harm of many white-collar crimes is a function of making the pursuit of profit or economic efficiency paramount over all other objectives. Corporations and the executives have often been prepared to put their workers, customers, and the general public at higher risk of harm, if their course of action is seen to enhance profit or result in lower risk of loss, or to achieve some other organizational objective. The typical examples in the U.S. are the tragedy of Buffalo Creek, West Virginia, and the explosion of the space shuttle Challenger (Friedrichs, 2007, p.10).

Section 3. The tragedy of Buffalo Creek, West Virginia

On Feb. 26, 1972, when the Pittston Coal Company's coal slurry impoundment Dam #3, located on a hillside in Logan County in Buffalo Creek, West Virginia, U.S.A., burst four days after having been declared "satisfactory" by a federal mine inspector, of which collapse led to the destruction of the community and out of a population of 5,000 people, 118 were killed, 7 were missing, hundreds houses were destroyed, and left thousands homeless (Governor's Ad Hoc Commission of Inquiry, 1973). In 1990, Governor Arch Moore plead guilty to five felonies and served two years, eight months in federal prison for campaign finance violations, extorting over a half-million dollars from a coal company, and obstructing investigators (Citizens' Commission, 1973). Pittston Coal Company, the sole stockholder of Buffalo Mining Company, later claimed the failure of the Dam #3 was an Act of God – God just put more water in the dam than it was meant to hold. They also argued that this Dam was built like Pittston's other dams according to accepted industrial custom and usage (Stern, 1976). But they weren't. The other Pittston dams had emergency spillways to prevent overflow or topping over (Stern, 1976, p 151). Jones argued about production vs. safety that like many other industrial disasters, a value system promoting profit over safety contributed to allowing such an event as the flood at Buffalo Creek to occur. Gerald Stern, author of *The Buffalo Creek Disaster*, also commented on the emphasis of production over safety in this culture. According to an e-mail from Stern to Jones (2013), Stern was sure the engineers at Buffalo Creek had known about the "dams," but he also assumed they thought their jobs were to increase production, to engineer with respect to the mining rather than safety. The problem was that all the emphasis was on production and the bottom line income, while spending money on safety certainly was not a priority, and it also hurt the bottom line. Arch Moore accept a \$1 million settlement from Pittston Coal Company as complete payment for the state government's loss in the disaster, leaving West Virginia taxpayers stuck for up to \$13 million in unpaid costs.

Section 4. Explosion of the space shuttle Challenger

On Jan. 28, 1986, the world was stunned by the explosion of the Challenger in midair, which killed 7 astronauts, as millions watched on television. The Challenger disaster was the collective product of the interaction between a government agency, the National Aeronautics and Space Administration (NASA), and a private business corporation, Morton Thiokol, Inc. (MTI) (Kramer, 1992). NASA was a product of the cold war between the Soviet

Union and the U.S. The launch of the first Sputnik by the Soviet Union in 1957 caused a political firestorm in the U.S., which eventually resulted in the creation of NASA in 1958. When NASA succeeded in the Apollo project in 1960s, NASA enjoyed its glory days. In 1970s, however, the political and economic environment changed dramatically. Economic conditions caused a string of budget problems and political and public supports for NASA also began to decline (Kramer, 1992, pp. 218-19). Because of the budgetary reasons, the Nixon administration ordered the development of the shuttle vehicle. To get political support, NASA had to allow the air force to help planning the design of the shuttle to accommodate military missions⁹. As the President's Commission on the Challenger Accident (1986, p. 201) described that the nation's reliance on the shuttle as its principal space launch capability created a relentless pressure on NASA to increase the flight rate in the 1980s, under the Reagan administration. NASA had to compete with the European Space Agency's Ariane satellite launcher and, therefore, NASA had to make the shuttle missions look routine and dependable (Kramer, 1992, pp. 221-22). The direct cause of the explosion was the faulty design of the O-ring seal in the field joint of a solid rocket motor¹⁰. Another point was the fact that NASA had not been subjected to any strong oversight by any external control agency. The National Aeronautics and Space Act (1958) allocated broad oversight responsibilities to the Congress and to the National Aeronautics and Space Council. Both of them, however, lacked the technical expertise, and the capacity for monitoring NASA activities. As the conclusion, the explosion of the Challenger was not an "accident," but a "state-corporate crime¹¹" (Kramer, 1992, pp. 238-39). Kramer exemplifies recent state-corporate crimes, including environmental, safety, and health violation that occurred at various nuclear weapon production facilities, the coordinate criminal frauds involving defense contractors and U.S. military officials, and the Iran-Contra crimes that resulted from interrelationships among the National Security Council (NSC). Kramer provides general support for the hypothesis that criminal behavior at the organizational level results from coincidence of pressure for goal attainment, availability and perceived attractiveness of illegitimate means, and an absence of effective oversight and control.

⁹ Financial restrictions from the Office of Management and Budget (OMB) would have a major impact on the design of the shuttle.

¹⁰ Source: President's Commission on the Space Shuttle Challenger Accident (1986).

¹¹ Raymond J. Michalowski and Kramer (2006) have defined it as the "illegal or socially injurious action that occurs when one or more institutions of political governance pursue a goal in direct cooperation with one or more institutions of economic production and distribution."

Chapter 2: The disaster of Fukushima #1 Nuclear Power Plant

Section 1. Introduction

In Japan, electric power has been supplied by 10 private companies since 1951, each of which supplies respective region exclusively, as the monopolistic market. TEPCO is the largest and leading company among them (Fig. 1).

Despite the two serious nuclear accidents before Fukushima #1 disaster, the “Three Mile Island¹²” and the “Chernobyl accident¹³,” why could not we learn from those experiences? Two possible causes resulted in this respect. Related engineers were satisfying their own curiosity and felt confident about nuclear technology. It is good to say of the vanity of technicians. The other is the criminal negligence of the safety measures by TEPCO and the government, which had constructed the imperfect plant and continued to operate it without sufficient safety measures.

There should be a national and international mechanism to avoid the situation that engineers or technicians running towards a direction in their discretion only. For example, the management of nuclear weapon becomes a main political issue internationally. Similarly, nuclear power, biotechnology, medical technology, genetic manipulation, spatial development and resource development should also be included in such objectives. All of them have a possibility of causing a serious problem at the international level, if there is no limit or the regulation. Such international issues must be resolved by the UN or its subordinate organizations. However, the UN doesn't have such power and authority at present¹⁴. Therefore, International Court of Justice (ICJ) should be reformed in such way that ICJ could make recommendations and instructions, without any complaint. And for any State that did not follow the instructions, ICJ should have the power to impose international sanctions on that State.

¹² The accident of Three Mile Island on March 28, 1979, was considered the most serious civilian nuclear accident (of category 5 on the INES).

¹³ The Chernobyl accident was a nuclear accident happened in Chernobyl (Ukraine) nuclear power plant on April 26, 1986. It is considered, along with the accident of Fukushima #1, the graver on the international scale of nuclear accidents (accidents increased, level 7).

¹⁴ For example, if a State among the permanent members of the UN Security Council objects a decision, nothing happens. The UN is an organization that was created at the end of the World War II, and its life has already expired. However, the reform or the reorganization of the UN is not easy, because the number of the member States is now 193 countries.

Section 2. History of Japan's nuclear power development

The Japan's nuclear power development started from the operation of the test furnace Japan Power Demonstration Reactor (JPDR) (BWR¹⁵ type) introduced from the U.S. (Oct. 1963). Then, Tokai power station (GCR¹⁶ type) introduced from the United Kingdom, started Japan's first commercial operation of nuclear power plant in Jul. 1966. At that time, electric power companies planned and introduced power reactors developed by the U.S. Mihama nuclear power plant No.1 (PWR¹⁷ type) of Kansai Electric Power Company (KEPCO) started commercial operation in Nov. 1970 in Fukui Pref.. In addition, TEPCO started the commercial operation of the unit No. 1 (BWR type) of Fukushima #1 nuclear power station in Mar. 1971 (Fig. 2).

Regardless of our awareness of nuclear energy being powerful and scary, Japan took its first step toward nuclear development, because of the intention of the U.S. Two years later, after the signing the San Francisco Peace Treaty in 1951, the U.S. President Dwight D. Eisenhower (1890-1969) advocated the peaceful use of nuclear energy in his speech at the UN in 1953. In the same year, the Parliament of Japan passed the reactor construction budget of 235 million yen. In 1954, however, Daigo Fukuryu Maru¹⁸ of Japan exposed to hydrogen bomb test on Bikini Atoll by the U.S. The reason why the U.S. recommended Japan to introduce the nuclear power plant, was that, under the cold war, they intended to prevent Japan and other allied countries enter into the communist group, by supplying the fruits of nuclear technology. Although nuclear power plants were constructed from 1960s, they had a variety of problems, and produced a negative heritage.

When Kakuei Tanaka (1918-1993) became the Prime Minister of Japan in Jul. 1972,

¹⁵ Boiling Water Reactor (BWR). The BWR type of light water nuclear reactor is the second most common type of electricity-generating nuclear reactor, after the Pressurized Water Reactor (PWR), also a type of light water nuclear reactor. The main difference between a BWR and PWR is that in a BWR, the reactor core heats water, which turns to steam and then drives a steam turbine. In a PWR, the reactor core heats water, this does not boil. This hot water then exchanges heat with a lower pressure water system, which turns to steam and drives the turbine.

¹⁶ Gas Cooled Reactor (GCR). The GCR is a nuclear reactor that uses graphite as a neutron moderator and carbon dioxide or helium can be used as coolant.

¹⁷ Pressurized Water Reactor (PWR). Refer to the footnote 15 above.

¹⁸ Daigo Fukuryu Maru was a Japanese tuna fishing boat, which was exposed to and contaminated by nuclear fallout from Castle Bravo thermonuclear device test on Mar. 1, 1954. Aikichi Kuboyama, the boat's chief radioman, died less than seven months later, suffering from acute radiation syndrome. He is the first victim of the hydrogen bomb of Operation Castle Bravo.

nuclear policy has changed dramatically. The “Three Power Laws¹⁹” became effective as a part of the “Japanese Archipelago Reconstruction Policy.” These laws have played the important roles of attracting nuclear plants to the sparsely populated areas as established interests.

Public and private sectors jointly started the improvement and standardization project of the Light-Water Reactor (LWR type) since 1975, which resulted in the improved light-water reactors, ABWR²⁰ and APWR²¹ type. Kashiwazaki-Kariwa No. 6 (in Nov. 1996) and No. 7 (in Jul. 1997) of TEPCO were the first operation of ABWR type in the world. Recently, Hamaoka No. 5 (in Jan. 2005) and Shiga No. 2 (in Mar. 2006) began commercial operation. According to the Federation of Electric Power Companies (FEPC), the share of electricity generated by nuclear power plants in 2010 was 27.5 % (271.3 billion kWh) of the total electricity generated. In year 2012, after the Fukushima #1 disaster, nuclear power production was 1.7 % (15.9 billion kWh) of the total electricity generated. As of the end of 2012, 54 nuclear power units existed, but six of the Fukushima #1 plants (BWR types) were decided to be abolished. Therefore, the number of the units existing is 48: 24 BWR types and 24 PWR types (Fig. 3). The total capacity of 46,148 MW is the world’s third largest²².

After the catastrophe of Fukushima #1, a member²³ of the diet, who belongs to the Liberal Democratic Party (LDP), said that the purposes of nuclear power plants in Japan were to supply electricity, and to establish technology that allows manufacturing nuclear weapons when necessary. The second purpose is actually very dangerous to increase tensions in the East Asia. His words indicate that the development of nuclear power plant in Japan was a state-corporate crime.

Section 3. Village of Nuclear Energy in Japan

¹⁹ They are “Power development promotion law,” “Power development measures special accounting laws,” and “Regional development law around power generation facilities.”

²⁰ Advanced Boiling Water Reactor (ABWR type). The ABWR is the improved model of BWR type, e.g., the addition of reactor internal pumps mounted on the bottom of the reactor pressure vessel.

²¹ Mitsubishi Advanced Pressurized Water Reactor (APWR type).

²² The U.S. is the largest with 100,747 MW (104 units), and the second is France, 63,260 MW (59 units). (Source: International Atomic Energy Agency (IAEA), *Nuclear Technology Review 2010*).

²³ His name is Shigeru Ishiba (1957-). He was Minister of Defense of Japan under the Government of Yasuo Fukuda and also Minister of agriculture, forestry and fishing. Under the Shinzo Abe administration, he is in the position of Secretary General of the LDP since Sep. 27, 2012. (Source: Magazine, *SAPIO*. Oct. 5, 2011. Tokyo: Shogakukan.)

1. The definition of the Village of Nuclear Energy

The word “Village²⁴” does not mean an actual village where exists a nuclear power station, nor where persons related nuclear energy are living, but an exclusive group that has tried to develop nuclear energy, including members of electric companies, manufactures of the nuclear plants, universities and institutions of nuclear technology, and powerful government Ministers, e.g. Ministry of Economy, Trade and Industry (METI), Ministry of the Environment, and Ministry of Health, Labor and Welfare.

Japanese people react very sensitively against nuclear energy and radiation in general, due to the experiences of the atomic bombings at Hiroshima and Nagasaki. It can also be the nuclear allergy. They absolutely did not accept the construction of nuclear power plants. However, gradually they had become to rely on the “safety myth,” which was spread after the World War II among the people of the countryside, as a national policy for the promotion of nuclear power plants. Meanwhile, the companies in the Village (especially electric companies) also donated a large amount of money to the local municipalities. It was recognized that the donations from the electric power companies to the local government where nuclear power plant existed amount to 160 billion yen by the coverage of NHK²⁵.

2. The relations among the Village of Nuclear Energy

Most electric power companies have a share of stocks in the media companies, which have questioned the authenticity of the news. Further, financial institutions have a lot of bonds issued by the electric power companies. If TEPCO becomes bankruptcy, as an example, the bonds will become wastepaper. Therefore, the institutions exert pressure on METI through the Financial Services Agency, requesting not to make bankruptcy of TEPCO. METI had also promoted to construct the nuclear power plants, as a member of the Village, and was unable to advance on the legal dissolution of TEPCO. Further, electric power companies are important for the departments of nuclear engineering of some universities, because they had received many graduates of these universities. On the other hand, the universities had received large amounts of donations each year, from the electric power

²⁴ The word “Village” is the translation of the word “Mura” in Japanese, which means “village” in English, or “campo” in Spanish.

²⁵ Japan Broadcasting Corporation (NHK). NHK is Japan’s only one national public broadcasting organization, which is a publicly owned corporation funded by viewers’ payments of a television license fee.

companies, as the costs of research and development of nuclear energy²⁶.

After the change of Cabinet to the Prime Minister, Shinzo Abe, LDP²⁷, the Village would promote activities again by the re-operation of nuclear power plants²⁸.

3. Last accident of nuclear power plant

Table 1 indicates the releases of radioactive materials into the atmosphere, which means that the Fukushima #1 disaster was in the equivalent level to the Chernobyl²⁹. According to the Tokyo Shimbun Newspaper (2013), the number of deaths related to the Fukushima #1 disaster was 789. Secondary disasters caused by the evacuation brought greater sacrifices. In Mar. 2014, NHK reported the damage of the Fukushima #1 disaster in the last 3 years had reached 11 trillion yen (about 78 billion Euros). However, if they include future estimates of radioactive wastes, astronomical sums of money will be required.

4. The “Safety myth” of the nuclear power plant

The disaster of Fukushima #1 showed rupture of the safety myth of the nuclear power plant. The safety myth is the belief that “such a severe accident will not occur as the nuclear reactor becomes meltdown.” and has been touted by the Government and the electric power companies. For the Japanese who underwent the atomic bombings of Hiroshima and Nagasaki, the words of “nuclear energy” are very sensitive. It may be called “nuclear allergy.” During the period of the electricity shortage after the World War II and the oil crises, the construction of nuclear power plants was a national project. The key word of the safety myth was conceived in those days. Since then and until recently, some engineers had realized the fallacy of the myth, but they did not function as the whistle-blowers in a large organization. The behavior of the members of an organization is actually defined partially by the official rules and always remains in an area of relationships that don't get to regulate (Torrazza, 2008, p. 17).

In addition to the above “safety myth,” there were three more myths about the

²⁶ As an example, five electric organizations including TEPCO donated 387 million yen to the Faculty of Engineering of the University of Tokyo, during 2006 and 2011. (Source: National Citizens Ombudsmen Liaison Conference. Consulted on Dec. 2, 2013, in <http://www.ombudsman.jp/nuclear/todaikogakubu.pdf>.)

²⁷ The cabinet of the Prime Minister, Shinzo Abe, started in Dec. 2012.

²⁸ If the earthquake attacks again the re-operated nuclear power plant which is in suspension, without adequate safety measures, the energy supply in Japan must suffer a fatal blow.

²⁹ In the Chernobyl, the number of deaths of nuclear radiation was about 60 people, mainly firefighters. More than 200,000 people have lost their homes and jobs around the large area where Soviet Government issued a deportation order, and it is said that thousands of people committed suicide.

nuclear power plants: the “Low cost myth,” the “Clean energy myth,” and the “Primary essential myth for economy and our life.” Recently, the new myth of the “Radiation safety myth” began to be distributed, which means that the dose of radiation around the Fukushima #1 nuclear power plant is almost identical to the exposure in Africa.

Section 4. Criminality

1. Willful negligence of TEPCO

The National Diet of Japan Fukushima Nuclear Accident Independent Investigation Commission (NAIIC, 2012, p. 27) came to the conclusion, in the report, that: “In 2006, the Nuclear Safety Commission (NSC) revised the old guidelines for seismic standards, while the Nuclear and Industrial Safety Agency (NISA) asked the operators of nuclear power to carry out the earthquake-resistant confirmation according to the new guidelines. TEPCO had notified NISA that the deadline for its final report on the confirmation would be in Jun. 2009. However, NISA did not make the confirmation, and postponed to Jan. 2016, within TEPCO. Although TEPCO and NISA were aware of the needs for structural reinforcements to meet the new guidelines, no reinforcement had applied to unit No. 1 to 3 at the time of the accident. NISA considered that such anti-seismic reinforcement should be taken independently by the operator and implicitly approved the delay of TEPCO. In 2006, NISA and TEPCO were aware of the risk that a total loss of energy at the Fukushima #1 could be caused by a tsunami, if it went further than the level of the site. They were also aware of the risk of damage to the reactor core derived from dysfunction of the pumps of sea water in the case of a larger tsunami than the assessment of the Society of Civil Engineers. NISA had known that TEPCO had taken no measure to reduce or eliminate such risks, but did not give specific instructions.”

In 1993, NSC expressed an opinion that the possibility of a Station Blackout (SBO) would be minimal and that the resistance of the nuclear plant to SBO was sufficient and maintained a position that there was no need to consider a possible SBO. During the interviews with witnesses conducted by the NAIIC, it was also revealed that NISA was aware of the fact that Japan was only capable of responding to the first three of five layers

of the defense-in-depth³⁰, but that would tolerate the situation calmly. Regulatory authorities also had a negative attitude toward the importation of the new knowledge and technology from abroad. TEPCO had continued the operation of nuclear power plants, under the connivance of the Ministries, NSC and NISA. Therefore, local governments did not train local residents for the evacuation appropriately against the nuclear power plant accidents. And the accident occurred.

2. Severe accident measures that ignore the international level

Despite the country where natural disasters occur frequently, Japan has conducted severe accident measures that do not assume the external events such as an earthquake and tsunami, but intended only internal events, e.g. operational troubles or design mistakes. TEPCO, as the leader of electric companies, had approached positively to the authority that the measures did not cause any underutilization of nuclear plants (NAIIC, 2012, p.28).

3. Specific management structure ingrained in TEPCO

TEPCO, while exercised a strong influence on nuclear energy policy and the regulations, did not stand in the front line itself, and took such management structure as behind-the-scenes that passed the buck to the government, which had distorted the accident responses (NAIIC, 2012, pp. 32-33).

4. Obscuration of the information of the accident

After the accident, without announcing the correct information quickly, TEPCO tried to obscure critical information of the accidents, and to make the accident intentionally small. As a result, local residents were exposed unnecessary to the radiation. In Fukushima Pref., the distribution of iodine for the children was also delayed.

5. Interference of the investigation team at the site

When NAIIC members tried to investigate the Fukushima #1 site, TEPCO employees mentioned that since the site was quite dark without electricity, they could not look at anything, which was a lie and obstructed the investigation. Actually, the light entered through the damages of the housing, and the investigation was possible.

³⁰ It is the concept for safety of multi-stage measurements in nuclear power facilities. The International Atomic Energy Agency (IAEA) considers up to five layers.

6. Organizational problem of regulatory authorities

In the regulatory authorities in Japan, the organizational culture to consider health and safety of the people as the top priority and to consolidate the oversight and governance for the safety of nuclear energy were missing. The relation between the electric companies and the regulatory authorities was neither transparent nor independent, but the regulatory authority became a “prisoner” of TEPCO and the FEPC³¹ of Japan (NAIIC, 2012, pp. 41-42).

Section 5. Aftermath

1. The other nuclear power stations in Japan

Only two units out of 48 detained commercial nuclear power plants in Japan, Oi of KEPCO, were reactivated after the disaster of Fukushima #1. The administration of the LDP has changed the nuclear policy to reactivate the plants after they confirmed the safety. However, many active faults have been newly discovered underground of some nuclear plants. Further, the flood measures by the tsunami have not been completed and will take for some years at least³².

2. Local problem in Fukushima Prefecture

The number of people who had been evacuated to other areas of the Fukushima Pref. was 62,736, and to the places within Fukushima, 97,599, as of May 11, 2012³³. Even now, no one can enter within a radius of 20 km from the Fukushima #1, in principle. Young families with children have mostly been evacuated, and they will not return to Fukushima Pref. Therefore, the broad area around the Fukushima #1 site will become the area where old men and women only and then uninhabited plain in near future³⁴.

³¹ FEPC, Federation of Electric Power Companies, is the voluntary organization and the coalition of electric companies. Currently, all the 10 power companies in Japan are the members.

³² In the summer of 2011, TEPCO systematically stopped supplying electricity and successfully passed the maximum energy consumption period by thermal and hydroelectric plants without causing any blackout. Recently, since individual homes and workshops have replaced electrical products with those which consume less power, no power shortage is expected without the electricity generated by nuclear power plants.

³³ Results of the Reconstruction Agency. Consulted on May 10, 2013, in <http://www.cms.pref.fukushima.jp/download/1/kengaihinanuchiwake250218.pdf>.

³⁴ The Government of Ukraine allowed the entrance into the plant of Chernobyl Nuclear Power Station on

3. Prosecution

One of the largest issues about the Fukushima disaster is the “responsibility,” together with the investigation of the possible causes. Who is responsible for the serious unprecedented accident? And how are they accused legally? Demands of shareholder in civil court, against TEPCO executives, are underway³⁵. The plaintiff mentioned at the court that the headquarter of the Research of Earthquake in the Ministry of Education had announced in 2002 that the Tohoku area could be attacked by the earthquakes of magnitude 8 level. Compensation claim was about 36 billion Euros³⁶. On Jun. 11, 2012, the Organization of Charges the Fukushima Nuclear Power Plant (1,324 residents in Fukushima Pref.) presented the complaint and indictment to the Prosecutor of Fukushima. The demands of criminal defendants were 33 people³⁷ in total. The charges were based on the operational willful negligence, resulting in injuries and deaths, and violations of the Law Concerning Punishment for Environmental Crimes Relating to Human Health.

On Sep. 9, 2013, the Prosecutors Office decided no bill for everyone. It was determined that it had been difficult to predict specifically that the accident of the flood by the tsunami occurred at Fukushima #1. In 2008, TEPCO estimated the tsunami of 15.7 m as maximum. However, they did not take any measure such as an embankment construction. The prosecutors obtained the opinion from experts that the scientific knowledge of the earthquakes and the tsunami that occurred in the off Fukushima had not been determined. On the other hand, the prosecutors have determined that the correspondences of government officials and executives of TEPCO after reaching the tsunami was difficult, because the work to avoid the spread of radioactive materials was limited, due to the high radiation dose. Also, it was not recognized the exposure of residents as the “injury,” because the health hazard had not been scientifically proven. The

Dec. 21, 2010, after 24 years of off-limits, until then it had been prohibited to enter in a 30 km radius of its boundaries of the power station.

³⁵ Forty-two individual shareholders have submitted the demand for shareholders. The defendants are 27 directors or ex-directors of TEPCO. All the defendants were in the position of the director between 2002 and 2011.

³⁶ It was the maximum amount in the recent national litigations. On Jun. 14, 2012, the first oral argument was held at the Tokyo District Court.

³⁷ Fifteen TEPCO executives including the former President, Katsumata, 7 members of the NSC, including the former President, Haruki Madarame, 3 radiation health risk management advisors, including the vice President of University Medical of Fukushima, Shunichi Yamashita, the former President of the Commission of Atomic Energy (AEC), Shunsuke Kondo, 3 former directors of NISA, and 4 Directors-General of the Ministry of Education.

“Fukushima Prosecution Team” comprised of the residents and evacuees of Fukushima Pref., decided to submit the examination to the Inquest Board against the non-prosecution decision, for the ex-executives of TEPCO only. The current judicial system of Japan, especially the part of the related prosecutions and courts is shown in Fig. 4.

4. Project of electric power industry reform

While TEPCO also had exerted influences over energy policy and nuclear control, they suffered from the consequences, and would continue to shift the responsibility to the government. Therefore, the management of TEPCO, its autonomy and the sense of responsibility, has been diluted. On the other hand, however, TEPCO continued the attempts to castrate the regulations by the weapon of the gaps in technical information about the nuclear technology, through the FEPC.

It can be pointed out that in the management of risks TEPCO was distorted fundamentally. TEPCO considered that the severe accident that causes damages to the health of local residents was not their risk, but that the financial market evaluation, continuation of the operation of the existing nuclear power plants and the demands from large scaled consumers were the risks for them.

5. The finances of municipalities where nuclear power plants are located

The finances of the municipalities where nuclear power plants are located are based on the three Laws of Electrical System³⁸. Regional income had also increased in the construction of the nuclear power plant itself and the employment-related factors. However, noted that the dependence of nuclear energy had problems and limit the persistence and extent of the regional economy. After the disaster of Fukushima #1, the direction of the Japan’s nuclear policy or energy policy should be reviewed fundamentally. Since the nuclear power plants restart with a prudent judgment, the financial situation of the municipalities of primary location is standing at a turning point both in terms of finance and economics.

6. Transition of the power generation to renewable energy sources

Uranium and fossil fuels will run out in a few centuries. To solve the problem we

³⁸ They are fiscal measures, the property taxes and the nuclear fuel tax.

should switch to renewable energy³⁹. Since the disaster of Fukushima #1, deregulation of new energy resources has been made. Since July 1, 2012, the fixed price purchase system of renewable energy has started under the Law⁴⁰. This system aims to foster the renewable energy, and encourage increasing self-sufficiency rate of energy⁴¹; to carry forward the measures to prevent global warming, with less emission of CO₂; to foster the future industries, utilizing the best technology in Japan.

Renewable energy is only 1.4 % of Japan's total electricity supply, excluding hydraulic power generation. Because the costs are higher than the other power sources, renewable energy is sluggishly spread. Japan has greatly delayed, compared to Germany and Spain, in the transition to the power generation based on the renewable energy sources. The fact that about 30 % of the electric energy generation in Japan had to rely on nuclear power plants on the frequently quaking land was a state-corporate criminal offense.

³⁹ Spain is a leading State in the world that uses a lot of natural energy, along with Germany. Exports of technologies and policies for developing countries may help to solve global energy problems. On the other hand, German policy to purchase natural energy at a relatively high price and promote its adoption is an example that a political decision raised the economy. The policy of raising taxes of the conventional energy-intensive companies is another effective way to force them to develop new technologies.

⁴⁰ "Special Measures Law regarding the purchase of renewable energy electricity, by electric power companies," (Public Relations Office, 2013).

⁴¹ The self-sufficiency rate of energy of Japan in 2010 was 4.8 %.

Chapter 3: Transportation Accidents Worldwide

Section 1. Railway accidents

In Apr. 2005, a fatal railway accident occurred in Japan, which is called as JR West Fukuchiyama Line derailment accident, in which 106 passengers were killed. It should be made clear that this accident was caused by the neglect of the railway company, JR West, and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), to provide safety investments.

Recently, in Jul. 2013, many severe railway accidents occurred in Spain, France, Canada and Switzerland. Although the details of these accidents are still under investigation, the information on the mass communication media has been analyzed later.

1. JR West Fukuchiyama Line derailment accident in Japan

(1) Outline

The accident occurred at 9:19 am on Apr. 25, 2005, just after the local rush hour. A seven-car commuter train came off the tracks on the JR West Fukuchiyama Line in Amagasaki, Hyogo Pref., near Osaka. The front four cars derailed completely, with front two carriages rammed into an apartment building and becoming almost completely compacted by the third and fourth cars, which were themselves pushed from the rear by the fifth car. Of the roughly 700 passengers on board at the time of the crash, 106 passengers, in addition to the driver, were killed and 562 others were injured⁴². A limited express train was approaching on another line which ran side by side to the site of the accident at the time, but a railway crossing panic button was pushed by the quick wit of the neighborhood inhabitants who witnessed an accident, and the driver of the limited express stopped at approximately 100 m before the site.

(2) The damage situation

Most of the victims were passengers of the first and the second car, and most died of a multiple injuries, suffocation, and the crash syndrome was confirmed as well. With the death toll, it became the maximum number after privatization of Japan National Railways

⁴² This incident was Japan's most serious since the 1963 Tsurumi railway accident, in which two passenger trains collided with a derailed freight train, and killed 162 people.

(JNR)⁴³. The passengers of the train who were not wounded, neighboring inhabitants and the apartment residents, who participated in the rescue operation, diagnosed Posttraumatic Stress Disorder (PTSD).

(3) Cause of the accident

The elucidation of the accident cause by the Hyogo Police and the Aircraft and Railway Accidents Investigation Commission (ARAIC) was pushed forward. The last report (The Aircraft and Railway Accidents Investigation Commission, 2007) was announced on Jun. 28, 2007. The ARAIC authorized that the cause was the typical, simple overturn derailment that occurred in a right-hander of a radius of 304 m, at approximately 116 km/h, by a delay of the braking operation, and that the train which derailed so that the first car fell down outside and the following vehicles derailed successively. The train speed limit was 70 km/h at the curve. The oldest type ATS-SW had been installed at the spot, but the ground facilities for speed checking had not been installed at the spot. Therefore, the ATS did not work⁴⁴.

(4) Various theories of possible causes

When the accident broke out, various kinds of causes were suspected, e.g. car collision theory, a stone on the track theory, an emergency brake theory, and a surging derailment theory. The speeding theory is recognized that the train ran at a largely exceeded speed by the analysis of the velocity recorder. Because the train overran at Itami station, it departed from that station one minute and 30 seconds late. In addition, it became clear that the driver repeated extremely unnatural driving, i.e., made a wrong stop position, when it arrived at Kawanishi-Ikeda station and the Takarazuka station. Therefore, it is possible that the driver made a catch-up, with a speed beyond the limit.

(5) The problems that the management posture of JR West had

After the outbreak of this accident, various problems about the management posture of JR West were pointed out, and it was thought that the accident occurred as the natural consequence of these problems, e.g. financial issues, re-education (“Day shift education”) system of the crews, operational diagram, facilities of the route, and maintenance problems. They can be summarized as follows. Firstly, they were dull of actions for the safety facilities

⁴³ On Apr. 1, 1987, JNR was divided and civilized into 12 companies, including 6 passenger railway companies and a freight railway company.

⁴⁴ There have been 11 cases that a train urgently stopped by excessive speed from Jun. 2005 to Oct. 2010 on that line, and the spot is a dangerous curve that train speed is easy to exceed the limit.

investment, because they gave priority to speed and services to compete the private railway companies, under the circumstances that they held a large number of non-profitable routes after the privatization; some facilities suffered serious damage by the Southern Hyogo Pref. earthquake in 1995⁴⁵; a large amount of expenditure was forced to by the issue of concrete collapse of the Sanyo Shinkansen (bullet train line); and some shareholders demanded to give priority to the allotment of the profit for them.

Another issue was the re-education (“Day shift education”) system of the crews.

When a crew of the train cannot achieve his aim, JR West inflicts punitive re-education called the Day shift education as the penalty for that crew. Actually it was far from the education to prevent a recurrence. The accident investigation report of MLIT concluded that the Day shift education was a spiritual tease and that it was thought that the management method of JR West related strongly with the accident cause. It can be concluded that JR West saved the cost and put priority on the profit, rather than the safety of the passengers. Before that, the control of the JR West by the MLIT was the question. MLIT did not instruct JR West to install the new ATS in such sections where speeding might cause derailment of trains⁴⁶. The driver who caused the accident had a lack of experience in driving technique, because he had only 11 months in the driving career⁴⁷. Historically JR West caused many accidents in the past⁴⁸, and the diathesis that caused various accidents could not be rectified with the reflection and the lessons, which invited the serious accident again.

(6) Criminal trials

In Jul., 2009, Kobe District Public Prosecutors Office indicted President Masao

⁴⁵ On Jan. 17, 1995, a great earthquake with the magnitude 7.3 attacked Awaji-island and Hyogo Pref. in Kansai area of Japan (named as the “Southern Hyogo Pref. earthquake in 1995”). The damages were: 6,434 people dead, 3 missing, and 43,792 injured.

⁴⁶ The author is afraid that the bureaucratic engineers in MLIT did/does not know the details of the train operation and automatic train stop system, under the backdrop of the recent rapid development of electronic control technology. If so, the part of government to control the railway companies is controlled by the railway companies, at least technological aspects regarding safety, which are exactly same phenomena as the Fukushima nuclear incident.

⁴⁷ As the background of this, JR West had squeezed the fresh hiring in particular in a personnel reduction plan, in comparison with other JR companies, after privatization of JNR, and suddenly increased adopters, at the time that the number of retirements considerably increased. Therefore, a biased distribution of the age structure of the drivers appeared, and it is said that the nucleus of the drivers to teach the driving technique decreased.

⁴⁸ There was the head-on collision accident of the trains by the Shigaraki Heights Railway which JR West was related to, in May, 1991. Another accident was that in Nov. 2002, on the Tokaido Main Line, ambulance crews were fatal and injured.

Yamazaki who was then the director in charge of safety without arrest, for a professional negligence resulting in death and injury. The reason of the prosecution was that he had recognized the risk of the track change of the Fukuchiyama line without ATS-P, from the accident of JR Hokkaido. It is really willful negligence (Yamaguchi, 2007). The then directors who were the bosses of Yamazaki and the then president were not indicted, saying that they did not receive the report from Yamazaki. In Oct. 2009, however, the Inquest Board Prosecution in Kobe voted twice about the three acquitted presidents in each generation of JR West⁴⁹ that “prosecution was reasonable.” The Board decided to prosecute forcibly in Mar. 2010. The lawyer whom the court appointed prosecuted three ex-presidents of JR West on behalf of the professional prosecutor, and the trial began in Apr. 2010. In Jan. 2012, the Kobe District Court announced an acquittal for ex-president Masao Yamazaki, because he did not admit the risk (Yamaguchi, 2007).

2. Spanish train crashes in Jul. 2013

Historically, Spain experienced some train crashes. The most deadly previous crash was in 1944, when approx. 800 people were killed at Torre del Bierzo in Leon province (Hooper, 2013). In 1972, Andalusia crash left between 76 and 86 people dead. In Jul. 2006, at least 43 people were killed in a metro train crash in the Valencia. In Aug. 2006, inter-city train derailed in Villada, in the province of Palencia, killing six people and injuring dozens more.

On Jul. 24, 2013, the high-speed train “Alvia” from Madrid to Ferrol derailed at around 20:41 local time, at Spain’s northwestern Galicia Santiago de Compostela. In this accident, all the vehicles overturned, wrecked and fire also occurred in some parts. Spanish media reported 80 people died, and about 140 people were injured. Police formally accused Francisco Jose Garzon (52), the driver of the train, of manslaughter caused by recklessness, on Jul. 26, 2013. He was freed on bail on Jul. 28, after admitting to a judge that he had behaved recklessly (Hooper, 2013).

(1) Possible causes

El País reported that the driver said he was doing 190 km/h as he took the bend, Curva de A Grandeira, where the speed limit was just 80 km/h (BBC News Europe, 2013).

⁴⁹ They were Masataka Ide, Shojiro Nanya, and Tsuyoshi Kakiuchi.

According to the BBC News, the head of Spanish rail company Renfe⁵⁰ told a radio station that the train had passed an inspection in that morning without any technical problem. Attention is therefore likely to focus on the safety systems in place on the track to prevent exceeding speed limit. The most modern train safety system uses equipment on the track and within the driver's cab to replace traditional signals and control the speed and movement of the train automatically. With a system such as the European Train Control System (ETCS), a driver would not be able to break the speed limit. While parts of Spain's rail network - including a large section of the route the train had travelled from Madrid, do have the ETCS in operation, while the curve where the above derailment took place relies on a less sophisticated safety system known as ASFA⁵¹ which relies on a series of beacons to communicate with the driver's cab, and so does not have the constant communication of ETCS. The system gives audio and visual warnings to the driver, if a speed limit is surpassed, and will step in and brake the train if there is no response from the cab (ditto).

(2) Double track system

The derailed train was a Renfe class "S730," which can travel on both the Iberian gauge tracks used by most railways in Spain, and the standard gauge tracks on which the high-speed AVE⁵² services run. The type of train involved came into service within the last two years, and it is powered by a hybrid unit which can run off both electricity and diesel. The train would have left Madrid on high speed AVE track, before moving onto standard Iberian gauge track at Olmedo. At Ourense the train would have rejoined the AVE network, travelling towards Santiago on a newly constructed section of track which has the advanced train control system. However, the derailment occurred at the point where the high speed track transitions to the older railway network. The accident took place on the A Grandeira curve, which is just after a tunnel and follows around 80 km straight track. A video posted on El País's website shows the curve as the train emerges from the tunnel⁵³.

⁵⁰ Renfe (acronym of Red Nacional de los Ferrocarriles Españoles) is the state-owned company, created on Jan. 24, 1941. As per EU Directive 91/440, Renfe was divided into Renfe-Operadora (operations) and ADIF (infrastructure) on Jan. 1, 2005.

⁵¹ ASFA – "Anuncio de Senales y Frenado Automatico" or signal notification and automatic braking system.

⁵² AVE is the service of high-speed rail in Spain operated by Renfe Operadora, the Spanish national railway company, at speeds of up to 310 km/h.

⁵³ The Spanish journalist Miguel Murado told that there had been concerns about the bend since the line opened two years ago. "People who travelled in the train felt that it was dangerous that the train had to go from 200 km/h to 80 km/h in just a matter of seconds, and they felt that was a very difficult maneuver for the driver to execute (BBC News Europe, 2013)."

The Wall Street Journal (2013a) reported that the Spanish train driver was talking on his cell-phone when the train derailed at the tight curve. The court in the region of Galicia said, after reviewing the train's "black box" data recorder, that the driver, Garzón, had received a call from a co-worker of Renfe, a few minutes before the accident. The court stated that it seemed that the driver was consulting a map or a similar paper document, and that Garzón was driving the train at 190 km/h just before the wreck, and the brake was activated a few seconds before the accident.

(3) Background of the accident

According to the report, it is said that Garzón seemed to be checking where he was, from the cell-phone conversation. However, he had 30 years duty career in Renfe, and became a driver in 2000, and was in charge of the route of the accident for more than one year (Kyodo News, 2013c). As the background, it is also said that the train was running 5 minutes delayed and he might have tried to recover the delay by speeding up (Kyodo News, 2013a). Further, El Mundo (electronic edition) reported that the driver was proud of his experience that he had run at 200 km/h on the website a year before (Kyodo News, 2013b). This accident could be prevented if the management had realized the driver's characteristics of speeding, and had trained the driver appropriately. Additionally, modern technology of Automatic Train Control (ATC) system should have been installed beforehand. It seems that Renfe had saved the costs to install the modern ATC in that route, and in the competition against airlines, the executives might have forced the drivers to keep the time table. Therefore, the accident could be a state-corporate crime, though further investigations are needed.

3. The train derailment near Paris in Jul. 2013

(1) Outline of the accident

French President Francois Hollande said that at least 6 people were killed and 22 injured in a train derailment on Jul. 12, 2013, just south of Paris. Carrying about 370 people, the train was passing through the Bretigny-sur-Orge station. It did not have a scheduled stop there. Société Nationale des Chemins de fer Français (SNCF, French National Railroad Company) did not characterize it as a terrorist attack, but an accident. Hollande announced three investigations, a judiciary inquiry, an internal inquiry within SNCF, and an inquiry that will be handled by the State's Transport Ministry (Meilhan, 2013). On Jul. 13, 2013, SNCF showed the viewpoint that the malfunction of the point to let a track diverge as

for the train derailment. According to SNCF, it was recognized that some parts of the point came off. The SNCF executive explained that the train approached the station at usual speed at the interview with the TV station (CNN, 2013).

(2) Possible cause of the accident

If the above is correct, the maintenance of the rails was wrong. The SNCF operates the State's national rail services, including the "TGV," the high-speed rail network. Its functions include the operation of railway services for passengers and freight, and the maintenance and signaling of rail infrastructure owned by French Rail Network, Réseau Ferré de France (RFF)⁵⁴. RFF is the Public facilities corporation of the commerce and industry (EPIC⁵⁵) that performs railway infrastructure management. SNCF is also the EPIC which performs the services of the train, and the possession of the railway carriage. SNCF is divided into five branches according to the purposes⁵⁶. If the cause of the accident is malfunction of the point to let a track diverge, the problem is which party is culpable, RFF or SNCF Infra under SNCF.

(3) Top and bottom separation

Since EU ordered the top and bottom separation of national railways, national railways in most countries in Europe have been separated. The separation schemes are broadly divided into two. One is the financial separation scheme, which was applied in Sweden, Switzerland, Spain⁵⁷ and France. Strictly speaking, then, RFF is culpable in the accident. The other scheme was the case which introduces open access, in addition to the top and bottom separation, and there are plural upper part organizations. The examples of this scheme are in Germany⁵⁸ and the U.K.⁵⁹ Although the top and bottom separation

⁵⁴ It runs now in the following organizations by railway reform (top and bottom separation and the spinning off into separate companies) and the reorganization that began in 1997.

⁵⁵ Un établissement public à caractère industriel et commercial.

⁵⁶ One is SNCF Infra, which is in charge of the maintenance and management of the track and service. It manages its technical subsidiaries SNCF International, Systra and its subsidiary Inexia. In addition, SNCF has the companies more than 650, including distribution, communication, and transportation-related as the affiliations, and forms "French National Railways Group."

⁵⁷ In Spain, by the order of EU, Renfe was carried out the top and bottom separation on January 1, 2005: Renfe Operadora to take the role of train operation and ADIF (Railway infrastructure management mechanism in Spain) which manages the infrastructure of railway.

⁵⁸ The German railway was privatized and separated its top and bottom when the unification of the East-West railway organizations is made. The upper organization was divided into the companies such as a long distance, a short distance, night travel, and the freight. In addition, they introduced the open access and accepted track use for the new companies.

⁵⁹ In the U.K., they introduced top and bottom separation and open access on the occasion of British Rail's reform, but there is the criticism that the scheme invited many troubles due to the insufficient maintenances

policy of EU will not be withdrawn, the advantages and the disadvantages should clearly be understood by the organizations concerned, and the managements should overcome the shortcomings.

4. The scandals of JR Hokkaido in Japan

(1) Outline

The detrimental accidents to train service in the JR Hokkaido are frequently occurred since 2011, especially in 2013 (Table 2).

(2) Cause of accidents

The troubles that took place in the JR Hokkaido were regardless of the power system, of the age of the train, and the troubled locations were also wide-ranging. However, the lack of maintenance is pointed out as a common issue. The possibility that these troubles could have been prevented is high, as long as they had done the maintenance sufficiently. Since the fire accidents of the express occurred one after another, JR Hokkaido acknowledged, on Jul. 19, that there was a defect in their maintenance system of the vehicle, and that they would study the suspended services and the reduction of the number of vehicles in service in order to have a margin on maintenance, which they reported to the MLIT. The freight train derailment accident in Feb. 2012 had been reported that, because there was a possibility that the brake of the freight train is ineffective, it was allowed to enter the train from the main line to runaway at the derailment point of safety feature. From the findings later, the poor maintenance of wagons' brakes is suspected strongly. The next day of the derailment accident on Sep. 19, 2013, the headquarters of JR Hokkaido instructed investigations to all the field offices. Even though they had left the abnormality of the rail, the track maintenance management office reported "no abnormalities." This "lie" was the beginning of the recent series of the inspection data falsification. As the results of the internal investigation, it was found that the defects of the width of the rail being left were amounting to 270 points in total, despite the repairs were necessary.

(3) Lumbering bureaucracy

Since MLIT attached great view of the accident in May 2011, issued remediation instructions and order to improve operations of JR Hokkaido. MLIT included the

having been done by the company in possession and the management, and the service company of the track, separately. The example is said to be the casualty at Paddington in London suburbs on Oct. 5, 1999.

employee training, review of the manual for the fire trouble, business improvement in the technical management in the field departments and measures for the vehicle-side remediation instructions. As was carried out treatment corresponding to these, JR Hokkaido submitted the report in Sep. 2011 to MLIT. If they had established at this point a proper system, the possibility was high that they could have prevented those accidents thereafter. However, MLIT did not monitor the measures which JR Hokkaido had promised. According to the study of the Government Accountability Office in Oct. 2012, among vehicle inspections which JR Hokkaido conducted in 2011, safety regulations in the company had been violated by about 30 %; some tests were eliminated by about 900 cars; there were blank parts of the maintenance records of about 1,600 cars. Also as for the 50 maintenance works which had been subcontracted to their affiliates, the records of the maintenance had not been reported to JR Hokkaido.

The bureaucrats of MLIT might have considered that their responsibility was over when they issued the remediation instructions and order to improve the operations.

After the incident of the inspection data falsification in Nov. 2013, MLIT carried out a special security audit to JR Hokkaido. For the interview with NHK, some persons concerned testified that, because it was supposed to have a special security audit of MLIT being carried out after the derailment, the inspection data had been tampered with as were within the standard, immediately before the audit. After the audit, the internal investigation team found the raw data in the field notes were different from those of audited. Modus operandi for the inspection of the outside to falsify records, to destroy the records of truth, and to make a lie, is a typical statement of white-collar criminals. MLIT should have realized such systematic tactics of JR Hokkaido. Or, they have realized the entire situation, but concealed the facts, until mass media found and reported them, because they wished to keep some positions of parachuting in JR Hokkaido.

Section 2. Accidents of Commercial Aircraft

Since Orville and Wilbur Wright succeeded to fly the aircraft with an engine⁶⁰, it has passed more than 110 years. During that period, the technology of aviation has been

⁶⁰ It is said that on Dec. 17, 1903, Orville Wright made the first powered, controlled, and sustained flight of a heavier-than-air machine. Orville and his brother Wilbur made four flights on that day, the longest of which covered 260 m in 59 seconds (World Digital Library, 2013).

developed considerably, which involved more than 77 thousand sacrifices even since 1942 (Table 7). The onboard fatalities of worldwide commercial jet fleet seem to be declining since 2000, although the number of the accident rate does not change much (Fig. 5). Detailed analysis of recent accidents of commercial aircraft indicates that the probable causes of the accidents are broadly divided into four: pilot/crew error (Controlled Flight Into Terrain or CFIT) or the airline problem; structured problem of aircraft; air traffic control (ATC) or controller problem; and other problem, e.g., hijacking.

1. Pilot/crew error and airline problem

This category is the most frequent cause in the recent accidents, as shown in the Table 3. It can be divided into three: Crew Resource Management (CRM) issue, poor crew training, and the poor financial standing or poor management of an airline.

(1) CRM issue

More than one third of the pilot/crew errors results in the CRM problem, as exemplified in the right table.

The CRM issues are serious not only in the

Date of accident	Airline / Flight number	Type of aircraft
May 22, 2010	Air India Express Flight 812	B737-800
Jul. 28, 2010	Airblue Flight 202	A321-231
Aug. 16, 2005	West Caribbean Airways charter Flight 708	MD-82
Aug. 20, 2008	Spanair Flight 5022	MD-82
May 12, 2010	Afriqiyah Airways Flight 771	A330-200
Jul. 9, 2006	OAO Aviakompania Sibir Airlines Flight 778	A310-324
Apr. 15, 2002	Air China Flight 129	B767-200ER
Aug. 23, 2000	Gulf Air Flight 072	A320-212

developing countries, but also in almost all the airlines. The atmosphere in a cockpit may be different from ordinary conference room, but seems to be similar to the surgical operating room. In Japan, inter-communication is made between medical doctors and cockpit crews.

(2) Poor crew training

The examples of the accidents due to the poor training are shown in the right table.

Another important aspect of the crew training

Date of accident	Airline / Flight number	Type of aircraft
Nov. 12, 1996	Saudi Arabian Airlines & Kazakhstan Airlines	B747-100B & Ilyushin Il-76
Sep. 5, 2005	Mandala Airlines Flight 091	B737-230 Adv
Jun. 1, 2009	Air France Flight 447	A330-203
Nov. 12, 2001	American Airlines Flight 587	A300-600
Feb. 16, 1998	China Airlines Flight 676	A300-622R
Jun. 30, 2009	Yemenia Flight 626	A310-324
May 5, 2007	Kenya Airways Flight 507	B737-800

is about the man-machine interface. Since the computerized (fly-by-wire⁶¹ or fly-by-light⁶²) control system of aircraft has become popular, pilot's workloads could be reduced considerably. Launched into production in 1984, the Airbus A320 became the first aircraft to fly with an all-digital FBW control system. The benefits of the power-by-wire⁶³ are weight savings, the possibility of redundant power circuits and tighter integration between the aircraft flight control systems and its avionics systems⁶⁴. Airline crews are to be trained repeatedly, especially on the circumstances of emergency conditions in the air. In order to train pilots to operate cockpit equipment and expose them in an emergency circumstance, they can use flight simulators which are available under lease contracts⁶⁵. Aircraft manufacturers also provide training facilities and courses⁶⁶. However, some airlines, mostly in developing countries, do not own a flight simulator for the training. If there is an airline that saves money to train its pilots or maintenance staffs, or cannot afford to pay the training costs, such airline shall immediately give up staying in aviation business.

(3) Poor financial standings or poor management of airline

Date of accident	Airline / Flight number	Type of aircraft
Jan. 1, 2007	Adam Air Flight 574	B737-4Q8
Apr. 20, 2012	Bhoja Air Flight 213	B737-236
Dec. 25, 2003	Union des Transports Aériens de Guinée Flight 141	B727-223
Jan. 8, 1996	Air Africa aircraft, wet leased from Moscow Airways	Antonov An-32B
Aug. 14, 2005	Helios Airways Flight 522	B737-31S
Jan. 3, 2004	Flash Airlines Flight 604	B737-300

Poor financial standings or poor management of airline cause severe accidents. The

⁶¹ A fly-by-wire (FBW) system replaces manual flight control of an aircraft with an electronic interface. The movements of flight controls are converted to electronic signals transmitted by wires, and flight control computers determine how to move the actuators at each control surface to provide the expected response.

⁶² Fly-by-light uses fiber optics, instead of wire.

⁶³ A power-by-wire system eliminates the mechanical transmission circuits in fly-by-wire control system, which can eliminate the bulky and heavy hydraulic circuits. This system is used in the Airbus A380 backup flight controls. The Boeing B787 also incorporates some electrically operated flight control (spoilers and horizontal stabilizer), which remains operational with either a total hydraulics failure and/or computer failure.

⁶⁴ FBW system like the Airbus A330-200 had some disadvantages compared to the manual system, e.g., in case the computer of the FBW system and the pilot maneuvered something opposite, the computer prevailed against the pilot (so called "alpha-protection"). The crash of Air France Flight 296 was a famous example. After some accidents, Airbus Industries modified the system "to increase the flight crew's authority." The next step is fly-by-wireless, which reduces the installation and maintenance costs of wiring.

⁶⁵ The examples of the companies of the flight simulator leasing and training are FSC, Amsterdam, SimRent Training Center, Amsterdam, WCC Aviation Company Hangar, Philippines, and so on.

⁶⁶ The Boeing Training & Flight Services have a network of 100 full flight simulators in 13 countries in all the continents, and the Airbus Customer Services Training Centers have the training courses not only specific to flight crews, maintenance staff and cabin attendants, but also for structure repair specialists, etc.

examples of such accidents are as above.

The requirements for obtaining an AOC⁶⁷ generally include the proof that the operator has sufficient finances to fund the operation. ICAO codifies the principles and techniques of international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth. However, they are controlling more technical side than the airline's financial standings. On the other hand, the mission of International Air Transport Association (IATA) is to represent, lead and serve the airline industry. The aim of IATA is to provide safe and secure transportation to its passengers. However, they don't intervene in the analysis and warning about the financial standings of airlines. The only institutions that can announce publicly yellow or red signal in respect of airline's financial situation, are a few credit rating agencies, e.g., Moody's Investors Services, Standard and Poor's (S&P), and Fetch Ratings. They assign credit ratings, which is called the "Ratings Service." However, in the wake of the financial crisis of 2007–2010, the above big three rating agent made serious "failures⁶⁸." Therefore, we need an international organization that is watching the operation of airlines, especially financial matters, rather than technical matters. Then, the travelers can avoid risky airlines when they fly, after reading their reports on the website. That organization should be independent from any nation, and the members who audit airlines should be lawyers and certified public accountants who have no relation with an airline.

2. Structured problem of aircraft

Some accidents were caused by the failure of the aircraft structure, such as faulty design, failure of maintenance, lack of parts, etc. Typical examples of such accidents are tabulated in Table 4. The blackboxes are the most important tools to investigate probable causes of accidents, along with the survivors' testimonies. However, there were at least 15 cases that the investigators could not locate the blackbox, after the accidents (Table 9). Some of them still exist in the deep water, and others have been destroyed upon crashes,

⁶⁷ The Air Operator's Certificate (AOC) is the approval granted from a national aviation authority (NAA) to an aircraft operator to allow it to use aircraft for commercial purposes. This requires the operator to have personnel, assets and system in place to ensure the safety of its employees and the general public.

⁶⁸ Their failures were "essential cogs in the wheel of financial destruction," as described in the "conclusions of the Financial Crisis Inquiry Commission" (Financial Crisis Inquiry Commission, 2011).

or might have been stolen by some local people⁶⁹.

3. ATC problems

The key of air traffic control (ATC) is the combination of the language capability and the equipment to control aircraft. It was reported that many controllers in the countries where English language is not the mother tongue have problem of English command, and could not communicate well with foreign pilots. In addition, they sometimes do not have a modern electronic equipment to control many aircraft simultaneously. Then, it is quite natural that collisions in the mid-air or on the runway may occur frequently, especially in the low visible conditions. Even if the ATC staff that made a mistake is punished or incarcerated, the problem would not be solved. Similar accident would occur frequently. The lizard's tail off system does not work to eliminate such accident as the collision of Gol Transportes Aéreos Flight 1907 (Table 5). The most effective measure is to punish the head of the airport, who saved the cost to replace the equipment by new one. If the airport is owned by the government, the bureaucrat who is responsible to control the airport should be punished. The old fashioned equipment of an airport is a major cause of these accidents, although the causes of most of these accidents have been regarded as the pilot errors⁷⁰.

4. Other causes

As the other causes of aircraft accidents, there are bird strikes, suicides of pilots, high jacking, natural phenomena, etc. (Table 6).

In the case of the crash into the Atlantic Ocean of EgyptAir Flight 990 on Oct. 31, 1999, the two institutions, NTSB and ECAA, provided different investigation reports, which was not rare under the conflict of interests. One of them did not officially accept the liability

⁶⁹ In order to avoid such troubles, the author would propose a new system. Applying modern tele-communication technology, the flight data, voices in the cockpit, and the conversation between the cockpit and the ATC, shall be transferred to large computers (possibly cloud computers), through some communication satellites, from the departure out of the hunger to the cease of engines after landing. It is easy to fix a sort of encrypting and the password system to keep the security of the data, which can be kept confidentially by the airline. The database of such information can only be utilized by the authorized institutions or law enforcement agencies when the aircraft was hijacked or crashed. In this system, the data are transferred to the computer with the velocity of some megabits per second, all the time, automatically. Therefore, the heavy blackboxes will not be necessary any more. Even if an aircraft safely lands on an airport, the airline or the crew may require analyzing the flight information, to study and discuss the performance of the aircraft or crews.

⁷⁰ It is normal that an institution of investigation tends to attribute the cause of accident to the dead pilots, considering the live executives of manufacturers, airport authority, or head of ministry will not be punished. It is true that the dead can't speak a word.

of its own State, and tended to attribute to a mechanical or structural cause, while the other report opposed. This is based on the misunderstanding of the interpretation of ICAO Annex 13. Sometimes police officer or prosecutor applies the investigation report based on ICAO Annex 13, to indict criminal suspects (e.g. pilots, maintenance manager, and ATC staff) or organizations (e.g. airline, and aircraft or engine manufacturer)⁷¹. Once the final report of the investigation is published, the law enforcement agencies review it as a material to support their scenario of criminality. Therefore, recent investigation reports do not drill down on the criminality of individuals except dead crews, but describe a lot of recommendations to some organizations concerned. This approach may be effective for the mechanical or structural causes of aircraft. As for CRM causes, however, such recommendations are not effective at all, because the report does not have a compelling power to any organization. Law enforcement agencies also do not consider such recommendations seriously. In general, it is also true that law enforcement agencies are neither skillful nor knowledgeable in aircraft accidents, because most of these accidents are not street crimes but white-collar crimes (except hijacking).

5. Summary

(1) General

As indicated in Fig. 6, the frequency of accidents with 100 or more fatalities was about four per year from 1975 to 2005, as the 5 year moving average. It has become two per year in the last five years. Although the technical development of aircraft in these decades has been remarkable, the proportions of causes of fatal accidents have not changed much since 60 years ago (Table 8). The problem is that the human error which shares about a half of the accidents, have not been reduced substantially. Bad weather has caused some accidents; however, most of them have occurred near landing airports, and have been regarded as pilot errors. Though the accidents caused by hijackers occurred frequently in some areas, the number of hijacking has decreased recently, because of sever checking luggages at the airports. The types of crashed aircraft, the manufacturers, and the nationalities of the aircraft have a wide variety. The locations where the accidents occurred were mostly in or around airports. As the result of studying

⁷¹ ICAO Annex 13 says that “Objective of the Investigation, 3.1: The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability” (ICAO Annex 13, 2010, Chapter 3: General).

the severe accidents, the immediate targets to prevent aircraft accidents are the CRM issues, the language skill of the crews, and the man-machine interface.

(2) CRM issues

The CRM is the key to reduce human errors of the crew members in the aircraft accidents. Airline executives should study CRM and spend more time and money in CRM training. Robert L. Helmreich, Ashleigh C. Merritt and John A. Wilhelm describe that CRM training has evolved since 1970s (Helmreich, Merritt & Wilhelm, 2001)⁷². The roots of CRM training and the first generation was the Cockpit Resource Management. In Europe, the research of Elwin Edwards (1972) was translated into human factors training at KLM Royal Dutch Airlines in the late 1970s. In the U.S., the roots are traced back to the conference, Resource Management on the Flightdeck⁷³ sponsored by the NASA in 1979. The first comprehensive U.S. CRM program was initiated by United Airlines in 1981, of which model was the “Managerial Grid,” developed by psychologists Robert Blake and Jane Mouton (Blake & Mouton, 1994). The second generation was the Crew Resource Management. By mid of 1980s a growing number of airlines in the U.S. and around the world had initiated CRM training and many reported on their programs. Basic training conducted in intensive seminars included the concepts such as team building, briefing strategies, situation awareness and stress management. The third generation was broadening the scope. In the early 1990s, CRM training began to proceed down multiple paths. Training began to reflect characteristics of the aviation system in which crews must function, including the multiple input factors such as organizational culture that determine safety. Many airlines began to conduct joint cockpit-cabin CRM trainings. The FAA introduced a major change in the training and qualification of flight crews in 1990 with the initiation of its Advanced Qualification Program (AQP⁷⁴). In exchange for this greater flexibility in training, carriers are required to provide both CRM and Line Oriented Flight Training (LOFT)⁷⁵ for all flight crews and to integrate CRM concepts into technical training.

⁷² This work was supported by FAA Grant 92-G-017. Portions of this paper were presented at the IATA Human Factors Seminar, Warsaw, Poland, on Oct. 31, 1996, and the ICAO Regional Safety and Human Factors Seminar, Panama City, Panama, on Nov. 20, 1997.

⁷³ At this meeting, the label Cockpit Resource Management was applied to the process of training cockpit crews to reduce “pilot error” by making better use of the human resources on the flightdeck.

⁷⁴ AQP is a voluntary program that allows air carriers to develop innovative training that fits the needs of the specific organization.

⁷⁵ LOFT means the line training that the crew of ordinary flight performs using the flight simulator, in order to improve the CRM implementation capacity, and it includes normal flight conditions, abnormal conditions, and emergency situation that may occur.

It is the premise that human error is ubiquitous and inevitable, and a valuable source of information, i.e. CRM, is available as the error management. If error is inevitable, CRM can be seen as a set of error countermeasures with three lines of defense: the first is the avoidance of error; the second is trapping incipient errors before they are committed, and the last is mitigating the consequences of those errors which occur and are not trapped.

Geert Hofstede⁷⁶ has defined dimensions of national culture, several of which are relevant to the acceptance of CRM training. High power distance⁷⁷ cultures, such as China and many Latin American countries, stress the absolute authority of leaders. Subordinates in this culture are reluctant to question the decisions and actions of their superiors, because they do not want to show disrespect. In contrast, highly individualistic cultures such as the U.S. stress independence from the group and priority for personal goals. Individualists may cling to the stereotype of the lone pilot braving the elements and be less attuned to the group aspects of flightdeck management. The uncertainty avoidance refers to the need for rule-governed behavior and clearly defined procedures, of which cultures may be much more accepting CRM concepts that are defined in terms of required behaviors, in Greece, Korea, and many Latin American countries. The U.S. is low in uncertainty avoidance. Management of cockpit automation is also influenced by national culture. Pilots from high power distance and/or uncertainty avoidance cultures show more unquestioning usage of automation, while those from cultures in low power distance show a greater willingness to disengage. The low uncertainty avoidance of the U.S. pilots may account for frequent failure to complete checklists and the imperfect acceptance of proceduralized CRM.

⁷⁶ Geert Hofstede (1928 -) is an influential Dutch scientist in the fields of organizational studies and organizational culture, who is also a well-known pioneer in his research of cross-cultural groups and organizations and played a major role in developing a systematic framework for assessing and differentiating national cultures and organizational cultures.

⁷⁷ Brett Rutledge mentions the thought on the website as follows (Rutledge, 2011). Power distance refers to the way in which power is distributed and the extent to which the less powerful accept that power is distributed unequally. In a high power distance culture, the relationship between bosses and subordinates is one of dependence, while in a low power distance society, the relationship between them is one of interdependence. Australia, for example, is a low power distance state, while Asian countries, e.g. Hong Kong, are at the high power distance side of the spectrum. People in high power distance countries tend to believe that power and authority are facts of life. Both consciously and unconsciously, these cultures teach their members that people are not equal in this world, and that everybody has a rightful place, which is clearly marked by countless vertical arrangements. They seldom challenge their leader's power. In lower power distance countries, there is a preference for consultation, and subordinates will quite readily approach and contradict their bosses. The parties will openly work towards resolving any dispute by stating their own opinions. If they cannot come to a satisfactory conclusion, they may choose to involve a mediator. Leaders actually encourage independent thoughts and contributions to problem solving and expect to be challenged.

Chapter 4. Pharmaceutical Disasters

Section 1. The triangle of corruption

The major medication scandals are listed in the Table 10. Some of them are criminal offences and analyzed in depth below.

1. HIV-tainted blood scandal in Japan

This incident, which produced a lot of Acquired Immune Deficiency Syndrome (AIDS) patients between the late 1970s and 1980s, was caused by the administration of the unheated blood products that Human Immunodeficiency Virus (HIV) is mixed, for hemophilia patients⁷⁸. The cause of HIV/AIDS scandals is that the raw material of blood from foreign donors who had been infected with HIV, was used to produce blood clotting factors, and distributed it without the inactivation of HIV. It was used in therapy for the hemophilia patients widely in Japan. Among them more than 600 patients were killed by AIDS. The culpability of the parties concerned is why they did not withdraw the blood products of unheated formulation earlier from the domestic pharmaceutical market. If they could have withdrawn it earlier, hundreds of patients would not have been killed.

(1) Criminal actions

In Aug. 1996, Takeshi Abe⁷⁹, the former doctor of Teikyo University Hospital, former three executives⁸⁰ of the ex-Green Cross Corporation and Akihito Matsumura, the former biologics manager of Ministry of Health and Welfare (MHW) were arrested and were prosecuted a few months later for the professional negligence and involuntary manslaughter. A hemophilia patient treated with unheated blood products in Teikyo University Hospital died of HIV infection in 1985, and another patient with hepatic impairment, administered unheated blood products of Green Cross at a hospital in Osaka died in 1986. The charge of T. Abe was not the distribution of unheated blood, but the

⁷⁸ It is said that about 1,800 people (about 40 % of total hemophilia patients in Japan) were infected with the HIV by the unheated blood products.

⁷⁹ Takeshi Abe (1916 – 2005) was a medical doctor and the former vice president of the Teikyo University. He was known as the authority on hemophilia treatment, and served as the group leader of the AIDS research group in Ministry of Health and Welfare, which was established in 1983.

⁸⁰ Three defendants of the Green Cross Corporation were the former president, Renzo Matsushita, the former vice president, Tadakazu Suyama, and the former executive director, Takehiko Kawano.

involuntary manslaughter of the patient by administering an unheated blood contaminated with HIV, in his hospital. The judgment of the trial was that the three accused of ex-Green Cross were imposed actual prison sentence⁸¹ (in 2000), T. Abe was acquitted (in Mar. 2001), and A. Matsumura was handed down one year imprisonment, two years' probation (in Sep. 2001). T. Abe, however, suffered from dementia during the appeal and the trial was stopped in 2004. He died in April 2005. The Supreme Court dismissed the A. Matsumura's appeal (in March 2008).

(2) Civil actions

In Osaka (in May 1989) and in Tokyo (in Oct. 1989), the victims brought civil suits against MHW that had approved the unheated blood products and the five pharmaceutical companies⁸². In Oct. 1995, both District Courts presented the first settlement offer of a lump sum payment of 45 million yen per plaintiff. MHW showed relief responsibility, but denied the responsibility of the perpetrator. On Feb. 9, 1996, Naoto Kan, then Minister of MHW, announced that so-called "Gunji file" was found on Jan. 26, 1996, and apologized to the plaintiffs on Feb. 16. On Mar. 7, 1996, both District Courts presented the second settlement offer to pay 150,000 yen a month to those who develop AIDS. During Mar. 1996, five companies and the government announced to accept the offer, and on Mar. 20, the plaintiffs also decided to accept it.

(3) Shareholder lawsuit

In Jul. and Aug. 1996, two sets of shareholders of Green Cross filed civil damages suit in the Osaka District Court, for the reason that the company's directors had given the company a loss of monetary payment under the settlement of HIV-civil litigation, through the violation of the duty of care the job performance. Based on the settlement proposal of the court, the settlement was agreed among the plaintiffs⁸³, the defendants and Mitsubishi

⁸¹ Renzo Matsushita was sentenced to 18 months imprisonment, Tadakazu Suyama 14 months, and Takehiko Kawano's appeal was rejected due to his death at the age of 71.

⁸² The pharmaceutical companies that have been sued at this time for the manufacturing and sales were the Green Cross (currently Mitsubishi Tanabe Pharma Corporation), and the Chemo-Sero-Therapeutic Research Institute. Baxter Ltd. (Baxter Travenol Co., Ltd.), Japan Organ Pharmaceutical Co., Ltd. and Bayer AG (merged with Cutter Ltd.) were filed for their import and sales. In addition, Otsuka Pharmaceutical Co., Ltd., which was a sales agency of unheated blood products made by the Cutter Japan, and Sumitomo Chemical Co., Ltd. (currently Dainippon Sumitomo Pharma Co., Ltd.), which was an import sales agency of the same type of products made by Baxter, also had sold the unheated blood products, but both companies were not filed.

⁸³ Summary of the settlement contents were as follows (Mitsubishi Pharma Corporation, 2007): (a) The nine defendants shall pay 100 million yen settlement in total to the Mitsubishi Pharma Corporation; (b) Mitsubishi Pharma shall analyze the causes of the incident committed by the Green Cross, and summarize the

Pharma Corporation as the interested party on Mar. 13, 2002.

(4) Overseas actions

Damage of HIV infection by unheated blood products occurred worldwide, but it was the worst in France, where it became the situation to pursue criminal charges as well as Japan. In France, like the tainted blood scandal in Japan, large scaled incidents of HIV infection by blood products as the raw material or its blood contaminated with HIV have occurred (Kitamura, 1997)⁸⁴. Infection by blood collected from prisoners has become a problem in Canada, but did not become a criminal investigation.

(5) MHW

Table 11 indicates the chronicle of HIV/AIDS scandals mostly in Japan. Here, three aspects are focused: MHW, former Green Cross Corporation, and T. Abe. The history of HIV/AIDS incident goes back to Sep. 1982, when the U.S. Centers for Disease Control and Prevention (CDC) realized the risk of propagation of a rare disease through blood products, and pointed out it to pharmaceutical companies, and named the disease "AIDS." About a half year later, the U.S. Food and Drug Administration (FDA) approved the heated blood product made by Travenol Co. in the U.S., in Mar. 1983. They promoted it to MHW. MHW, however, did not consider it seriously. MHW celebrated that Kazumi Mochinaga, Chief of Pharmaceutical Practice Bureau of MHW, was appointed the president of Green Cross Corporation⁸⁵. In May 1983, MHW approved unheated blood products of Travenol and Japan Organ. In Jul. 1983, however, MHW decided that heated formulation should be processed in the Pharmaceutical Council, which took time to approve. AIDS Investigating Team in MHW, led by T. Abe, also concluded that the issue of blood products should be left as it was. Under a strong pressure or a connection among MHW, T. Abe and pharmaceutical manufactures, the policy about blood products had changed to the risky, dangerous direction. In Aug. 1983, MHW organized a committee to study the change to Clio formulation, in the AIDS Investing Team. However, the head Mutsumi Kazama was threatened by T. Abe not to change to Clio, and the committee did not work at all. MHW

preventive measures as the recommendation; and (c) Mitsubishi Pharma shall report the above to the shareholder

⁸⁴ The damage in France was wider than in Japan, i.e. about 45 % of hemophilia patients were infected with HIV, and further, the number of infected people due to blood transfusion of other than hemophilia patients is estimated to have reached from 4,000 to 5,000. CNN reported that as of July 5, 2002, hundreds of people were killed.

⁸⁵ This parachuting from the "heaven" into an executive position of a private pharmaceutical company was the root of the series of scandals.

finally accepted heated formulations of four pharmaceutical companies simultaneously, in Jul. 1985. In Oct. 1990, MHW abolished the Biologics Section, and instead, established Blood Business Response Office in MHW. From Apr. 1993, the government started to pay the victims of HIV/AIDS problems a small amount of money. Finally, Naoto Kan, former Minister of MHW, apologized in Feb. 1996. Then after, Public Prosecutors Office arrested and indicted some suspects, including T. Abe, A. Matsumura, and the former presidents of Green Cross.

The decision-making process of the government has generally been the target of criticism of society. A ministry has constituted a council or committee to collect always the expert panelists who are convenient for administrative side, to let them out the report in line with the measures and policies of their own, and to avoid their responsibilities in any important projects. It is not limited to the MHW, but also the same in Ministry of Economy, Trade and Industry⁸⁶. The nature of Japanese politics is that government bureaucracy is deciding the politics. Administrative officers let the experts say the opinion which is in line with the officers, and implement such measures, i.e. the scheme so-called “political council” goes unchallenged.

(6) Green Cross Corporation

The Green Cross was created by Ryoichi Naito (1906 – 82)⁸⁷, as the private blood bank “Japan Blood Bank,” in 1950, and changed its name to Green Cross Co., Ltd. in 1964. In Nov. 1982, Alpha Therapeutic Corporation in Los Angeles reported the risk of blood contamination of donors to its parent company, Green Cross. However, Green Cross ignored it⁸⁸. In Jul. 1983, Alpha Therapeutic Corp. requested Green Cross to send a risky lot back. Green Cross, however, ignored the request again, and the dangerous product was delivered to many hospitals and clinics. In Feb. – Mar. 1984, Travenol, Cutter and one more started the pharmaceutical test of heated formulation in Japan. Green Cross finally started the test in Jun. 1984. Because of the delay of the Green Cross’s development, MHW approved the heated formulation as late as Jul. 1985, which was two

⁸⁶ For example, the construction and operation of nuclear power plants, and the measurements with regard to risky events, e.g. earthquakes, it has been exactly the same response.

⁸⁷ Naito was a surgeon of the Army and in charge of biological warfare during the World War II. It is said that he was close to Shiro Ishii (1892 – 1959) who created the Kwantung Army Unit 731 in 1936, where various biological human experimentations and the developments of biological weapons were made.

⁸⁸ At the same time, the corporate lawyer of Cutter in the U.S. recommended Cutter that “AIDS-related warning message” should be printed on the blood product boxes, in order to prepare for the trial which would become inevitable.

years and four months later than in the U.S. One of interesting thing of Green Cross is that they changed its name and organization through a merger and acquisition, being absorbed, spin-out, establishing a holding company, and so on (Fig. 7). Considering the timing of litigations or criminal investigations, arresting and conviction of the former presidents, they tried to lessen the bad images of the company, through changing the name of the company⁸⁹.

(7) Takeshi Abe

By Jun. 1983, T. Abe recognized the risk of infection by unheated blood products that relied on imports, and wanted to inactivate the virus of imported blood, by the heating for 10 hours at 60°C. It was a good insight in early 1980s. However, he changed his mind during the following several months, when he received 43 million yen donations from five pharmaceutical companies, as the fund of the “Organization for Diffusion of Comprehensive Hemophilia Treatments.” Although his patient in Teikyo University Hospital died in Jul. 1983, he continued to argue that the risk of unheated formulation was quite small. In Aug. 1983, Dr. Thomas J. Spira in CDC certified that the case of Teikyo University was AIDS patient. In Jun. 1984, T. Abe sent the serum of 48 hemophilia patients to Dr. Robert Charles Gallo of the National Cancer Institute of the U.S. As the result, it was informed that two people died were AIDS patients, and 21 people were found to be HIV-infected. In Nov. 1984, the second hemophilia patient in Teikyo University Hospital died. However, it was in middle of requesting the second large scaled donation to the pharmaceutical companies, under the name of the working capital of the 4th International Symposium on Hemophilia Treatment⁹⁰ that T. Abe held⁹¹. In Apr. 1994, a hemophilia patient accused T. Abe to the Tokyo District Public Prosecutors Office of the attempted murder. In Aug. 1996, T. Abe was arrested and his home, the Teikyo University and MHW were searched and investigated.

In the first instance judgment in 2001, Tokyo District Court acquitted, despite the prosecutors demanded three years in prison. In the ruling, it is said that the official position of the researchers around the world was not clear in various aspects at the time in 1985, e.g. the meaning of the antibody-positive, the nature of HIV, and the recognition of a

⁸⁹ Further, they organized the holding company which owns actual business companies; thus shareholder derivative action does not occur against those business companies.

⁹⁰ It is understandable that a sort of agreement was made with Green Cross during this donation negotiation, e.g. to postpone the approval of heated formulation until Green Cross complete the development.

⁹¹ The pharmaceutical companies paid 25 million yen in total.

danger⁹². The prosecutor appealed the acquittal, but the trial was stopped due to the onset of dementia and heart disease, and T. Abe died on Apr. 25, 2005 at the age of 88⁹³. It was clear that T. Abe intentionally delayed the propagation AIDS prevention by adding the allowance to the progress of the clinical trial of heating Factor VIII preparations. From the intention to expand the self-injection therapy that had been promoting at the center, while receiving huge amount of donation from the related pharmaceutical companies⁹⁴, the defendant, T. Abe, strongly opposed to the emergency evacuation or conversion to Clio formulation. It is a shame in that the truth of his criminality did not become clear, because the complaint was dismissed by his death.

Since the causes led to the unprecedented damages of “medication scandals of HIV/AIDS,” located on the adhesion of three: pharmaceutical companies, government, medical authorities, and the medication scandals was entangled in complex interests of the triangle of corruption, it has continued to be referred to as the “structured” medication scandals or “complex chemical injury” (Fig. 9)⁹⁵.

2. Hepatitis C caused by Fibrinogen

Hepatitis C is one of the viral hepatitis to develop it by infection with Hepatitis C Virus (HCV). The number of current HCV infection in Japan is about 2 million people⁹⁶, and 170 million in the world seems to be carriers (about 3 % of the world’s population). Infection by blood is the main route of HCV infection, which was many in the past⁹⁷.

(1) Pharmaceutical disaster of hepatitis C

⁹² At the court, it was pointed out the responsibilities of scholars in the leadership position should be heavier than those of the other scholars and the general doctors. In the closing argument, the prosecutor pointed out severely that even though the defendant had been aware of the danger of infection, he adhered financially to the pharmaceutical companies, refused to shift to a safer preparation, and did neither apology nor reflection.

⁹³ If T. Abe would have discontinued the use of unheated blood products, and adopted alternative treatment with safe preparation Clio, the possibility that the appropriate medical standards could be formed was very high.

⁹⁴ During from 1983 to 84, the related pharmaceutical companies provided T. Abe 68 million yen. Including the contributions of others, the amount provided to him in three years was more than 100 million yen.

⁹⁵ In the criminal trials, the facts and evidences of each trial that appeared to the court affected each interact to three trials mutually. It is meaningful to find the “truth” in the “medication scandals,” but in terms of clarifying the “whereabouts of liability,” these trials gave ambiguous results.

⁹⁶ In Japan, type “1b” is 70 - 85 %, for which interferon is not effective to treat, type “2a” is 10 - 15 %, and type “2b” is about 5%. However, type “1a” is often in hemophilia patients. This is because Japan imported blood products for hemophilia patients from the U.S., and in the U.S., HCV type “1a” was the most popular.

⁹⁷ Since strict inspection system has been established and spread of disposable syringe in developed countries at present, HCV infection is rare. The infection due to needle stick injuries, tattoos, and the stimulant injection are the major causes at the moment.

The pharmaceutical disaster of hepatitis C is the damage caused by the infection of hepatitis C⁹⁸. Mitsubishi Tanabe Pharma estimates that about 290,000 people were administered Fibrinogen, and that more than 10,000 people have been infected with hepatitis C. Table 13 indicates the blood products that caused the infection of hepatitis C.

(2) Lawsuits

Table 12 indicates the chronicle of the incidents that HCV is mixed in blood coagulation Factor IX and Fibrinogen. In accordance with the Pharmaceutical Disaster of Hepatitis Victims Relief Special Measures Law of Jan. 2008, it was decided that almost all the HCV infection victims would be relieved uniformly. However, in order not to repeat similar pharmaceutical incident, the final recommendation of the Validation Committee for the prevention of recurrence was submitted on Apr. 28, 2010, in which it was noted that a third-party organization to perform the monitoring and evaluation of pharmaceutical drug safety and the administration strictly from the standpoint fair neutral, should be installed as an organization that is independent from the Ministry of Health, Labor and Welfare (MHLW)⁹⁹.

(3) Culpability of MHW and the pharmaceutical companies

Since the judiciary has a greater emphasis on the proof of causation, such as timing of dose or type of pharmaceutical, it is natural that at the first place there is a limitation in terms of uniform relief of patient victims¹⁰⁰. The reason unforgivable in the triangle of corruption is the theory of bureaucracy that the collusion with pharmaceutical companies took precedence and gave priority to business of the pharmaceutical companies that continue to sell dangerous drugs, rather than consideration of patients' lives and the HCV infection. The trials of the tainted blood hepatitis incidents taking place in various locations were the administrative and civil trials. Any criminal trial has not yet been done. In the tainted blood scandals of HIV/AIDS, there was a precedent that MHW was hiding a lot of information, and the responsible person at the time was criminally prosecuted. In hepatitis C scandals, there was also similar composition as the case of

⁹⁸ The hepatitis C (non-A, non-B hepatitis) was caused by the administration of the blood clotting factors, fibrinogen, unheated Factor IX and unheated Factor VIII preparations.

⁹⁹ However, as of Mar. 2014, the legislation to set up such a third-party organization is not foreseen.

¹⁰⁰ The trials were conducted in five locations nationwide, and judgments were also falling apart, because there were differences in the thinking of the judges. In the first place, to exceed the wall of justice is the role of politics. Because there was a limit in the judicial decisions to resolve the pharmaceutical problem of hepatitis, the decision of then Prime Minister Fukuda was quite natural. When he ordered to achieve all uniform relief of hepatitis C tainted blood victims by the lawmaker-initiated legislation, the first step toward resolution has been taken.

HIV/AIDS caused by contaminated blood products. There is a possibility that there was a cover-up in order to escape the criticism of inaction.

As for the problem of “418 patients’ list¹⁰¹” being left in the warehouse underground, the investigation team in the MHLW organized by Kyoko Nishikawa, Deputy Minister, reported simply that “there was not an administrative responsibility, while such reflection was necessary that they should have noticed the fact of infection to the person listed¹⁰².”

The pharmaceutical disaster of hepatitis C is very similar to the tainted blood scandal of HIV/AIDS that occurred about 10 years before. The manufacture and sale of blood products was the same ex-Green Cross. Since MHW made a survey about the dangers of the hepatitis C when it out broke in Aomori Pref. in 1987, there was no doubt that as well as HIV, they also observed the dangers of HCV.

As the lesson of the tainted blood scandal¹⁰³, bureaucracy itself has learnt that they will be tried by an omission. As the result of this learning, they decided to hide the “418 patients’ list.” Because they had known the personal information of the patients, they were probably afraid of the “omission of notice.” If MHW notified the fact to the patients, it meant that they admitted the mistakes of their own that they had authorized the Fibrinogen. Conversely, if they did not notify the fact, they took the risk of being accused of inaction. It was the act in that dilemma that they hid the list in the underground warehouse.

In the hepatitis C scandal, the number of infected person is more than 10,000 which is huge in comparison with the case of HIV/AIDS. National responsibility and that of pharmaceutical companies that did not take any appropriate measures in a timely fashion, while recognizing the risk of infection, are extremely heavy. It is natural and necessary for the person in charge in both MHLW officials and pharmaceutical companies to bear the criminal responsibility accordingly. The “crime of omission” is that a person does not do anything in the presence of danger. This will be a true criminal offense. The problem is

¹⁰¹ In Aug. 2002, during the survey of the investigation report on the HCV infection caused by the fibrinogen formulation, MHLW received the document from “Mitsubishi Pharma” (former Green Cross, currently Mitsubishi Tanabe Pharma), which included personal information of 418 individuals who had been infected with hepatitis C by fibrinogen. The information of each individual includes the address, the name or initial, the date of administration, symptoms, and the name of the medical institutions (MHLW, 2007).

¹⁰² Further, they said, “Although there was no intention of hiding the information, the management of information was very sloppy” and therefore disposed the light admonishment to the three staff members who left the list of patients. The sweet disposal to the internal members gives bitter taste to the public.

¹⁰³ The omission (or inaction) of bureaucracy was tried as a criminal case in the tainted blood scandal of HIV/AIDS. The bureaucrats of MHLW knew all the story of this trial with a strong impact, because, a bureaucracy individual was arrested on charges of professional negligence resulting in the death crime by “omission,” was prosecuted, and convicted, for the first time in history.

that the party in question itself does not allow the omission. In the hepatitis C incident, for example, MHW had been saying consistently that “to announce to the patients was not the work of government, but the work of doctors.” They never confess the omission.

Section 2. Inaction of MHW

1. Creutzfeldt-Jakob disease (CJD) due to dried human dura mater

On the dried human dura mater¹⁰⁴ which B. Braun¹⁰⁵ in Germany and others manufactured and sold (e.g. “Lyodura”), there was the possibility that the donor had been contaminated with abnormal prion¹⁰⁶. However, neglecting the selection of donors and proper sterilization, they continued to sell, and the patients who received transplants in the dural suture at the time of brain surgery, due to head injury, developed CJD in Japan and the U.S. Most of the patients died. Later, it was concluded that the iatrogenic onset of CJD by transplant of dried dura. In Feb. 1987, FDA detected the abnormal situation, and prohibited the use of dried human dura mater. The U.K. also prohibited in 1989. In Japan, however, MHW continued to approve importing it as a medical device, without considering FDA’s prohibition, until 1997, when WHO issued a ban to use it. As the medication disaster, the damages have been filed against the MHW and the manufacturing and sales companies in various locations, starting with the litigation in Otsu City in 1996. The settlement to pay compensations was established among German company, the government of Japan and the victims in Mar. 2002 (Sato, 2002). According to the paper (Brown, Preece, Brandel, et al., 2000), 141 CJD cases have been reported, due to the dried human dura mater¹⁰⁷.

Dried human dura mater, Lyodura, of Germany B. Braun had been contaminated with CJD pathogen. Because it is the product of the material of human cadaver tissue, originally, it is not strange that various pathogens are lurking. The culpability of B. Braun was that they did neither select the cadaver as the donor, nor keep records of donors, which meant that it was impossible to keep tracks of history; it had not been processed by

¹⁰⁴ The dura maters that were excised from the brain of the dead were commercialized.

¹⁰⁵ B. Braun Melsungen AG is a German medical and pharmaceutical company, which has offices and facilities in more than 50 countries. The company, founded in 1839, is still owned by the Braun family. The headquarter locates in the small town of Melsungen, in central Germany.

¹⁰⁶ It is a high risk of transmissible spongiform encephalopathy.

¹⁰⁷ Among them, 90 cases have been described as onset cases in Japan (more than 60 %).

the individual in the manufacturing stage, i.e. they kept all the dura maters of 300 persons in a single plastic bag; and they did not fully sterilize¹⁰⁸. In 1987, after the first case was reported in the U.S., they changed to sodium hydroxide sterilization method; however, they did not recover the dangerous products manufactured earlier, but continued to sell them. B. Braun was accused of its irresponsible behavior, forgetting the responsibility of the company. In Japan, Niigata University reported the 4th case in the world, on Neurology Magazine in Jun. 1991. Even though many other papers on CJD infection were published, MHW took no action, after they approved the import of Lyodura in 1973, and until prohibited in 1997. The fact that the MHW did not properly check and regulate the medication products was the cause of the number of cases in Japan.

The U.K. Government Advisory Committee suspected the relationship between CJD and the Bovine Spongiform Encephalopathy (BSE) in its statement in Mar. 1996. Upon this statement, MHW organized the “Emergency National Survey Study Group on Creutzfeldt-Jakob Disease, etc.” in May 1996¹⁰⁹.

Since Lyodura was approved by the MHW and imported in 1973, it was transplanted at least 300,000 patients, during the 24 years. Since the paper describes that the risk of infection by Lyodura is about one per 1,000 to 2,000 patients, there is a possibility that the onset will increase in Japan in the future, given the long incubation period¹¹⁰. After all, the same phenomena as the HIV tainted blood occurred. The response of MHW was always slow. Although it is not clear when the MHW did understand the danger, they said about the recognition of risks in 1987, that there were plenty of medical journals, and that they did not assign responsible staffs to read them; therefore, at that time, they could not expect the infection. Were they really the professionals who should protect the health of the citizens? Couldn't they think about a lot of people who were/are having anxiety that might develop CJD in the future? The number of patient¹¹¹ is increasing even now (Fig. 8).

2. Subacute myelo-optic neuropathy (SMON)

SMON is a neurological disorder that occurred frequently from the 1950s to 70s in

¹⁰⁸ They adopted gamma sterilization method which had been found invalid to CJD pathogens.

¹⁰⁹ This group surveyed the epidemiological study nation-widely, and found ironically no patient with new variant CJD, but 43 CJD patients with dried human dura mater have been confirmed (Shimohata, 2006).

¹¹⁰ The Incubation period, from the transplantation to onset, is 16 months to 17 years.

¹¹¹ The dried human dura mater was implanted during the year 1979 – 91, especially 1983 – 87.

Japan. Initially, an infection disease was suspected. MHW investigators recognized 12,000 patients. The number of patients actually seemed to be double. Late 1960s, the joint research team of doctors of the National Hospitals across the country, listed the various Chinoform contents for intestinal disorders, but could not specify. In the 1970s, the epidemiological and the experimental fact proved that Chinoform was the cause. By ban on sales of it, the occurrence of new cases disappeared dramatically. The SMON as a medication disaster became a social problem, and the legal actions have been going on in various places. In 1979, “Adverse Drug Reactions Victim Relief Fund Act” was enacted. In addition, the governmental obligation of drug safety is clearly stated in the revised “Pharmaceutical Affairs Law.”

(1) History of Chinoform¹¹²

Chinoform was imported in 1913, and was produced by the Army in 1924 in Japan. However, some cases like neurotoxicity of Chinoform occurred in Argentina in 1935. In Switzerland, they specified it as a powerful drug and Japan also specified as a dangerous drug in 1936. However, the designation was released in 1939, and the production was expanded domestically, for the use of military.

In the U.S., although they were also using the Chinoform, N. A. David described an article on JAMA (1945) that the intoxication appeared in the abuse of amebiasis therapeutic agent, and that Chinoform had a strong toxicity, it should be used for 10-14 days and should not use for 2-3 weeks. If amoeba was not found, the administration was stopped. In 1960, FDA also required a doctor’s prescription, and limited the use to the amoebic dysentery, which was notified to Ciba-Geigy.

Meanwhile, in Japan it was in turmoil just after the World War II, and to deal with the spread of gastrointestinal infections, production of Chinoform was restarted in 1948. The Pharmaceutical Council of MHW approved various drugs including Chinoform. Since the Health Insurance System started in 1961, the usage of it had increased. At that time, 173 items of the drugs containing Chinoform had been sold from the 93 companies.

(2) Lawsuits

Since the causation of SMON was Chinoform agents, which caused serious side

¹¹² The Chinoform is the chemical having a strong sterilizing power, based on the quinoline nucleus that make up the quinine, with hydroxyl group, iodine, and chlorine being bonded to. Basel Chemical Industry (later, Ciba-Geigy) of Switzerland developed it in 1899 (Konagaya, 2009). In the 1920s, the possibility of a medicinal drink with a strong sterilizing power was considered, and Chinoform was reported as an effective agent to amoebic dysentery in 1933.

effects, the State that approved the drug and the pharmaceutical companies involved had to take the responsibility of the disaster. In May 1971, the SMON patients filed for damages to the Tokyo District Court, and then, class action lawsuit went on in various places. In the end, 6,476 people sued¹¹³. To ban sales of the Chinoform agent was made 5 months later by MHW (in Sep. 1970), after Tsubaki et al.¹¹⁴ pointed out that the offending drug was the Chinoform agents in Aug. 1970. This seems to have been a quick decision at that time. However, it had passed 10 years since the U.S. FDA limited the use to the amoebic dysentery in 1960.

(3) Aftermath and discussions

Ciba-Geigy continues to manufacture and sell the clioquinol drug in many third world countries, although clioquinol drugs are now banned in Japan, the U.S., Sweden, Norway, Denmark, New Zealand, etc. and restricted in many other countries. The charge was the continued manufacture and sale in developing countries of the drug known to have caused SMON in Japan¹¹⁵. Medical and legal experts were called up by both prosecution and defense in the presence of mute but eloquent wheel-chaired victims of the disease. Admitting that they pay compensation to Japanese victims of SMON, whilst at the same time continuing to sell the drug which causes it, Ciba-Geigy nonetheless reconciles the two actions by claiming that the Japanese case is unique¹¹⁶. Because of its apparently wide application to what the Lancet¹¹⁷ has called that “nebulous ragbag” of symptoms, sales climbed steadily. Pains in the abdomen, diarrhoea, degeneration of the

¹¹³ In Dec. 1996, the last settlement was agreed and the total settlements were with 6,490 people, among which 1,765 were surviving patients, with 79.5 years average age as of Jan. 31, 2013 (MHLW, 2012a).

¹¹⁴ T. Tsubaki, Y. Honma, M. Hoshi. (1971). Neurological syndrome associated with clioquinol. *Lancet*, 1971; 1:696-7.

¹¹⁵ In the ensuing panic, it was at first assumed that a contagious epidemic was on the loose. Publicity on radio and television sent thousands of people to medical centers to enquire anxiously about their stomachache or diarrhoea. Ghastly suspicions therefore became self-fulfilling and the confusion of cause and cure spread the disease and eventually exposed its real cause.

¹¹⁶ Their defense (Tiranti, 1981) said: “SMON was a Japanese disease of the nervous system that is the subject of litigation in which medicines containing clioquinol, used for the treatment of intestinal infections, are implicated as the cause of the disease. Approx. 10,000 cases have been reported from authoritative sources covering the 15 years since SMON existed in Japan. But, three-quarters of the patients suffered from others, and in the 900 patient deaths, such disease must have been relevant. These figures from Japan are in marked contrast to those from the rest of the world. In Sweden, Denmark, the U.K. and Australia reported similar diseases as SMON, due to taking the Chinoform. Correctly used in products such as Entero-Vioform and Mexaform, clioquinol combines medical value with safety.” Ciba-Geigy therefore continues to make them available. Dr. Olle Hansson, a prominent Swedish opponent of the drug, commented in a *New Scientist* article that “this is Ciba-Geigy’s version of one of the greatest drug scandals of our time.”

¹¹⁷ The *Lancet* is the world’s leading general medical journal and specialty journals in Oncology, Neurology and Infectious Diseases.

nervous system, weakness and paralysis in the legs - these were the symptoms which began to affect thousands of citizens in the 1960s in Japan. Of known SMON victims in Japan, 50 % returned to their jobs within two years¹¹⁸. In 1970 the SMON epidemic came to the end with a final ban on all clloquinol drugs. In 1972, no new case was reported. The government says 11,000 suffered during the period of unrestricted use¹¹⁹. The drugs are usually sold not through independent pharmacies but through the doctor's own stores, helping to boost their incomes¹²⁰. And possibly the profits being made was one reason for the massive doses of clloquinol being prescribed in the 1960s.

The risk-benefit analysis is the final argument brought forward to defend the policy of selling the drug in the developing countries which is banned or highly restricted in industrialized nations. Severe diarrhoea is common in the countries where water and sanitation are inadequate, and so a drug which lessens the suffering of millions is worth the risks to a few thousand. Such logic would have a finer cutting edge, if there were evidences that sufferers were in fact relieved by the drug¹²¹.

3. Thalidomide¹²²

Thalidomide has an immediate effect as a hypnotic drug, and awakening is good. Further, since lethal dose could not be measured in animal experiments, it was sold in many countries around the world outside the U.S. However, if Thalidomide was used as a sedative for morning sickness of pregnant women, in early pregnancy, it was found that the stillbirth and heavy birth defects (limb loss) occurred. Because the epidemiological warning that there was a causal relationship with the symptoms of newborn and taking Thalidomide was announced, the sale was prohibited and the products were recovered immediately in Europe and other countries, based on the Lenz warning¹²³.

¹¹⁸ The recovery for the remainder was slower, with 10 - 15 % unable to care for them again, and 7 % fatalities.

¹¹⁹ The College of Medicine in the University of Tokyo estimates 30,000, pointing out most sufferers couldn't get the certificate proving that they had taken clloquinol, because medical records are only preserved for 5 years and because doctors have not bent over backwards to co-operate in tracing disabilities to the drug.

¹²⁰ The pharmaceutical division rate in 2010 was 63.1%, and the dispensing amount reached 6 trillion yen.

¹²¹ Many doctors, like Sri Lanka's Professor N. D. W. Lionel, maintain that while clloquinol may be useful for those with amoebic cysts in their stools, there is no good evidence that it is useful for non-specific diarrhoea. Yet in most cases, that is what clloquinol is used for, and in large quantities. According to Lionel, Sri Lanka imported 16.8 million clloquinol tablets for its 13 million people in 1977.

¹²² Thalidomide is the name of the sedative-hypnotic drugs, developed by Grünenthal GmbH, Germany and released in 1957.

¹²³ So-called "Lenz warning," was publicized in Nov. 1961, but the mechanism of teratogenic was unknown.

Thalidomide in Japan was launched in 1958 by Dainippon Co., Ltd.¹²⁴, which applied the original manufacturing method. However, even after the teratogenic became a social problem worldwide, since there was no elucidation of the mechanism in the Lenz warning, Dainippon concluded that it did not stand on scientific basis. Therefore, it took for about two years to complete the recovery of the product. During that period, the number of victims in Japan reached to 309, excluding stillbirth.

(1) History of Thalidomide in overseas countries

Thalidomide came to be used by pregnant women in many countries during the late 1950s and early 60s. In fact, before being marketed, the danger signs had already appeared. During the 1950s at the University Clinic at Bonn, Thalidomide had been tested on 140 children¹²⁵. The sales rocketed as many pharmaceutical companies produced the drug under license of Grünenthal from as early as 1955¹²⁶. In 1957, after launching Contergan (Thalidomide) in former West Germany, reports began to appear regarding peripheral neuritis which revealed Thalidomide's toxic effects on the nervous system of the users¹²⁷. Although thousands of cases of peripheral neuritis and a growing number of cases of deformities had been reported, the firms responsible for the manufacture and distribution of Thalidomide resisted withdrawing the product. In 1958, Grünenthal advised 40,000 doctors that the administration of a sedative and a hypnotic that would hurt neither mother nor child was often necessary. This message encouraged gynecologists and obstetricians to prescribe Contergan and Contergan Forte to patients. The pharmaceutical company, SmithKline and French, reported ill-effects from the drug and the same problems were confirmed by doctors observing their patients through to 1959. Grünenthal minimized the reports by ascribing them to over-dosage and prolonged usage. In Sep. 1959, the use of Contergan was stopped in a German Hospital, because of severe reactions. By 1960, sales of Thalidomide were stepped up, despite the reports of malformations caused by the drug which then came from all over the world. Globally

Widijung Lenz was a human geneticist and the pediatrician in West Germany.

¹²⁴ Currently Dainippon Sumitomo Pharma Co., Ltd.

¹²⁵ Most of forty children who had been given the drug for up to 9 weeks had brain damages. The responsible doctor stopped using the drug when he heard that his medical colleagues had similar experiences with Thalidomide.

¹²⁶ Bette Overell, the founder of the New Zealand Anti-Vivisection Society, argues (1993) that the mysteries of science may place too much power in the hands of those who are out for profits.

¹²⁷ Such a suspicion was suggestive enough to cause Dr. Frances Kelsey, the Medical Officer of the U.S. FDA, to reject the pharmaceutical company's application to market Kevadon (Thalidomide) in the U.S., because among other reasons, she was not satisfied that the drug would be safe to take during pregnancy.

Thalidomide was one of the most successful prescription drugs¹²⁸. In Apr. 1961, Dr. W. G. McBride of Crown Street Women's Hospital, Sydney, notified the representatives of Distillers in Australia about his suspicions of the link between Distavel and malformations. On Nov. 27, 1961, Thalidomide was withdrawn from the British market. In Dec. 1961, Dr. McBride's observations were published on the *Lancet* and in the *Australian Medical Journal*. Only when the evidence was overwhelming, Grünenthal finally took Contergan off the market. However, in other countries around the world including Brazil, Italy, Japan, Sweden and Canada, drugs containing Thalidomide were not withdrawn until a year or longer after the Grünenthal withdrawal. By the time the drug was banned, more than 10,000 children had been born with major Thalidomide-related problems¹²⁹. On Mar. 4, 1962, Thalidomide was removed from the shelves in Germany, because of public opinion, against the wishes of Grünenthal. News of the dangers of Thalidomide was played down by the media, but in many cases malformed births occurred after the drug was withdrawn as mothers still possessed the drug, and used it because they were unaware of the risks involved. At the time that Thalidomide was withdrawn in Germany, thousands of malformed babies had been born, thousands of women required extensive psychiatric treatment and there were many suicides¹³⁰. During the lengthy trial of the manufacturers in 1970, numerous court witnesses, all animal experimenters¹³¹, stated under oath that the results of animal experiments are never valid for human beings.

In the British *Sunday Mirror* on Jul. 3, 1994, "Thalidomide dad's tragedy" was reported that the babies of six young men who were born deformed, because of

¹²⁸ The British pharmaceutical company Distillers produced Thalidomide for morning sickness where it was distributed throughout the U.K., Australia and New Zealand under the trade name of Distavel. In those countries, it was also prescribed as a tranquillizer under the trade names of Valgis, Tensival, Valgraine and Asmavel. At that time, it was being marketed by 14 firms in many countries under 37 different trade names and sold without a prescription.

¹²⁹ A common pattern of limb deformities, termed "phocomelia" from the Greek word for "seal limbs," emerged including shortening or missing arms with hands extending from the shoulders, absence of the thumb and the adjoining bone in the lower arm and similar problems with the lower extremities. The drug also caused abnormalities in the eyes, ears, heart, genitals, kidneys, digestive tract (including the lips and mouth), and nervous system.

¹³⁰ The actual number of malformations that Thalidomide caused to babies can never be precisely assessed in the official casualty figures as in many of the poorer countries "monster babies" and "freak", as they were deemed, were locked from view or destroyed by distraught parents who accepted the terrible afflictions as "visitations from the devil."

¹³¹ One of these experts was the Nobel Prize winner, Sir Ernst Boris Chain. According to the court records on Feb. 2, 1970, he stated: "No animal experiment with a medicament, even if it is tested on several animal species, including primates, under all conceivable conditions, can give any guarantee that the medicament tested in this way will behave the same in humans, because in many respects the human is not the same as the animal."

Thalidomide, have also been born with malformed limbs. Two of the babies have almost identical deformities to their fathers. Obstetrician Dr. William McBride says there are second generation victims in Germany, Japan and Bolivia as well as Britain.

Further experiments revealed that even if Thalidomide had been tested in pregnant rats, no malformations would have been found (McBride, 1961). The drug does not cause birth defects in rats or in any other species, so the human tragedy would have occurred just the same. A few of the hundreds drugs with side-effects not predicted by animal tests are listed in Table 14¹³². As Professor Pietro Croce, M.D., of the Milan Institute explains that a disease caused artificially is not the same disease as one born spontaneously (Croce, 1993). More recently, the March of Dimes Birth Defects Foundation, the organization responsible for monitoring birth defects, reveals that every year more than a quarter million babies (1 in 12) are born in the U.S. with birth defects¹³³.

(2) Lawsuits

The number of victims of Thalidomide was expected about 7,100 in total¹³⁴.

In Japan, Thalidomide was launched by Dainippon Co., Ltd. as the product name of "Isomin." On Aug. 22, 1959, Thalidomide was marketed by blending gastrointestinal medicine to "Provins M." Then, the births of phocomelia syndrome children of three cases have been reported up to 1961. Though Dainippon was in a position to have obtained the information about the dangerousness by that time through the researcher who had been sent to West Germany, they ignored the "Lenz warning" in Nov. 1961. And they continued to sell Isomin and Provins M. Also, MHW authorized Thalidomide agent of Asia Pharma "Panguru" in Feb. 1962, and continued to ignore the Lenz warning. In Sep. 13, 1962, Dainippon decided to stop selling and recovery, but Thalidomide agents that were not recovered since then has continued to be sold in the open market. The victims filed at Nagoya District Court the damage claim against Dainippon. Finally, on Oct. 13, 1974, the confirmation of the settlement was signed between the government, Dainippon and the National Unity of Thalidomide Litigation Plaintiffs.

¹³² Vivisectors attempt to inflict diseases on animals using unnatural laboratory conditions that bear no resemblance to the complex variety of conditions which lead to human disease, such as diet, lifestyle, genetics, environment and stress," (Levin, 1991).

¹³³ In the Germany's authoritative medical journal, *Münchener Medizinische Wochenschrift*, 1969, Dr. W. Christian Müller of the nation's First Gynecological University Clinic reported that an extensive survey by German doctors had revealed that "for 61 % of all malformed children born alive and 88% of all stillborn children the intake of various drugs had to be held responsible (Müller, 1969).

¹³⁴ They are 3,049 in the former West Germany, 1,000 as maximum in Spain, 309 in Japan, 201 in the U.K., 115 in Canada, 107 in Sweden, 99 in Brazil, 86 in Italy, and also 30 % were told stillbirths.

International plaintiffs have seen recent success in settling their Thalidomide lawsuits. An Australian woman named Lynette Rowe who was born without arms and legs due to Thalidomide, has led the charge in filing a class action lawsuit against both Grünenthal and the British distributor. The distributor decided to settle with the woman for an undisclosed amount of money (Akerman, 2012). Grünenthal refused to follow along with such a settlement and remained in court to fight the Thalidomide lawsuits.

The recent rash of Thalidomide lawsuits charge that the drug was manufactured, marketed, and distributed negligently by a number of different parties. The plaintiffs include a wide range of different individuals who suffered as a result of the drug. The birth defects suffered by plaintiffs range from severe deformities like Rowe to less serious defects. Phocomelia is often listed as the most common side effect of the drug. This is a condition that effects the development of bones in unborn children¹³⁵. Thalidomide lawsuit in Spain is that primary demand against Grünenthal began on Oct. 14, 2013, at the court of Madrid. About 180 victims are seeking damages of 204 million Euros in total (El Mundo.es, 2013).

In the origin of Thalidomide, Grünenthal apologized first time in 50 years, to the victims and the families, in Aug. 2012¹³⁶. It was withdrawn in 1961 after it was linked to birth defects. It is said affected 10,000 babies were around the world, mostly in Australia, Canada, Europe and Japan. The first accusations against Grünenthal reached the Public Prosecutors Office at the country court of Aachen by the end of 1961. By 1968 the bill of indictment comprising 972 pages was completed, based on some 500,000 documents. On May 27, 1968, a criminal lawsuit was started by the Public Prosecutor against seven men of Grünenthal. The case was that they had put on sale a drug which caused an unacceptable degree of bodily harm without having tested it properly, and that they had failed to react to information on side effects in due time, and instead had tried to suppress information. Five days after Widukind Lenz's testimony, the cross examination by the

¹³⁵ In many cases, the children have been born without certain bones. The drug has largely been linked to this condition in countries around the world, and plaintiffs suffering from phocomelia have had success pursuing their civil claims in a wide range of different courts.

¹³⁶ The New York Times reported that decades of campaigning by victims of Thalidomide, it took a new turn, with the first apology in 50 years to the victims and their families, by Grünenthal, and an incensed rejection of the apology as too little and too late from many of those it was intended to placate. The apology was issued by Harald Stock, Chief Executive of the Grünenthal Group, a family-owned pharmaceutical company that marketed the drug in the 1950s and early 60s.

defense started and was continued for 12 days¹³⁷. The court had its final session on Dec. 18, 1970, two years and 7 months after its start. There was neither a sentence nor an acquittal, but the decision that there was no more public interest in continuing the trial, after Grünenthal and Urn. Schulte-Hillen and Schreiber, attorneys of the plaintiffs had reached an out-of-court agreement on compensation of the victims on Apr. 10, 1970. Grünenthal had agreed to pay 100 million DM to the 2,866 victimized children.

(3) Aftermath

The reason why Thalidomide became a major problem later in Japan was a slow response of Japanese pharmaceutical companies, and the laziness of thought to the harmful effect of the MHW. The context of discontinued Thalidomide in West Germany was reported to the Dainippon. However, Thalidomide was withdrawn from the market in Japan as late as Sep. of the following year. While West Germany started to recover Thalidomide immediately after warning by Dr. Lenz, it took 10 months to determine recovery in Japan. In Germany they took the attitude of “punishing those suspicious,” but Japan took the attitude of “do not punish the suspect.” Rather than protect the health of people, the government did carry out the policy to protect the interests of the companies. As of Dec. 5, 1961, Dainippon obtained the Lenz warning, and the information of the side effects from Grünenthal at the latest. On Dec. 6, Dainippon reported it to MHW, but there was no indication of recovery and discontinues the sale. Without contacting to the pharmacies or doctors, MHW and Dainippon hid the side effects of Thalidomide, which was a criminal offense. A manager of the Dainippon went to West Germany to study in Jan. 1962. He reported Dainippon and MHW that Grünenthal had recovered Thalidomide because mass media had been noisy, and Lenz theory had a poor ground. This seems to be an example that even a most competent person, when he becomes one of the gears of a large company, is pushed to a corner where he loses his ethical and moral conscience, and there is no choice but to tell a lie. In the government offices and private organizations in Japan, such circumstance that whistle-blowers can blow a whistle without fear, is strongly expected. MHW committed to hide the causal relationship of Thalidomide with the pharmaceutical disaster, under the reason that there is no academic support. Without taking appropriate measures to Lenz warning, they expanded the occurrences of

¹³⁷ On Oct. 10, 1969, 14 months later, the court decided that Lenz’s testimony could not be used, because the defense lawyers had reasonable grounds for assuming that Lenz should be so biased as an expert witness.

damages unnecessarily. On May 17, 1962, the Asahi Shimbun Newspaper made the exclusive coverage for the first time in Japan on the Thalidomide incident¹³⁸. Since the mass media in Japan began to move in unison in the wake of this report, Tokujiro Miyatake, President of Dainippon, announced that although there was no academic support of Thalidomide that gave birth defects, they voluntarily stopped the production of Isomin. Dainippon issued the opinion advertisements on some newspapers that there were reports of birth defects in West Germany, but that there was no such fact in Japan, and that it was currently under experimental trials whether such side effects existed in the Thalidomide, and further that they wanted to avoid taking it during pregnancy for the time being. Dainippon ceased production of Isomin at this point, but they did not recover it from the market. Therefore, they continued to sell out the stock in the market. Since Thalidomide sales had been the cash cow of the company since its start, the selfishness of the company to sell out expanded further damage¹³⁹.

For the articles of the Asahi Shimbun Newspaper, the MHW Pharmaceutical Division commented that “although there was no academic basis, they paid a deep tribute to the measures of Dainippon.” MHW wanted not to lose face by retracting the drug that had been approved once. In the follow-up articles of the newspaper, some experts of medicine and pharmacy appeared, and commented that Thalidomide was safe even in the use during pregnancy¹⁴⁰.

The company-controlled scholar of Dainippon stressed that there was no development of phocomelia in Japan. In fact, however, Dr. Tadashi Kajii, Hokkaido University School of Medicine Pediatrics, had reported earlier phocomelia due to Thalidomide at the Academy of Pediatrics. The Yomiuri Shimbun Newspaper scooped this fact on Aug. 28, 1962, and the Japan Academy of Pediatrics reported the phocomelia one after another. Dainippon had claimed that since they started to sell Isomin, there was no report of phocomelia in Japan, which was a lie. On Sep. 12, 1962, Dainippon decided to recover Thalidomide from the market, while still denying a causal relationship between birth defects and Thalidomide. New cases of phocomelia decreased rapidly after the recovery. It is said that if Dainippon had recovered Thalidomide at the time when West

¹³⁸ Its Bonn branch reported that the sale of Thalidomide was canceled in West Germany, because of the possibility of birth defects due to Thalidomide.

¹³⁹ They continued to sell the Thalidomide as agents of gastrointestinal medicines (Provins M) also.

¹⁴⁰ In such circumstances, there appears some company-controlled scholars who insist in favor of the bureaucracy and the companies, and ignore the health and safety of the public, in any world.

Germany discontinued it, more than half of the victims in Japan could have been saved. Thalidomide lawsuits clarified the negligence of the government, and played the pioneering role, such as permanent welfare measures, in the pharmaceutical disasters. However, the prosecution did not bring the case into the criminal case eventually, which led to cause the great pharmaceutical disaster of HIV/AIDS cases¹⁴¹.

The U.S. FDA reviewer, Dr. Frances Kathleen Oldham Kelsey, can be compared in contrast of the former MHW officials. The application for marketing approval of Thalidomide had been submitted over 14 times from a leading pharmaceutical company, Merrell, Inc. in the U.S. However, Dr. Kelsey did not relent to the pressure from pharmaceutical companies and her boss, and did not give a manufacturing license of Thalidomide which had some questions toxicity and side effects. Thalidomide brought phocomelia in the world, but only the U.S. escaped the damage¹⁴². It was exposed that the MHW Pharmaceutical Affairs Council had allowed the manufacturing license of Isomin by the deliberation of only an hour and a half. It is an example to show the authorization of new drugs in Japan was how perfunctory. The author has to say that the MHW, which should protect human life and health, was rather complicit in the corporate logic for-profit.

Section 3. Summary

The Pharmaceutical Affairs Law was enacted in 1960 in Japan, of which basic purpose was to crackdown adulterated drugs and placebos, rather than the evaluation of effectiveness and safety, as well as regulatory pharmaceutical affairs around the world at the time. Prior to the approval of a drug, it had not been done in strict evaluation of the efficacy and safety based on the data. In addition, safety information from overseas was not collected and evaluated systematically, and therefore, it was not utilized in safety measures and approval. In addition, delays of the determination of recovery measures, and the imperfect collection expanded the damages. Further, hypnotic, etc. with side effects were readily available as OTC drugs. Such old environment surrounding the drugs

¹⁴¹ Renzo Matsushita was the then Director of Pharmaceutical Affairs in MHW, and in charge of the settlement negotiations with the patients. R. Matsushita said the comment as “never cause mistakes like this again” in the settlement. But later, R. Matsushita had to sit in the dock as the perpetrator who made the revolving-door syndrome to the president of Green Cross, and caused the “tainted blood scandal.”

¹⁴² President John F. Kennedy gave the President’s Award for Distinguished Federal Civilian Service to Dr. Kelsey.

has continued for decades. Meanwhile, the Pharmaceutical Affairs Law was revised superficially, and small modifications of the organization of the MHW were performed. However, never took a scalpel to the root, in terms of criminal justice, in the adhesive triangle of corruption, i.e. the bureaucracy, universities and pharmaceutical companies.

During the 68 years after the World War II, while technological advances in the private sectors were very notable, technical incompetence of the bureaucracy has become significant, including the legal restrictions. They have no choice but to rely on the knowledge and experience of the private sectors. The technical competence and experience of the persons in the position to regulate, has become inferior to that of those to be regulated. As the result, all is now being processed by the corporate logic, i.e. the supremacy of profit.

Fig. 9 indicates the general scheme of the adhesion among academic, bureaucracy, industry and politician. In Japan, the pharmaceutical disasters occur repeatedly, and MHW bureaucracy and pharmaceutical companies have apologized in each case. Pharmaceutical companies have paid a small amount of money to the victims in order to settle the disputes. Only one case, the disaster of HIV/AIDS, was criminally accused. However, in this case, due to the defendant T. Abe's death, the relationships of the triangle of corruption have not become clear. In Germany, after the settlement was established, the trial of the criminal case has been discontinued.

Although it can be understood that the intention of victim organizations tends to have the resolutions of the cases in the settlements, due to the aging of victims, unless the relationships of the triangle of corruption are not disclosed publicly, the real culprit commits the similar crime again. It is said that in case bureaucrats once issued a permit of production and sale of a drug, they hate to lose the face by the order to the manufacturer to stop the production and recovery of it from the market. However, it is believed that on its backdrop, the bureaucrats have the knowledge of pharmaceuticals which is inferior to the critical, as compared to the drug manufacturers, and that they fear to expose their incompetence, when they change their policy frequently. In addition, since the political contribution from the pharmaceutical industry is enormous, any actions that tease the pharmaceutical companies will cause an opposition from political circles. For the senior officials of MHW, the pharmaceutical companies are good targets of their parachuting after the retirement from the ministry.

On the other hand, for the professors of university schools of medicine, to deny the

view of a particular authority who is said to be the stalwarts of the academic field, may influence the later lives and lively free remarks are not respected. Rather, research papers which are in line with the intention or concept of the particular authority would be welcomed¹⁴³.

The criminal law and procedure have consistently been amended several times since the World War II, from the view point to reduce street crimes. As for the white-collar crime in general, however, the enforcement policy is not clear, and the lenient punishment is also a problem in compared with street crimes. In the first place, the triangle of corruption, i.e. the adhesion among academic field, private corporations, and the bureaucracy, and also the unfair exercises of the power of politicians, have existed as the phenomenon of “evil,” since some decades ago. White-collar crime was the prosecutions as bribery cases at most in the past. Recently, however, tops of the regulatory authorities make a parachuting (“revolving-door syndrome”) into regulated companies. Moreover, as an example, the successors in the regulatory authorities were the subordinates of the parachuter until a day before his parachuting, which must be a structural issue. This type of issues should not simply be treated as an ethical issue, which only expects the consciousness of the parachuters; but such parachuting should be defined as a “criminal act” in the provision of the criminal law¹⁴⁴. Otherwise, it would be impossible to deter such white-collar crime as pharmaceutical disasters.

In short, it means that it is the time when the systematic, substantial and “revolutionary” reform is required to the “post-war, old fashioned criminal justice system,” which has continued for more than 68 years.

¹⁴³ This is a problem that is not limited to the world of medical and pharmaceutical necessarily, and is going on in the academic areas of the others. The ivory tower always constitutes a closed world.

¹⁴⁴ In relation to the freedom of occupation, which is guaranteed by the Constitution, for the civil servants to have served the nation (or an organization of the government), it is considered inappropriate and should be limited to utilize the knowledge, experience and human relations, which was obtained during the period of his tenure, for the self-interest, instead of for the public. In case of patent rights of private companies, it is also limited for the inventor, who developed and obtained such right during his stay in the company, to utilize such right freely. Today, the inventor has to agree with the company, in respect of his intellectual rights.

Chapter 5. Consumer Product Accidents

Section 1. Mitsubishi Motors Corporation (MMC)

1. General outline

As of Jul. 2000, MMC was the 4th largest passenger car manufacturer of the car sales share, next to Toyota, Nissan, and Honda. Over a period of about 30 years since 1970s, they did not report to the Ministry of Transportation (currently MLIT) the claims that lead to recall 10 models or more, amounting to about 600,000 cars, and they hid them within the company. In Jun. 2000, the fact came to light by an anonymous whistle-blower who informed the User Affairs Office of the Road Transport Bureau, Ministry of Transport¹⁴⁵. In Aug. 2000, the Traffic Investigation Division, Metropolitan Police Department raided five locations, including the headquarters, for the suspicion of violating the Road Transport Vehicle Act (RTV Act). On Apr. 25, 2001, Tokyo District Public Prosecutors Office indicted Takashi Usami, then the vice president of MMC, for the RTV Act violation (false report), because when the Department of Transportation made the on-site inspection in 1999, they hid the defect information of about 10,300 cases. On May 8, MMC as a corporation received a summary order of the 400,000 yen and the vice president 200,000 yen fine, from the Tokyo Summary Court. At that time, MLIT required MMC to disclose all the defect information, however MMC hid the information before 1997, and they did not take the defect measures to modify the hub and clutch.

Due to the hidden recall incidents, MMC lost the confidence in the market, and the sales amount fell sharply. Further, the wheels fell off out of the large vehicles of the subsidiary, Mitsubishi Fuso Truck and Bus¹⁴⁶ in 2002, which was strongly doubted as the hidden defects and the structural problem. As the result, on Apr. 22, 2004, Daimler-Chrysler, which was then the largest shareholder of MMC, announced the discontinuation of financial support to MMC, and Rolf Eckrodt, then CEO of MMC, resigned. In Nov. 2005, Daimler-Chrysler eliminated capital tie-up with MMC in the crisis of the company¹⁴⁷.

On May 6, 2004, seven people including former chairperson of Mitsubishi Fuso, T.

¹⁴⁵ The president at the time, Katsuhiko Kawazoe, took the responsibility of this hidden recall incident, and resigned in Sep. 2000.

¹⁴⁶ Mitsubishi Fuso Truck and Bus Corporation became independent company from MMC in 2003.

¹⁴⁷ However, they allowed to continue the capital alliance with the Mitsubishi Fuso Truck and Bus, and afterwards, made a consolidated subsidiary.

Usami, were arrested by the Kanagawa Pref. Police for the tire falling off accident from a large trailer, and the MLIT filed a criminal complaint against MMC and Mitsubishi Fuso as the corporations, and 5 members including T. Usami. In addition, seven suspects including T. Usami and Kawazoe, the former president of MMC, were arrested by the Kanagawa and Yamaguchi Pref. Police, for another accident in Jun. 10, 2004¹⁴⁸. A series of hidden recall incidents caused two fatal accidents in 2002.

2. The fatal accident in Yokohama

The accident occurred on Jan. 10, 2002, near the intersection in Yokohama, Kanagawa Pref. The left front wheel of the large trailer truck that was carrying heavy equipment, came off from the truck, and rolled down about 50 m. The wheel was about 1 m diameter, 28 cm width, and 140 kg weight. It hit the maternal (29), who were walking on the sidewalk by pressing the stroller, with her two children. The mother died, and the elder son (4) and the younger son (1) also suffered minor injuries. The Kanagawa Pref. Police found that the hub was damaged and the wheel, tire and the brake drum were dropped off as a whole.

The 57 accidents of large cars of Mitsubishi Fuso in total had occurred due to the hub defects since 1992, and the wheels had been dropped off in 51 cases of them.

Mitsubishi Fuso consistently insisted that the cause of the accidents was the poor maintenance of the users. However, the thickness of the Mitsubishi-made hub in the same age as the vehicle of the accident was found thinner than that of a third-party, and when the bolts were over-tightened, the metal fatigue was likely to occur. When such facts were found in Mar. 2004, Mitsubishi Fuso claimed the recall to the MLIT with the recognition of product liability. On May 6, 2004, five were arrested including T. Usami, for the RTV Act violation (false report), and two of the quality assurance department were arrested for professional negligence resulting in death and injury, and on May 27, they were indicted. MMC as a corporation has also been accused of criminal RTV Act violation (false report) charges¹⁴⁹.

¹⁴⁸ As the results, MMC had the sanction of the stop in the nomination bid of vehicle purchases by some cities and prefectures.

¹⁴⁹ In the civil action which the mother of the woman who died in the accident sought damages, the Supreme Court finally ruled MMC to pay 5.5 million yen to the plaintiff in Sep. 2007.

3. The accident of truck driver fatality in Yamaguchi

The accident occurred on Oct. 19, 2002, near the interchange of Sanyo Highway, Yamaguchi Pref. The driver (39), who was working for a shipping company in Kagoshima Pref., drove the 9 ton refrigerated car and passed the toll booth without slowing down, overcame the median of prefectural road to confluence with the tip of interchange, and crashed at the entrance structure of pedestrian underpass. The driver died in the crash. The Yamaguchi Pref. Police investigated, and found the recess at the point about 3.4 km before the interchange, and it was discovered that a part of the propeller-shaft that dropped out of the truck caused the accident. In 2004, Yamaguchi District Public Prosecutors Office determined that the accident had been caused by the ruptured propeller-shaft, which had a structural defect of Mitsubishi Fuso, and it had destroyed the brake system. They decided the driver as a non-prosecution disposal.

4. Criminal procedures

(1) Hidden recall (RTV Act violation)

On Jul. 15, 2008, Tokyo High Court ruled that since the permission had been left to the Recall Response Office, and MLIT also accepted, the lower court decision was discarded and the crime was established. Mitsubishi Fuso and the three defendants including T. Usami had the conviction of 200,000 yen fine each, in accordance with the prosecutor's recommendation. On Mar. 9, 2010, the Supreme Court dismissed the appeal of the defendants, and the guilt of the defendants was established.

(2) The mother fatality in Yokohama (professional negligence resulting in death and injury)

On Dec. 13, 2007, Yokohama District Court ruled that the recognition of the defect was easy, and that it could be predicted that the defect would hurt humans if it was left as it was. The manager and the chief of the market quality section were handed down the guilty verdict of one year and 6 months in prison, with three years' probation for both defendants. On Feb. 2, 2009, Tokyo High Court dismissed the appeal of the defendants. According to the sentence, "Even if the defendants could not conclude the cause was insufficient, if the defendants had decided the recall at the time there was a suspected, the accident of 2002 could have been prevented," and certified negligence of both defendants. The conviction was determined on Feb. 8, 2012, for the appeal to the Supreme Court was rejected. For the cause of the accident, it could be recognized as a flaw of lack of strength; because there

were some broken hubs of which degree of wear was not so severe in many accidents occurred in the past.

(3) The Yamaguchi truck driver fatality (professional negligence resulting in death)

In this accident, four defendants including T. Usami, who were accused of professional negligence and involuntary manslaughter, withdrew the appeal, and the ruling in the first trial Yokohama District Court, which convicted two years in prison with three years' probation, was confirmed¹⁵⁰.

5. Summary

The chronicle of accidents of MMC group is indicated in Table 15. Whenever repeated scandals, MMC group has repeated "reflection," but after all, corporate structure of "safety neglect," "ignore users" and "concealment" have not changed. In Jan. 2013, once again, scandals surrounding the recall came to light. Since Mitsubishi Fuso and MMC was reluctant to recall, on Dec. 25, 2012, MLIT conducted site inspections based on the RTV Act, to check the efforts to improve, at 9 places, including the headquarters in Tokyo, Quality Affairs Division in Okazaki City, Aichi Pref. On Dec. 19, 2012, MMC had reported to MLIT recall of 8 models of small cars, "Minicab" and "Toppo BJ," a total of 1.2 million units. There was a possibility that lead to stop the engine and leak engine oil by the failure of the engine parts. On the same day, since it was assumed that there was an inappropriate description in the MMC report, MLIT strictly warned verbally. It was highly unusual that MLIT made a strict verbal warning to a manufacturer¹⁵¹. Finally, MMC reported the recall of 1.76 million units of 10 models. The 4th recall of 1.21 million units was the largest. Their posture of reluctance to recall was clear. The total number of recall of 1.76 million units was the largest in Japan, and their financial damage was huge¹⁵².

Historically, Quality Control Division of MMC had begun to hide claims from around 1998. When they stored the claim data into the computer, they marked it with a sign "H"

¹⁵⁰ Prior to this accident, the driver had requested the check three times in total to the dealer, because of the abnormal noise, but the dealer and MMC had ignored. After the failure, the driver yelled out the fact that the brake did not work on radio, and cried the same to the tollgate staff when he broke through it. From the fact that if he entered the city as it was, it could be a catastrophe that engulfed the others and rammed the structure of the entrance to the underpass. He was prepared to stop the car in exchange for his life.

¹⁵¹ MMC had carried out recalls three times in the past under the same reason, and it was the fourth time.

¹⁵² The outlook of the global sales in fiscal year of 2013 of MMC is 1.04 million units. It is expected that the costs associated with the recall, will be 7.5 billion yen in total. Their policy is to record it in fiscal year ended Mar. 31, 2013. Since the outlook of the net income of MMC is 13 billion yen, it must be a big blow to the restructuring (Business Journal, 2013).

indicating the information that was secret to the outside. The “H” mark was given to 30,000 cases, approximately half of the total claim data. MMC received a site inspection in Jul. 2000, and then they reported the recall of 530,000 units. It was the starting point. They reported 400,000 units additionally in Aug. 2000, and another 170,000 units in Feb. 2001¹⁵³.

Hidden recalls spread further. In the large vehicles made of Mitsubishi Fuso, accidents of the hubs which came off occurred 50 times between 1992 and 2004. When the fatal accident in Yokohama, and the driver’s death in Yamaguchi Pref., in 2002, Mitsubishi Fuso pushed through saying that the “poor maintenance caused the accidents.” Mitsubishi Fuso finally admitted the defect two years later, in May 2004. In Jan. 2003, it spun off the commercial vehicle sector, and the Mitsubishi Fuso Truck and Bus launched. And the new company reported to the Ministry the recalls of 110,000 units, since there were defects in the hub of large trucks and buses. These defects had already been recognized in the 1996. There was the internal discussion of whether or not to recall, but since the cost of recall should take about 9 billion yen, it was decided to repair secretly without notifying to the users and the Ministry. The top priority was to ensure the profits of spurious by saving 9 billion yen, and the safety was in the secondary.

In the fatal accidents in Yokohama and Yamaguchi Pref., nine executives were arrested and charged with manslaughter, including Kawazoe and T. Usami. In 2008, Kawazoe was sentenced three years in prison with five years’ probation, and T. Usami two years in prison with three years’ probation. Former manager and the chief were convicted between 2010 and 12, in the case of Yokohama incident.

After the hidden recalls of MMC in truck and bus sector were discovered, Daimler-Chrysler, the capital partner of MMC, aborted the additional support in Apr. 2004, and the management crisis was disclosed. After that, support of Mitsubishi group was determined, and Osamu Masuko was nominated in Jan. 2005, as the new president from Mitsubishi Corporation. He recovered the performance by strengthening the sales in emerging countries and eco-friendly cars. However, recall problem occurred once again. Hiding constitution, escaping responsibility, and inward culture of MMC group were exactly preserved.

What has created the corporate culture of current MMC is of the Mitsubishi group

¹⁵³ The impact on the management by hidden recalls was enormous, i.e. 21.5 billion yen cost in 2000, and 17 billion yen in 2001.

definitely. The plight of the president that has changed 7 people in the 9 years from 1995 confused the management of MMC. As we get down the problem of lack of corporate ethics, it ends up in “Anatomy of Dependence¹⁵⁴,” which has been doing in huggy to piggyback on the Mitsubishi group.

As constitution of MMC, officials testified the following to the media.

- The policy that they did not put the foot on the axis of customers, and that corporate logic had the priority, which was rampant in executives of MMC group.
- The power and the authority concentrated in the executives in the vertical organization, which was the collection of instruction-waiting staffs.

It is a strong will that a company with Mitsubishi brand never fails¹⁵⁵. It has obscured the social responsibility of MMC itself. On the other hand, MMC that receives investments and loans from the Bank of Tokyo-Mitsubishi and the capital supports from Mitsubishi Corporation tends to watch the faces in the management (Hatamura, 2005).

MMC focused only their appearance when a large amount of hidden claims were revealed in 2000, and showed just a gesture externally. They did not step into from that point, which was the problem aggregated in MMC. It is a way of the world that the top apologizes and draws a curtain, when a scandal is revealed. However, in this incident, they have shown that the top management must move in detail the mechanism of improvement, which is of great significance. The question is the nature of internal control. The incidents clearly show that the company itself will be abandoned, if they are going to continue to tell a lie. If criminal liability is recognized, the shareholder derivative litigation will occur. All the employees do not know why they have to have such results, after working for decades at the thought for the company (Hatamura, 2005).

The company that has a strong culture to think their customers would not leave to commit the same mistake. At the same time, in terms of criminal justice, it is necessary to consider whether the sentences with a few years' probation attain the social justice, for the defendants who were dishonest, repeatedly told lies and hid the defects of their products.

¹⁵⁴ The Anatomy of Dependence is a non-fiction book written by Japanese psychoanalyst, Takeo Doi, which describes at length Doi's concept of “amae,” which he describes as a uniquely Japanese need to be in good favor with, and be able to depend on, the people around oneself. He likens this to behaving childishly in the assumption that parents will indulge you, and claims that the ideal relationship is that of the parent-child, and all other relationships should strive for this degree of closeness.

¹⁵⁵ The sexual harassment problem in the local plant in the U.S. in 1996, profit sharing case against extortionist in 1997, and hidden recall incidents of 1990s and 2000s, all these incidents that shake the corporate governance were the secondary, even if the sales downturned due to the image degradation. Their confidence was that Mitsubishi group had always supported MMC.

The MLIT is also responsible, because they have left such an evil company like MMC group intact. The author believes that it was necessary at an early stage for the MLIT to take a rough therapy to order a business suspension for several months. The constitution of MMC seems to be the same as TEPCO.

Section 2. Disguising the origin of food

The disguising the origin of food is a kind of false labeling, and display falsely the production area, to intermediaries and consumers.

1. Background

Originally, the display of the production area of foods and consumer goods is to support the confidence in the quality of the products. However, taking the advantage of this trust, it can be possible that the price to be sold for the goods of cheaper production area becomes higher than the market price of the same goods with the name of the original production area, by labeling a different, specific famous name of production area. Currently, this act is treated as a fraud and an Unfair Competition Law violation.

2. Legislation

There are two relevant acts in Japan, of which abstracts are inserted in the footnote¹⁵⁶.

¹⁵⁶ (1) Unfair Competition Prevention Act

- Art. 21 (2): Any person who falls under any of the following items shall be punished by imprisonment with work for not more than five years, a fine of not more than five million yen, or both:
(v) a person who misrepresents information on goods or with respect to services, or in an advertisement thereof or in a document or correspondence used for a transaction related thereto, in a manner that is likely to mislead the public as to the place of origin, quality, contents, manufacturing process, use, or quantity of such goods, or the quality, contents, purpose, or quantity of such services.

(2) Act on Standardization and Proper Quality Labeling of Agricultural and Forestry Products (JAS Act)

- Art. 19-13 (1): For the purpose of aiming at proper quality labeling of foods and drinks and thereby helping consumers choose them, the Prime Minister shall enact a standard to be observed by manufacturer, etc. concerning necessary matters among those listed in the following, for each division as prescribed in Cabinet Office Ordinance, as regards the quality labeling of foods and drinks out of agricultural and forestry products (except those which have distinctive features in the method of production or distribution and thereby their value are found to be increased): (i) Name, materials or ingredients, method of preservation, place of origin and other matters to be indicated; and (ii) Method of labeling and other matters to be complied with by Manufacturer, etc. in indicating the matters listed in the preceding item.
- Art. 19-13-2: Manufacturer, etc. shall label the quality of agricultural and forestry products in

The Act on Standardization and Proper Quality Labeling of Agricultural and Forestry Products¹⁵⁷ was revised in Apr. 2009, which was one of the laws and regulations related to food display. The revised act provides a direct punishment provision to prevent the impersonation of production area.

3. Typical examples of disguising the origin of food

The typical examples of disguising the origins of foods are shown in Table 16.

4. Punishment

In the last decade, many scandals of false labeling or impersonations of foods have occurred in Japan. Consumers' confidence in food labeling and the safety has become weak in these days. It is quite natural for the consumers to consider that the penalty is too lenient when a company commits a fraud or impersonation of foods; and the crime deterrent effect does not exist. They consider that foods must be strictly monitored against impersonation. The Food Safety Commission (FSC) replies to the above question on the website as follows (FSC, 2010):

Consumers Agency of Government of Japan, comments that: "We make the instruction and publication of all the details of the incident as a display violation of JAS Act. In addition, if the organization, who has received the instruction, does not follow it, we order the operator to follow the instruction. We can apply penalties, if they do not follow our instruction. The revised JAS Act of 2009 enabled direct punishment prescribed for the locality impersonation of foods and penalties being enhanced directly. We would like to ensure consumer confidence in the foods, through conducting monitoring and enforcement strictly based on the JAS Act, so that the proper food labeling is carried out, in cooperation with relevant organizations such as the police and MAFF."

MAFF comments as follows for the same question: "In response to the numerous food fraud incidents, we took the following steps.

accordance with the standard for quality labeling provided for pursuant to the provisions of paragraphs (1) to (3) of the preceding Article.

- Art. 23-2: Any person who sold a food or drink with false labeling of the place of origin (including the place of origin of materials and ingredients), which is obliged to be indicated by the standard for quality labeling pursuant to the provisions of Paragraph (1) or (2) of Art. 19-13, shall be punished with a penal servitude not exceeding two years or a fine not exceeding 2 million yen.

¹⁵⁷ This act is simply called as JAS Act (Japan Agricultural Standards Act).

- (1) We applied the quality labeling standards of JAS Act to raw material suppliers.
- (2) We placed 2,000 food labeling special G-men, to respond to the serious wide-area violation cases, to each agricultural administration office of Fukuoka, Tokyo, and Osaka, in the MAFF, on Apr. 20, 2008.
- (3) We revised JAS Act in May 2009¹⁵⁸, in view of the situation of a large number of malicious mislabeling incidents about the origin of foods and beverages. We provided penalties for those who sell food and beverage of which origin is misrepresented.
- (4) We improved the operation of the guidelines for instruction and publication based on the JAS Act on Jan. 1, 2011, and decided to obtain the voluntary publication for such cases that we had not made “instruction and publication” but “guidance,” to operators in the traditional rules.
- (5) Between the local agency and the national institutions of the State, we have established a “Food Labeling Oversight Commission,” to achieve quick responses and information sharing for enhanced monitoring. So that such correspondence is carried out more smoothly, we have established a “food labeling contact meeting” between relevant ministries and agencies (Consumer Agency, National Police Agency, and MAFF). Further, MAFF provided the system of “Dial 110¹⁵⁹” of food labeling, and the “Food labeling watcher system” to check the status of the food labeling through the daily shopping, by the public consumers. Through these systems, we have received the information about the proper food labeling from many consumers.

If a food business operator is found in violation of the JAS Act, we do the instructions and publications, etc. quickly so that the optimization can be achieved at an early stage.”

¹⁵⁸ The major contents of the amendments of JAS Act:

(1) Revision of purpose provision (Art. 1). The purpose of the Act has become clear of the protection of the interests of consumers and the promotion of agricultural production, such as in line with the facilitation of production and distribution of agricultural and forestry products, to consumer demand.

(2) The new provision regarding compliance with quality labeling standards was established (2 of 13 of Art. 19). With the introduction of direct penalty provisions, it is required that the manufacturers and the like shall display the quality of the products of the agricultural and forestry, in accordance with quality standards.

(3) The provision for publication in accordance with the quality labeling standards violation has newly been established (2 of 14 of Art. 19). When the instruction is performed according to the instructions or labeling standards violations, new provision requires for performing the publication of it in conjunction with the instruction.

(4) The penalties for those who sold food and beverage that misrepresented origin was established (2 of Art. 23). The person who sold the food and beverage of which place of origin was misrepresented (including the origin of material or raw material), which was to be displayed in labeling standards, shall have a fine of 2 million yen or less or imprisonment of 2 years or less, and the corporation be liable a fine of 100 million yen or less.

¹⁵⁹ Number 110 is the emergency call dial number, in case of incidents and accidents, in Japan.

The new approach against the false labeling of foods can be a step to the resolution. Some offenders mentioned that the consumers could never discover the true origin, and intermediate distributors want cheaper products to sell more. Nowadays, the most serious concern of the consumers in Japan is whether the foods came from China or Fukushima Pref. Since poisoned steam-baked meat pie incident¹⁶⁰, the Japanese generally would not buy agricultural products from China¹⁶¹. However, at small restaurants, the owner purchases the cheaper vegetables from China, to make the menu prices cheaper. It is fair if the cheaper dishes have the labels indicating that they include vegetables from China, from Fukushima, or any other place of origin¹⁶². The restaurant union complains to specify the countries of origins in their menus, under the severe price competition of small restaurants. Even if severer penalty for the violation of the JAS Act would be imposed immediately after the discovery of the violation, the effectiveness is doubtful.

5. Summary

The impersonation of foods is one of the crimes of which eradication is difficult. The following philosophy is the summary of what Yoshida¹⁶³, the former president of Maruaki, talked before being arrested.

- i. It is unprofitable to sell a good thing cheap. He could make a rapid growth under the policy to sell “what he disguised as a good thing” cheap.
- ii. In his policy, there was the professionalism that “the point to show the skill of meat suppliers existed in the camouflage technology which brought the gross profit.”
- iii. The meat supplier, who continued to deliver the disguised beef to hotels, was proud to have sold imported beef as Japanese beef. He created Japanese beef from imported beef meat, which professional cooks of some hotels could not discover as the foreign meat. It was said that profitable meat vendors were those who had the excellent

¹⁶⁰ Between Dec. 2007 and Jan. 2008, 14 Japanese people, who ate frozen dumplings manufactured in Tenyo Foods in China, reported poisoning symptoms such as vomiting and diarrhea. The police inspected the dumplings, and found methamidophos, the organic-phosphorus insecticide that had been banned. The culprit who had been an employee of the manufacturing plant, was sentenced to life imprisonment in Jan. 2014.

¹⁶¹ In addition, Chinese people in China also wish to buy Japanese agricultural products, vegetables and fruits, if they can afford. The main reason of this phenomenon is that in China, some toxic pesticides are used unofficially to increase the crop yield.

¹⁶² There is still a moral problem that the poor people must eat with a risk of poison, and only the rich can eat risk-free foods, which is common in almost all the services in capitalism society.

¹⁶³ He, as a meat supplier, focused on the Hida beef (a famous brand of beef), and expanded Maruaki to the scale of 10 billion yen in annual sales in one generation.

technology in the camouflage of foreign meat.

- iv. He could sell cheaper products, since he was capable to fool the people.
- v. It was important to impregnate the president's policy thoroughly. He did not listen to what other people said to him but believed in his own way. He fired the people who had objected his policy¹⁶⁴. In such way, he could attain the rapid growth.

However, these "success factors" cannot always be effective. The environment in the society is changing¹⁶⁵. Changing the circumstances, the success factors may become "failure factors" in reverse. However, he who attained the annual sales of 10 billion yen in one generation cannot easily discard the "successful experience." The greater success is brought, simply because the successor pursued "success factors" more thoroughly, and the more significant growth could be attained, than others. Such criminals shall not be in the position of management in any organization in the future again. It may be better to prohibit them for life to be in any managerial position in an organization, because they cannot forget their success experiences for life, and will try to do the same¹⁶⁶.

As the study of the "Community Development Program" in National Graduate Institute for Policy Studies, Yoshio Hamada has announced consideration with a focus on the impact of legislation such as JAS Act (Hamada, 2013). The summary of it and the comments are described below:

- i. Before and after the strengthening of labeling system of the quality, asymmetry information is eliminated; the difference between the evaluations of the quality of consumer goods with high quality and low quality has relatively become larger. This indicates that the enhancement of quality display system has proven effective for

¹⁶⁴ By giving the fear of unemployment, he controlled the employees, and forced them to work hard. While some employees waver among the feelings of "doing something bad," of "scary to go against the president," or of "as long as following the president, the salary is good," employees take the way according to the instructions of the president.

¹⁶⁵ The environment is changing slowly: e.g., food fraud incidents were followed by the enhanced monitoring of the foods; press attention about food fraud has increased; whistle-blowing can now be easy via Internet; the workers who consider not necessary to work with patient in order to live, have increased.

¹⁶⁶ The lesson that we should learn from the scandal of foods is that "once we get a success, we tend to get the wrong idea that that success factor will continue forever." The greater the success, the greater the mentality that "do not want to admit the success factors will change to the failure factors" works. We easily welter in the past success, and forget the basics of strategy.

- To organize success factors of their own;
- To organize the environment where success factors are valid,
- To confirm whether the environment has changed or not;
- If the environment has changed, to review the success factors accordingly.

At the same time, it should be deeply impressed that anything that is contrary to the social ethics does not last long, even if it goes well at first.

certain markets.

- ii. With respect to the mechanism of the origin impersonation, he points that: (a) the fact that there is a relatively large price difference between high quality products and low quality ones is the basis for the impersonation; (b) unless the price is high, high quality products will not be supplied, but the high quality products with high prices are always exposed to the risk of being impersonated; (c) the penalties for violations may or may not be effective, depending on the detection probability and the magnitude of the fine.
- iii. Regarding the managerial decision-making for an executive of a food supplier, the factors whether he/she commits the violation of the Act by false labeling of origin, are (a) the presence or absence of revenue growth by the impersonation; (b) the cost of the impersonation and illegality; and (c) the risk of the management. The greatest risk for a large supplier of foods is the reputation risk, in addition to the financial damages.

Ken Shiraishi tries to explain mathematically the decision-making of the impersonation (Shiraishi, 2007). When there is an asymmetry in the information between a producer and consumers, consumers have damage, because when the result of consumers' selection at will is found deviated worse from the expected result, then the consumers have to suffer accordingly. If there is an asymmetry in the information, under the premises of (a) the production of high-quality goods cost more than that of low-quality goods, and (b) the sale of high-quality goods increases in sales amount and profits, the company has always the incentive to sell the low-quality goods disguised as the high-quality goods. In order to avoid this situation, the company that committed illegal impersonation, must be penalized. Although the penalty can be considered various types other than fine, think about the penalty of fine only here, in order to make the logic simple.

X: Low-quality goods (disguised)

Y: High-quality goods

R: Net sales amount

C: Average cost

D: Amount of fine as the penalty

γ : Probability of discovery of criminal acts (or violation of rules)

Now, the condition that the production of high-quality goods cost more than that of low-quality ones, is expressed:

$$C(Y) > C(X) \dots\dots\dots (1)$$

The condition that the sale of high-quality goods increases in sales amount is expressed:

$$R(Y) > R(X) \dots\dots\dots (2)$$

The condition that the company has the incentive of impersonation is expressed:

$$R(Y) - C(X) - \gamma D > R(X) - C(X) \dots\dots\dots (3)$$

That is,

$$R(Y) - \gamma D > R(X)$$

The condition that the sign of this expression is reversed, is

$$R(Y) - R(X) < \gamma D \dots\dots\dots (4)$$

In other words, if the penalty (γD) is greater than the difference between the sales of high-quality goods and sales of low-quality goods, the disguised (low-quality) goods shall be sold as low-quality goods (if the company sells the low-quality goods as the high-quality goods, the loss will occur, because of the high penalty). In this situation, the decision whether to sell high-quality goods as high quality goods, or to sell disguised goods as disguised goods, shall be made by the amount profit whichever larger.

$$R(Y) - C(Y) > R(X) - C(X) \dots\dots\dots (5)$$

If the above (5) is satisfied, the high-quality goods are sold as high-quality goods, and the disguised goods are not sold. In other words, in order not to distribute the disguised goods in the market, the conditions (4) and (5) are to be satisfied at the same time.

In order to enhance the control to increase the probability of discovery of illegal activities (γ), social costs are required. The amount of penalty should be determined in consideration of this point. As a result, to enhance the detection of illegal activities to the level of eradication may not be realistic, due to the huge social costs. The results of the "Food labeling watcher system," described above, are interesting as one of the heuristics at low cost with the use of volunteers. This is similar to the private security organization in Japan¹⁶⁷. A big difference is that even an amateur can identify street criminals easily in the streets. However, the disguised origin of foods can fool the professional, if it is done cleverly. In order to solve this problem, the only way to discover the impersonation of foods is to use the DNA testing machine, instead of relying on the five senses of human. In Japan, since the disaster of the Fukushima #1, many health centers test the foods which the citizens brought whether the level of radioactive materials in the food is within the limit. Similarly, it

¹⁶⁷ Since the social costs are so huge, all the street criminals cannot be caught by the police. Therefore, in Japan, we establish the regional private security organization in which citizens cooperate with each other, discover and report the illegal activities to the police.

is the most reliable and has deterrent effect that DNA testing of foods can be done inexpensively and quickly. In the case of street crimes, because it is impossible to screen the criminals by DNA analysis or radiation meter, we cannot help but to arrest the criminals after the commitment of a crime, generally. In the case of foods and drinks, irrespective of suspicious or not, we can put it in the testing machine, and check it before entering into our mouth.

Chapter 6: Crime of Inspection Agencies

Section 1. The Seismic calculations of architects

The seismic calculations of many buildings were disguised by some qualified architects.

1. Outline of the incident

On Nov. 17, 2005, the MLIT announced that it was discovered that some seismic structure calculations had been disguised for the total of 20 apartment buildings and one hotel. Then, the facts of the seismic impersonations were discovered one after another, and the suspects were summoned at the diet. Although it was considered that the motive of this incident was the self-interest of individuals who impersonated the seismic structure statements, but the real cause of this incident was the building certification system that could not discover the disguise.

Hidetsugu Aneha, a former primary architect, disguised seismic intensity calculations of some condominiums and the hotels since May 1997. The specified private Confirmatory Test Institution could not discover the disguises, and the constructions were approved. The tenants moved in the buildings, after the completion. However, 13 buildings were found after the re-calculations that they might collapse by the earthquake of the intensity 5 plus¹⁶⁸. On Oct. 7, 2005, there was an accusation to the MLIT about the faults of book keepings of the Test Institution from a whistle-blower. Impersonation of seismic intensity was discovered in the site inspection. On Nov. 17, 2005, the MLIT announced the impersonation properties which were found as of that day. Since then, the number of the impersonation buildings has increased. However, there was no compensation capability for the building constructors to pay to the residents, and administrative support was also insufficient. H. Aneha's wife killed herself. The MLIT confirmed that H. Aneha disguised 75 buildings in his calculations, as of Dec. 16, 2005¹⁶⁹. He was indicted for the violation of the building code and perjury. On Sep. 6, 2006, the first trial of H. Aneha started. On Dec. 26, 2006, the Tokyo

¹⁶⁸ The earthquake of ground motion of the "intensity 5 plus" is not a rare level in Japan. Four earthquakes occurred in 2012 were "intensity 5 plus" or greater, and in 2013 (as of Aug. 4) 6 occurred. Under this level, many people feel the trouble to act; a television and heavy furniture (e.g. a chest) falls down.

¹⁶⁹ However, as of March 31, 2006, earthquake intensity impersonation buildings by H. Aneha were 98. Including other architects, 110 buildings were reported as the problems in the calculations.

District Court sentenced five years in prison, and 1.8 million yen fine¹⁷⁰.

2. Systemic problems

After the seismic impersonation by H. Aneha, it was discovered that seismic impersonations were committed by the other architects.^{171 172} Construction industry is famous as the source of rigging-bids, illegal donations to politicians, bribery of bureaucracies, and as many industrial scandals¹⁷³. The moral level in the entire construction industry is extremely low.

Although the inspection agencies should be neutral, the related traders and construction companies have invested in the agencies (Newspaper Akahata, 2005). The result of a survey of 49 private laboratories designated by the government indicated that 40 of them were official corporations, and 11 companies had been funded by the construction or housing-related companies. East Japan Housing Evaluation Center which could not discover the forgery of H. Aneha, receives the capital investment of Tokyo Gas, etc. It was also found that they accept several seconded employees from the invested companies. The Japan ERI, the largest in this industry, has been funded by the five companies of house builders. The companies are trying to avoid the criticism of the string-attached, by making their own rule that the investments from construction-related companies shall be “less than 5 %.” Some inspection agencies were actually string-attached (Newspaper Akahata, 2005).

Some people point out that the problem came out in fair and neutrality of private Inspection Agencies¹⁷⁴, since the revision of Building Codes in 1998, when the jobs of building certification opened to the private companies. The MLIT, however, put the notice that the shareholding of private Inspection Agencies by construction companies was admitted to less than two thirds as maximum, just before the revision of the Building Standards Act enforcement. In this regard, some experts criticize. The author notes that it is

¹⁷⁰ The Tokyo High Court (on Nov. 7, 2007) and the Supreme Court (on Feb. 19, 2008) dismissed his appeal. The ruling of the Tokyo District Court was finalized.

¹⁷¹ They were Ryoichi Asanuma, in Sapporo, and Mizuochi Tamura.

¹⁷² Although many computer programs to perform seismic structural calculations have been developed, along with the revised Building Standards Act, the reliable one was significantly delayed, because it must be built to prevent an impersonation to “tamper-proof.” On Feb. 22, 2008, the NTT Data program was certified by the MLIT finally.

¹⁷³ With respect to this incident, the author surveyed the website of this scandal, and found no posting of the construction industry people, about the affirmative comment to evaluate the whistle-blowing.

¹⁷⁴ Specified Inspection Agency means the private institution that receives the designation of the government, and inspects that buildings meet the Building Codes. The number of buildings authorized to construct were about 330,000 by the government and 420,000 by private sectors in 2004.

a serious problem that the contribution by the construction-related industries is granted to less than two-thirds, and that the structure has not collateral of the neutrality of private Inspection Agency. A mechanism to ensure the fairness and neutrality is needed¹⁷⁵.

The author believes that the principal cause of the impersonation that had slipped through the inspection of the private Inspection Agency, was in the “sophistication of disguise.” However, there might be “an intentional ignorance” or “negligence” of the Inspection Agencies. The Inspection Agency of local government which the neutrality is secured also could not discover the fraud.

3. Aftermath

In Apr. 2006, the “Emergency Investigation Committee on Structural Calculation Falsification,” which was established as a private advisory body to the Minister of MLIT, analyzed and reported the situation that such impersonations were performed, as follows (Tatsumi et al., 2006).

In the building construction system of Japan, the opportunity to have the order of the structural design work by the architect who is inferior in ethics or technology has not been eliminated. H. Aneha could not meet at the same time both the minimum standards set forth in Building Codes and the economical demands by the constructors in the structural design, and ignored the Building Standards Act, and falsified the structural calculation documents.

Even an architect is inferior in ethics and technology, the followings can be pointed out as the reasons why the architect can continue to work as an architect.

- Since the roles of the architect are not well understood in the society, the mechanism of the selection of an appropriate architect based on the fair competition of the technical capabilities as the architect, does not work. Additionally, the selection in the market is also insufficient.
- As the result of the advancements of the construction engineering, architects are also specialized in various fields, i.e. division of design, planning, structure, and equipment. The design office as the prime contractor in general, is specialized in the design and planning and gets an order from building constructors, then they outsource or subcontract the structural design and equipment design to the specialized sub-contractors. While the

¹⁷⁵ Inspection Agency has the risk that even if the inspection shall be done fairly in the eyes of a third party, it might be dependent on the intention of the invested companies.

multi-layered subcontracting structure makes it easy for the architect, who is even if inferior in ethics and technology, to participate in subcontracting design work by the disguised anonymity, the management functions of the architect of the prime contractor to oversee, has declined, and the checking the co-works is unable normally.

- In particular, the presence of the structure calculation program of the Minister's certification makes it possible that a person, who does not recognize the importance of structural calculations and is inferior in technology, can make the structure calculations, and trim the outline of the structure statement.

Regarding the loss of functions of building certification and the inspection system, it is analyzed that under the legal system of the building certification, the reason why the impersonation was overlooked is the structural problem described below, in addition to the ineptness of the inspectors who cannot catch up the recent sophistication and specialization of modern building technology.

- (i) Due to the factor of increased number of the applications, processing power of an architecture director in a specific administrative agency cannot keep up the confirmatory test.
- (ii) At the system inception, the architecture director had rich experiences (e.g., the design of public buildings), and they were superior technically to the applicants of the building certification works. However, the situation has reversed, which brought the ruin of the examination.
- (iii) The regulation of Building Codes has gone towards the improvement of rationality and freedom, reflecting the sophisticated and diverse technology. Therefore, it has become necessary to have the advanced engineering knowledge to confirm the compliance with the laws and regulations. However, since the mechanism to cultivate human resources capable of required advanced engineering judgment in checking was insufficient, the architecture directors and the inspectors, who did not understand that, might have been unable to understand what should be the basis of confirmation.
- (iv) The architecture confirmation became open to the private sectors, which was a good opportunity for the private companies. However, building constructors tended to flow to an easy examination, i.e. cheap and fast, under the principle of economy.
- (v) The tendency produced the ruin of the examination in which it is assumed that they should formally check the outputs of the computerized structural calculation that has been approved by the Minister, and impersonations have been overlooked.

(vi) This is a result of the system of which “open seam” gradually became wide, during an extended period of time. However, the authorities were unable to predict and recognize the signs and symptoms.

Further, as for the strengthening of the legal responsibilities and penalties for architects, Japanese society assumed that human nature was fundamentally good. However, we must view the human nature as fundamentally bad, under today’s economic priority, assuming the unexpected problems.

In case the designing documents were created in collaboration with architects of multiple fields, under the current Building Codes, one qualified person suffices as the name of the architect designed, when it is applied for the confirmation. For the three disguised buildings out of 21, H. Aneha had to confirm applications as the designer; it was decided to be subject to oversight by the disposal of the Architect Law. However, there is a flaw in the legislation of Building Codes that, unless it is clear that an architect was involved in the structural design, the architect cannot be punished for even a serious criminal act related to the structural safety of the building. Currently, legal reform to strengthen the penalties for architects is studied, but it should be considered to strengthen the penalties corresponding to the responsibility, along with the clarification of the legal responsibility of the designer in response to specialization.

As for the handling of information, it took time to respond the e-mail that eHomes¹⁷⁶ had sent the report of a counterfeit of structural calculation documents to MLIT, which triggered the revelation of a series of scandals. In addition, it took another one week to transmit the information to the Minister, after checking the fact of impersonation. The reasons for this are (1) administration personnel did not recognize the existence of institutional risk, and could not understand the seriousness of the report, and (2) there was no personnel to recognize the importance of the situation and to transfer the information to the responsible supervisor. In terms of the victim assistance of this incident, even though the person who is responsible for the civil litigation was clear, it did not fulfill its

¹⁷⁶ The eHomes, Inc. is a company based in Tokyo. As the designated institution of the MLIT and the Ministry of Environment, it could issue the building certification and did the performance evaluation of buildings, including the investigation of the soil environment. It is the first company that informed MLIT the structure seismic calculation statement counterfeiting problem that came to light in Nov. 2005. As a result of this publication, the defects of Construction Industry Act, the Building Codes, and the Architect Act were amended in 2006. On Jan. 26, 2011, in a suit for damages to residents of a condominium for which eHomes made the building certification, Tokyo District Court dismissed the claim as “there had been no negligence on the confirmatory test.”

responsibilities, because it went bankrupt in the early stage, which was a major problem.

With respect to the manner and timing of the information publication, following the publication of impersonation fact of 21 buildings on Nov. 17, 2005, on the next day, the MLIT announced the 14 buildings which had been completed, excluding the locations and property names. Then, the residents of the apartments which Fuser Corporation¹⁷⁷ had sold called and visited the local governments with anxiety. MLIT announced the view at that time that they had properly provided the information to the specific administrative agencies involved. However, the ministry should have notified citizens all the available information exactly, without concealing, at an earlier stage (Tatsumi et al., 2006).

Under such critical situation that everyone did not expect, it is a most important thing for the government agencies and the ministry to provide information to the citizens through mass media in a timely fashion.

4. Summary

Initially, this case was viewed as a crime for the personal benefit of H. Aneha. However, as the investigation progressed, a wide range of apartments and hotels were disclosed as impersonations or errors due to more than one architect. As the result, the people distrusted construction industry as a whole. As pointed out by the private advisory body, "Emergency Investigation Committee," to the MLIT minister, the technology level of private constructors advanced beyond that of the agencies that supervise and regulate. The phenomenon of capability being reversed has occurred¹⁷⁸. However, the origin existed in some decades ago. This problem goes back to the high-growth era of the 1960s and 70s. Around that era, excellent engineers who graduated from technical colleges did not get a job in the governmental organizations, but entered various private sectors, where there were rewarding carriers and high salary levels. In other words, the engineers who got jobs in the governmental organizations were inferior in terms of academic achievement in the colleges. About two decades later, in the bubbled economy period of the 1990s, those

¹⁷⁷ Fuser Corporation was a real estate developer. In 2005, they sold some apartments for which the earthquake resistance statement was discovered counterfeiting. Then, they were forced to stop the operation, and the Tokyo District Court started bankruptcy proceedings in Feb. 2006.

¹⁷⁸ As pointed out in the Chapter 2 (Fukushima #1 nuclear power plant), this phenomenon is a major problem that various regulatory and supervisory agencies have at the moment. The regulatory and supervisory agencies have become the simple organizations that push a seal of approval to the documents which are submitted by the private companies to the "junior" bureaucracy in the organization, who cannot keep up with the recent technological advances.

excellent engineers, who had jobs in the private sectors, were promoted to the executives in their respective companies and made the successful developments of new technologies one after another. They contributed to pushing Japan up to the second position in the economy in the world. They did not evaluate or respect the rules and regulations which were created by the bureaucracies who had been “poor” alumni of the colleges. Instead, they brought authorities to their own “standards” that they created, and made them the new rules of the industry¹⁷⁹.

It has passed for more than 68 years after the World War II, and the decline in the relative position of the bureaucracy, and the low legislative ability of legislators who strengthened the dependency to the bureaucracy, delayed decisively from the technological advances in the world¹⁸⁰. In criminal justice, they cannot deal with the sophistication and globalization of crime, and led to a spread of white-collar crime. It is required that reviewing all the existing system in the eyes of the 21st century.

Section 2. Unqualified medical doctors

1. Outline of the incidents

Unqualified medical doctors can neither examine nor do surgery treatment of human body. Among those who have the qualifications referred to as monopoly business qualification, medical doctors can act as defined by the Medical Practitioners’ Act¹⁸¹. Despite being defined strictly, unqualified medical doctors and their treatment cases occurred quite frequently (Table 17).

2. Systemic problems

¹⁷⁹ In 1950s in Japan, it was a major issue how to apply the seismic design in the design of high-rise buildings. For example, Kiyoshi Muto (1903 - 89), after graduating the Department of Architecture in the Faculty of Engineering of the University of Tokyo, began the earthquake-resistant structural study, and established the theory of flexible structure to absorb seismic energy, which enabled the high-rise buildings. After retired from the University, he was invited by the Kajima Corporation as a vice president. He then led the study of the design and construction of high-rise earthquake-resistant buildings. At that time, it was said that the bureaucracy in MLIT begged the guidance about the seismic design of high-rise buildings to Kajima.

¹⁸⁰ The same is true to the relationship between the power companies and METI in nuclear power plant engineering, also to the relationship between pharmaceutical companies and MHW.

¹⁸¹ In Japan, even if a person other than the doctor has enough knowledge (e.g. nurses, pharmacists, or medical students), he/she cannot make a diagnosis. An emergency medical technician (EMT) is also possible to practice a treatment of emergency life-saving, but cannot make a diagnosis, and a surgery.

Because unqualified doctor incidents occurred frequently, the MHLW issued the notice on the “Thorough qualification of doctors and dentists,” on Sep. 24, 2012. Then, in the large hospitals, the cases have apparently increased that, when they employ a doctor, they request the presentation of the “original” of the doctor’s license. However, it is unlikely to eradicate fake doctors, because there are following circumstances in Japan.

- a. Since the government adopted the policy not to increase the number of physicians in the past, there is a grave shortage of doctors (Fig. 10).
- b. In the small or medium-sized hospitals and clinics in remote areas, when they recruit a doctor, it still happens often that they accept a “copy” of the doctor’s license to prove that the applicant is a doctor, in consideration not to make the applicant uncomfortable.
- c. Basically Japanese society is based on the belief that human nature is fundamentally good. In particular, a medical doctor is a profession with a significant risk and partakes of the life of people. Therefore, most Japanese think that to engage in medical services without a license is hard to consider from a commonsense viewpoint. And it is widely understood that even if an amateur could learn simple diagnoses on the website, it might be impossible to say something to the patients.
- d. In comparison with other professions, the compensation per hour of doctor is large enough and the investment for impersonation can be recovered immediately.
- e. The staffs and nurses who worked in medical institutions began unqualified medical practices by the instruction of a director in the same institution in many cases, because of the labor shortage. In such case, the illegal situation is not discovered for a long period of time by the connivance of the director. (Collusion among the people in the medical institution.)
- f. The doctor’s license is a B4 size, which is not convenient to carry. Therefore, both adopters and applicants tend to use the copy.
- g. In the case of spoofing of a real doctor, there is a need to be matched with the photo identification document such as a passport or driver’s license. Verifications of the name, date of birth, and the address with another document, e.g. health insurance card or residence certification, are required. However, such procedures are not usually done.
- h. By accessing the physician database of the MHLW, private information of individual doctor can be obtained. Those who aim to fake a doctor could access the database and steal such information by hacking, and the spoofing could be done perfectly. In other words, such database is a double-edged sword.

3. Aftermath

On Sep. 24, 2012, the MHLW issued the notice to the superintendents of Medical Department (and Bureau) with primary responsibility of all prefectures in Japan (MHLW, 2012c). This notification required that the superintendents should survey the qualifications of all the medical doctors and dentists in the hospitals and the clinics in the respective prefectures, and requested the employers to confirm the “original” of the license and the certification of graduation of medical college of the candidate of medical employee.

In addition, on Aug. 27, 2013, the MHLW issued another notice to all the Prefectural Governors (MHLW, 2013), in which they explained the development of the computer checking system of the information of registered doctors and dentists, and requested the Governor to notify it to all the hospitals and clinics in the respective territory. For the credentials of doctors, it can be said that strict operation has been made even compared to other qualifications. However, in spite of it, why do fake doctors appear one after another?

One pattern is that unqualified doctors take an examination of the clinic where a real doctor operates. Authorities did not inspect the qualifications of doctors, nurses, etc. after the opening inspection of the medical institutes. This is one of the causes that had produced fake doctors. Some of the doctors do not actually operate their clinics, but lend the name only. However, the MHLW cannot determine the actual situation.

The other pattern is the case to forge a doctor’s license. There were the cases that the unqualified doctors forge the license based on the image on the website, and submit the copy to an employer, unless the employer requires the original. What are described in the doctor’s license are the full name, date of birth, the registered address, the year when passed the national medical examination, and the registration number. Compared with the driver’s license, it is easy to counterfeit. In case the counterfeiting is discovered, and even if a fake doctor is arrested, the punishment is lenient¹⁸², and the probation is accepted in

¹⁸² Provisions of acts are as follows. No person except a medical practitioner shall engage in medical practice (Art. 17 of Medical Practitioners’ Act). A person who falls under any of the following items (include a person who has violated the provisions of Art. 17) shall be punished by: imprisonment with work for up to three years, a fine of up to one million yen, or both (Art. 31, Sec. 1, No. 1). When a person who has committed the crime set forth above has used the title of medical practitioner or a similar title, he/she shall be punished by imprisonment with work for up to three years, a fine of up to two million yen, or both (Art. 31, Sec. 2). If, in the case the medical license of fake have been presented to hospital where a person worked, there is a possibility that the crime of Uttering of Counterfeit Official Document is established (imprisonment of one year or more, 10 years or less, Penal Code Art. 158). In addition, there is a possibility that also holds for the fraud that it got a salary (imprisonment of less than 10 years, Penal Code Art. 246).

most cases. Therefore, this crime has an economical rationality as compared with the amount of income when one can successfully work as a false physician.

4. Summary

The characteristics of the persons being arrested for the medical practices without medical license are as follows: (1) Continues medical intervention for a long period of time before caught (more than 10 years in some cases); (2) Accidentally, some unqualified doctors can be discovered; (3) Cases that are aware of and reported by patients or physicians are a few; (4) The philosophy of unqualified doctors is exactly same as the real doctors, i.e. the view of justice to help the patients; (5) In some cases, a real doctor asks his staff to work as an unqualified doctor, and instructs that wearing a white robe, sitting, and being bossy make one a good doctor, and will not be discovered; (6) Unqualified doctors with no academic background are not discovered; (7) Some unqualified physicians were working at university hospitals; (8) Patients have often endeared the unqualified doctors as kind and sympathetic.

Today, it must be considered that there are many “unqualified doctors,” who are doing the diagnosis, treatment and surgery so hard for the patients across the country. In Japan, there are more than 1,000 national certifications. Among them, there are 157 business monopoly qualifications¹⁸³. The licenses and the handling of them do not match the current social circumstances, e.g., their certificates have been performed in the same way for decades. It is necessary to construct the system under which a biometric microchip is embedded in the license card, and the qualified person can disclose and transfer the embedded information to another institution with a password. Each national license involves one or more ministries. It is necessary to unify the database creation in one Ministry, e.g., Ministry of Internal affairs and Communications (MIC). “My Number System” will start from Jan. 2016, in Japan, in which each individual will have a unique identification number. This system can be connected to the administrative jobs of national licenses. Anyway a centralized, computerized management system is expected.

It is also important to eliminate the economic rationality that non-authorized personnel want to work, hiding the unqualified fact, or disguising. The simplest way is to

¹⁸³ Business monopoly qualifications are that it is qualified that with regard to the specific business, only the person who has the license, etc. of certain qualifications can do the business. To carry out the work without such qualification is prohibited (National qualifications, 2013).

strengthen the sanctions. For example, the following criminal approaches make the crime of impersonation rationally uneconomic.

- a. This kind of crime is not negligence. It is a deliberate offense. A person who commits a crime in deliberate, probationary imprisonment is not a suitable sentence. If found guilty, they should be incarcerated directly.
- b. Assault and fraud should be charged. Fines should be larger than the amount cheated.
- c. Health care facility management or physician who did not report an unqualified doctor and acquiesced should be regarded as the same offense.
- d. If the organizational involvement of a hospital or a clinic has been discovered in respect of an unqualified doctor, regional Governor should remove the clinical license.

Once a national qualification is obtained, it is effective for life in most cases.

However, the qualification in the rapidly developing fields like medical services requires the participation of up-to-date training (e.g., once per two years), through which the mechanism can be established to avoid the situation that qualified people will not keep up with the change of environment in terms of knowledge and skills in technological advances. Some unqualified doctors were particularly enthusiastic in the acquisition of knowledge and technology. Unqualified doctors are said to have shown approaches with friendly, polite description and kind reception, in contact with the patients, without taking the arrogant attitude of qualified doctors. It should be the model of the medical doctors.

Chapter 7: Sanctions to Deter White-collar Crime

A criminal individual of white-collar crime generally does not intend to commit either an incident nor a violent crime. However, an accident is caused by an individual, and behind that individual, there is an organization that arranges criminal circumstances where the individual is forced, or even willingly, to commit a crime.

Section 1. Location of white-collar crime in “Three-dimensional (3-D) crime model”

The author has created a unique 3-D crime model, which explains where various crimes can be located in the spectrum of the criminal activities, and why it is so difficult to deter white-collar crime.

1. Hypothesis

The uniformity principle can be applied to the criminal acts. In other words, although the criminal acts are constantly changing from the differences of environment, era and the means, the crime is committed at anywhere at any time. Then, all crimes are positioned at somewhere in the 3-D stereoscopic crime model.

2. The first dimension: X-axis of criminal motivation and the damage level

This axis is the spectral distribution of criminal damages based on the motivations of various crimes. The motivation levels are as follows in ascending order from the simplest to the most sophisticated.

- X = 0: The crime without criminal motivation (i.e. a simple negligence). The damage may be enormous, depending on the degree and scope of the negligence.
- X = 1: The crime to rob a small amount of money¹⁸⁴ or sexual crime, based on the selfish motivation. The offender ignores the opponent dignity or rights, and the motivation is based on the instinctive desire. The damage is limited to a single opponent.
- X = 2: The motive is a relief from the stress based on the liberalism, such as an

¹⁸⁴ In this thesis, the small amount of money means about 10 million yen (71,400 Euros) or less.

indiscriminate murder, the arson other than for obtaining insurance money, vandalism and bullying. The damage is not limited to a certain person, but sometimes wide and serious.

- X = 3: The mercy for an opponent. As an example, an offender kills a familiar person, in order to relieve the pain of the victim (e.g., euthanasia). This type of crime is not for the purpose of the offender, but for the familiar person nearby¹⁸⁵. The damage is limited to the familiar person.
- X = 4: The large-scaled fraud¹⁸⁶ for the self-protection or for the company based on the money supremacy. This is the motivation typically found in financial crimes, such as Enron¹⁸⁷, WorldCom¹⁸⁸, etc.
- X = 5: The hate crime based on an ideology, of which motivation is the prejudice against race, religion, sexual orientation or ethnic matters¹⁸⁹, and
- X = 6: The crime for survival or development of an organization based on solidarity. As the motivation, this is the most advanced and sophisticated. An offender commits crime not for oneself, but for the organization to which one belongs¹⁹⁰.

In the actual crime, the motivation is not clearly distinguished in such way. In some cases, plural motives coexist (e.g., X = 4 and 6 are mixed). Also, in the U.S. and the U.K., a few offenders raped and killed many prostitutes, with hatred of prostitutes (X = 1 and 5).

3. The second dimension: Y-axis of organizational level

The organizational level is the degree of criminal organization. It is a parameter that varies continuously from the individual level (Y=0), to the national level (Y=5). This axis is applicable not only to a company, but also to any organization. As the ideological backgrounds, self-centric, profit supremacy, and free competition supremacy can be considered.

- Y=0: Individual or aggregate level, but not organized;

¹⁸⁵ In Japan, some parents who were sick at heart for the future of the thalidomide baby killed their babies.

¹⁸⁶ In this thesis, the large-scaled fraud means about 10 million yen (71,400 Euros) or more.

¹⁸⁷ Enron Corporation was an energy company based in Houston, Texas, which employed more than 21,000 people by mid-2001. However, a large accounting fraud was disclosed and collapsed in Dec. 2001. Until Jul. 2002, the bankruptcy of Enron was the largest U.S. corporate bankruptcy. Total debt was about \$40 billion.

¹⁸⁸ WorldCom was the second largest long distance telephone company, after AT&T, in the U. S. WorldCom grew largely by acquiring other telecommunication companies. On Jul. 21, 2002, WorldCom filed for Chapter 11 bankruptcy protection, as the largest filing in U.S. history at the time. Total debt was about \$41 billion.

¹⁸⁹ For example, the violence against African Americans by white supremacists in the U.S. is included.

¹⁹⁰ The incident of Fukushima #1 nuclear plant of TEPCO and the related bureaucrats is included.

- Y=1: Small organization level¹⁹¹;
- Y=2: Medium-sized organization level¹⁹²;
- Y=3: Large sized organization level, but not listed company;
- Y=4: Large listed company or governmental organization level; and
- Y=5: National level.

4. The third dimension: Z-axis of the level of connection with the power

This dimension indicates the strength of the connection with the organization which enforces power to the offender. In case a crime is irrelevant to the power of the government, criminal justice system, or bureaucracy, for example, the level is zero (Z=0). It is the spectrum from the lowest or the most primitive level of connection, which is equivalent to “bribery” (Z=1), to the level of being protected by a specific law or semi-governmental organization (Z=5).

- Z=0: Without connection with an individual and an organization of public power;
- Z=1: The most primitive connection equivalent to “bribery;”
- Z=2: The connection equivalent to “corruption;”
- Z=3: The connection equivalent to “revolving-door syndrome¹⁹³” to an affiliated organization;
- Z=4: The connection equivalent to “ruling an affiliated company or an organization, by a general rule or regulation” and
- Z=5: The connection protected by a specific law or semi-governmental organization.

5. Three dimensional crime model

Then, all the crimes can be plotted on the 3-D crime model. Under the above

¹⁹¹ In Japan, the small company is defined as the number of employees by industry as follows: Commercial and service industry: 5 people or less; manufacturing and other industries: 20 or less. (<http://www.chusho.meti.go.jp/soshiki/teigi.html>.)

¹⁹² Similarly, the medium-sized company is defined as the number of employees and the scale of capital by industry as follows, but excludes the small company: wholesale: 100 people or less, or 100 million yen or less; retailing: 50 or less, or 50 million yen or less; service industry: 100 or less, or 50 million yen or less; manufacturing or other industries: 300 or less, or 300 million yen or less. (<http://www.chusho.meti.go.jp/soshiki/teigi.html>.)

¹⁹³ In Japan, Amakudari (“revolving door” or “descent from heaven”) is the institutionalized practice where Japanese senior bureaucrats retire and enter high-profile positions in the private and public sectors. The practice is increasingly viewed as corrupt and a drag of unfastening the ties between a private sector and the State. It prevents economic and political reforms.

assumptions, typical white-collar crimes and some non-white-collar crimes are tabulated below, which are depicted on Figs. 11 to 13. The numbers in the following table are the typical ones to indicate the image of the crime¹⁹⁴.

	Criminal organization or Incident	X	Y	Z	Length
a	Pharmaceutical companies	6	3	3.5	7.57
b	Nuclear Power Companies	6	4	5	8.77
c	Institutes to control architects, fake doctors, etc.	0	2	4	4.47
d	Consumer product manufacturers	6	4	4	8.25
e	Airline and railway companies	5	4.5	4.5	8.09
f	Food misrepresentation producers 1	5	2.5	4	6.87
g	Food misrepresentation producers 2	6	4	4	8.25
h	Financially scandalous companies	5	4	4	7.55
i	Robbery	1	0	0	1.00
j	Terrorism	4	5	4	7.55
k	Arson or other crime for fun	2	0	0	2.00
l	Hate crime (e.g., Rodney King incident)	4	4	5	7.55
m	Daily traffic accidents	0	0	0	0.00
n	War crime	6	5	5	9.27

- Notes 1. The items from “i” to “n” are the typical examples of non-white-collar incidents, for the purpose to compare with the white-collar crimes.
- 2. The length means the length from the origin to the point (X, Y, Z) of respective crime, in the 3-D crime model. That is, “Length” = $(X^2 + Y^2 + Z^2)^{1/2}$.

Almost all the white-collar crime are linked to the crime of a company or organization with a high organizational level, except only food misrepresentation frauds, which includes small and medium-sized businesses. And the connection levels with power are also high, i.e. the rights of the licensing, regulation, and protection are held by relevant ministry or legislation. This aspect is quite different from the street crime. The table below indicates the same crimes which are sorted by the “length” from the origin of the 3-D crime model, in which blue marked lines are white-collar crime. This table shows a sort of degree of

	Criminal organization or Incident	Length
m	Daily traffic accidents	0.00
i	Robbery	1.00
k	Arson or other crime for fun	2.00
c	Institutes to control architects, fake doctors, etc.	4.47
f	Food misrepresentation producers 1	6.87
h	Financially scandalous companies	7.55
j	Terrorism	7.55
l	Hate crime (e.g., Rodney King incident)	7.55
a	Pharmaceutical companies	7.57
e	Airline and railway companies	8.09
d	Consumer product manufacturers	8.25
g	Food misrepresentation producers 2	8.25
b	Nuclear Power Companies	8.77
n	War crime	9.27

difficulty to deter the respective crime, because of the complexity (Fig. 14).

When we seek in and compare a white-collar crime with the non-white-collar crime, the war crime is close to the white-collar crime category, which means that in order to deter the organized white-collar crime having a connection

¹⁹⁴ The number with a decimal fraction means the both integer numbers round up and down can be realistic, for example, Z=3.5 means that both Z=3 and Z=4 are existing.

with the power, we have to be prepared as if we stop a war crime. It is true that great power and great crimes are inseparable (Michalowski & Kramer, 2006, p.1). When political and economic powers pursue common interests, the potential of harm is magnified further. It is the harmful collaboration, which Michalowski and Kramer termed the “state-corporate crime,” which is one of the subjects of this thesis.

Section 2. Relation of an individual and an organization in punishment

The punishment has been made to both the corporations and the individual actors, in the cases of corporate crimes and scandals. However, when we look at the actual situation, neither punishment had the sufficient effect on corporate crime deterrence.

1. Why is an individual punishment poor in corporate crime deterrent?

In social psychology, there is the concept of “groupthink¹⁹⁵.” When a person determines things in a group, the person becomes to feel unbeatable, and to be excessively optimistic. It is the theory that, if a critical situation occurs in the group, the members of the group fall into the state that no one can dispute the decision. It is considered that such situation has occurred in corporate crime. Under such circumstances, it is necessary to cause the decision-maker the normative consciousness beyond the logic of the company to prevent corporate crime. However, the current criminal penalty system does not have such power as to form normative consciousness.

2. Why is punishment to a corporation poor in corporate crime deterrent?

Punishment to a criminal corporation is to impose the economic disadvantage as the penalties and fines for the corporation. There is also an approach to consider the punishment for corporate crime step by step, on the basis of the severity (Ayres & Braithwaite, 1992; Fisse & Braithwaite, 1994). According to their approach, the regulation stages becomes stronger in the order of: Market function ⇒ Self-regulation ⇒ Self-regulation with binding force ⇒ Laws and regulations. Corresponding to these

¹⁹⁵ Most of the initial research on the “groupthink” was conducted by Irving Lester Janis (1918 – 90), a research psychologist of Yale University. Janis published an influential book, “*Victims of Groupthink: a Psychological Study of Foreign-Policy Decisions and Fiascoes*,” Boston: Houghton Mifflin. (1972), which was revised in 1982, “*Groupthink: Psychological Studies of Policy Decisions and Fiascoes*,” Boston: Houghton Mifflin. Later studies have evaluated and reformulated his groupthink model.

regulation stages, the punishment system becomes in the order of: Persuasion and recommendation ⇒ Civil penalty ⇒ Criminal punishment ⇒ Suspending or deprivation of license, or business capital punishment. Although a fine does not lead to stop the business activity of a criminal company, it is a severe sanction, depending on the amount of it. However, there are some problems in this punishment.

- (1) The corporation can pass the burden of fine on to the product cost, and recover it from the consumers.
- (2) It is difficult to determine the appropriate amount of fine as an effective punishment. If the amount is too large, it affects the survival of the corporation, e.g., bankruptcy may occur, which provides a disadvantage to the consumers. In contrast, if it is too small (such cases are popular), there is no effect of punishment for a large corporation.
- (3) The penalty for a corporation cannot be the direct punishment for the decision-maker or the director. If the executives of a company consider that “because it was imposed on the company, it is not abnormal for the company to pay the fine as its cost,” the penalty has neither a deterrent effect, nor a formation effect of norms.

Therefore, current corporate punishment system is not an effective sanction to deter corporate crime. There is the need to evolve and to change from the conventional concept of “further strengthening of punishment to actors, and the severe economic sanctions as the punishment to corporations,” to the “sanction of the crime decision-making executives within the corporation,” and to the “remediation of the decision-making process.”

3. Current measures against corporate crime

To address the increase of corporate crime in Japan, the author examined measures which the government had taken recently. According to the “Role of consumer policy in the 21st century” in May 2003, Social Policy Council on Consumer Policy Committee has announced the following four items, in the chapter of “Monitoring and deterrence of illegal acts and injustice,” to deter corporate crime (Cabinet Office, 2003).

- (1) Enhancement of administrative penalties;
- (2) Raising amount of the fine of the administrative penalty;
- (3) Publication of the name of criminal organization; and
- (4) Introduction of the concept of the Federal Sentencing Guidelines in the U.S.

The Government had run the policies that were in line with the above four items

before the publication of this report. For example, to deal with the hidden trouble of the nuclear power plant, the range of imprisonment of individuals was expanded, and the maximum fine for corporations was raised to 300 million yen. For false labeling of foods, the maximum fine of individuals was raised to 200 million yen; maximum fine of corporation was raised to 100 million yen. Further, it set the guidelines for publishing the name of the company that committed an illegal act. In order to ensure the effectiveness of regulations based on the JAS Act, the rules had been changed to be able to publish the name of criminal corporation, if necessary, in Jun. 27, 2002.

Do these policies have a deterrent effect on corporate crime?

- (a) It is believed that penalty enhancement has a certain effect, because the penalties were too small. However, just to impose a fine does not solve the problem.
- (b) The amount of individual penalty is up to 10 million yen at most. In reality, however, subjecting to disciplinary action of dismissal from the company can be much tougher than the amount of the fine. The effect of the individual penalty is limited.
- (c) The publication of the name of the criminal corporation is a relatively new method of punishment. This is located at the lowest level of the criminal punishment system (Ayres & Braithwaite, 1992). As the feature of this method, the following characteristics have been pointed out: (i) It can avoid the disadvantages to consumers caused by the fine; (ii) The publication provides information to consumers; (iii) It has adopted the concept that “the soft punishment using a market mechanism is better than hard punishment;” (iv) However, depending on the trend of the market, it may give irreparable harm to the offender, and it becomes a hard punishment in some cases. In particular, for the case of large companies dealing with goods for consumers, the brand is so important that the publication of the brand name could be the death sentence for the company¹⁹⁶. On the other hand, for small businesses, because the brand is not so important, even if the corporate name is announced, they transfer the business to a new company with a different name, and let the announced company go bankruptcy. They may repeat the same criminal activity through the new company. Therefore, the effect of publication is insufficient for them.

Corporate crime is decided by one or more individuals in an organization. The compliance program is the means to prevent a criminal decision-making systematically in a

¹⁹⁶ For example, Snow Brand Food Co., Ltd. determined that they could not continue the operation with the brand of Snow Brand, and they finally selected the company dissolution, after the disguising beef products.

company. In order to promote the corporate crime prevention, the development of compliance program is to be enhanced in such way that, even if a corporate crime has occurred, if the company had developed the program, the severity of the sentencing is reduced¹⁹⁷. The steps taken under corporate probation include the appointment of probation officers, the development of compliance programs, internal investigations, submission of compliance reports, and publication of corporate crime. Currently, the Ministry of Justice of Japan is studying it. A certain effect is expected in the corporate probation, because it will directly curb individual criminal decision-makings. However, the effect is limited for small businesses.

4. Crime prevention corresponding to the decision-making process

Who is making a criminal decision in a company? Metzger & Schwenk (1990) classified the decision-making models of enterprises as follows.

- Rational actor model: In this model, it is possible to prevent corporate crime by giving sanctions to decision-makers, e.g., the directors of the organization, or to eliminate them.
- Organizational process model: Since the criminal business is processed through the decision-making system, to deter the crime is difficult. Therefore, they cause the same type of corporate crime repeatedly.
- Bureaucratic model: An influential decision-maker does not exist, and a decision-making across the organization is determined by negotiation among groups in the organization.
- Organized anarchy model: A criminal decision is made by the result of a chance of event.

Broadly speaking, a decision-making of corporate crime is divided into two: the individual decision-making and the organizational decision-making. For the models other than the rational actor model, there is a problem of the decision-making process, i.e. it is difficult to identify the actual decision-maker. Therefore, the decision-making “process” should be corrected to prevent corporate crime, instead of identifying and punishing an actual decision-maker.

How has the corporate decision-making been done in Japan? According to Suehiro (1996), it is often said that most large organizations have the bottom-up

¹⁹⁷ This is the concept of the Federal Sentencing Guidelines of the U.S. and the above is the idea of this concept. Furthermore, when a crime occurred, as a way to correct the decision-making process, the system of the “corporate probation” is employed. The Federal Sentencing Commission formally adopted it in Nov. 1991 as a choice of sentencing.

management style¹⁹⁸, rather than the top-down style¹⁹⁹ in Japan. As the entire organization of a large enterprise, the middle management is substantially moving the company. The top management of large companies in Japan generally does not instruct, or order details of their intention²⁰⁰. Generally, the decisions of corporate crime are divided into two: top decision and the middle management decision. In the case of top decision, the crime is motivated by personal gain, while in the case of the middle management decision, it is motivated by the interest of the corporation, rather than to obtain personal gain directly. Therefore, the sanctions for each pattern are as follows:

- (1) Against top decision: the sanctions are to strengthen the individual punishment of the top decision-maker, and to deprive the criminal proceeds from the criminal individuals.
- (2) Against middle management: the sanctions are to correct the decision-making process in the company, to foster the normative consciousness beyond the logic of the company²⁰¹, and to deprive the criminal proceeds from the company, in addition to the punishment to the real decision-maker of the crime.

Section 3. Sanction and decision-making process

1. Decision-making patterns of corporations

The corporate crimes that occurred recently in Japan have been reviewed, specifically, in respect of at what level each criminal decision was made (Pattern A of Table 18). According to the interviews of the presidents of these companies, most presidents reported that they did not know about the scandals (Nikkei Shimbun Newspaper, 2003g). There are also some cases to the contrary, in which chairperson or president was involved (Pattern B of Table 18). Therefore, there are two patterns of the organizational decisions. When the owner's management power is strong, top-down decision-making is made, in the

¹⁹⁸ The bottom-up management style is that the draft of a decision comes from the middle management to the top, and the decision-making is carried out in the form of approval of the draft.

¹⁹⁹ The top-down management style is that the top of an organization decides things at the sole discretion of the top, who pulls the organization toward it.

²⁰⁰ In some cases, before the submission of the draft from the middle to the top, the middle managements sound out the intension of the top management, or the top suggests its intention to the middle.

²⁰¹ According to the Thorstein Bunde Veblen (1857-1929), an American economist and sociologist, modern capitalism can be considered in the dual structure of the commercial companies and machine control industry. "Industry" is related to the production of goods that contribute to the welfare of humans, while "company" usually aims the maximization of corporate profits rather than welfare, as the logic of the company (*"The Theory of Business Enterprise,"* 1904).

cases of relatively small businesses. On the other hand, in the large enterprises, the middle management commits white-collar crime based on the idea of “for the company.”

2. RICO Act and its Japan version

Against organized crime including corporate crime, the Organized Crime Laws²⁰² have been put in place in 1999. The background of this legislation was that such crimes had been committed frequently at the time, as the crime for the purpose of acquisition and maintenance of illegal criminal interests, the firearm and the drug related crime of gangsters, population smuggling crimes committed by criminal groups of foreigners, violent crime of Aum Shinrikyo²⁰³, and so on. The emphasis of the Organized Crime Laws had been placed against organized crime of gang groups and terrorist group. Originally, the Organized Crime Punishment Law was established by reference to the Racketeer Influenced and Corrupt Organization (RICO) Act²⁰⁴ of the U.S. The application of the Act is determined by the continuation and repetitiveness. It is said the criteria is the enterprise and the pattern²⁰⁵. The key word in the application of the Japan version of RICO Act is the “organization,” which is defined as the organization of multiplayers with the common purpose, and it intends to carry out all or a part of the actions to realize the intention or purpose that is repeated by it. The organization to be applied is wide, e.g., a company or a gang group with an organizational structure. However, it is said that the bodies having legitimate purposes are not included²⁰⁶.

The Organized Crime Punishment Law lists the crimes of which punishment is aggravated. It includes gambling, murder, arrest and detention, extortion, forcible obstruction of business, fraud, extortion, abduction, kidnapping, harboring a criminal and

²⁰² There are three laws: The Organized Crime Punishment Law, Act on Wiretapping for Criminal Investigation, and The Law to amend a part of the Code of Criminal Procedure.

²⁰³ Aum Shinrikyo (currently known as Aleph) is a Japanese cult, which has been formally designated as a terrorist organization by several countries, including Canada, the EU, and the U.S. The group was founded by Shoko Asahara in 1984. The group gained international notoriety in 1995, when it carried out the sarin gas attack on the Tokyo subway. About 500 believers in the group were arrested, and 189 terrorists were indicted. Death sentence of 13 people and life imprisonment sentence of five have been established.

²⁰⁴ The original purpose of the RICO Act was to target the “criminal activities continued through illegal means such as violence or intimidation” committed by mafia.

²⁰⁵ If twice or more racketeering activities are observed within 10 years, it is recognized as the pattern.

²⁰⁶ Matsumiya (2003) criticizes that the definition of the organization is too wide, and there is a possibility to include labor unions and private corporations. However, in order to impose an aggravated punishment upon the actors, it is necessary that the offense is committed as the “activity of the organization,” and moreover, it is performed by the “organization” to perform its criminal activities. Therefore, it is unlikely that the activities of an organization with legitimate purposes are included in the criteria of this Act.

destruction of evidence. However, as the white-collar crimes, it includes only fraud, extortion, destruction of evidence, and the like.

Under the U.S. RICO Act, the meaning of racketeering activity is set out at the 18 U.S. Code §1961²⁰⁷. The point is that RICO Act tries to deal with crimes against economic activities, rather than simply dealing with anti-mafia (Tamura, 2001). In this regard, it is broader than the Organized Crime Punishment Law of Japan. However, K. Shiraishi (2007) argues that corporate crime prevention effect is high under the Organized Crime Punishment Law, with respect to enhanced crime proceeds deprivation described below. In particular, it would be effective against economic crime of small or medium-sized enterprises in which criminal activity would be directly connected to the top management.

3. Deprivation of criminal proceeds

The purpose of the corporate crime is the pursuit of profit obtained by it directly or indirectly. Therefore, to deprive the economic benefits as penalties or fines from representatives of the corporation and the corporation itself means to lose the incentive to commit a crime. In particular, if the top of a corporation, who is going to get a benefit through corporate crime and decides to commit a crime, is taken away the profits, rather than stripping the profits from the company, it dampens the incentives significantly. In the Act on Specified Commercial Transactions, fines similar to the actors are imposed even for representatives of the corporation under the dual liability rule. However, the amount of the fine in this case is 3 million yen or less, which is same as the maximum sentence of the actors. In the case of organized crime, since many victims are involved, gross amount of the losses may reach several billion yen. If this had remained as the profit of the representatives and the company, it is not a deterrent of crime. What has rationality as economic sanctions is the deprivation of overall (100 %) crime revenues.

The confiscation of criminal proceeds must be criminal forfeiture. The reasons are as

²⁰⁷ As currently amended, it includes: (1) Any violation of state statutes against gambling, murder, kidnapping, extortion, arson, robbery, bribery, dealing in obscene matter, or dealing in a controlled substance or listed chemical (as defined in the Controlled Substances Act); (2) Any act of bribery, counterfeiting, theft, embezzlement, fraud, dealing in obscene matter, obstruction of justice, slavery, racketeering, gambling, money laundering, commission of murder-for-hire, and many other offenses covered under the Federal criminal code (Title 18); (3) Embezzlement of union funds; (4) Bankruptcy fraud or securities fraud; (5) Drug trafficking; long-term and elaborate drug networks can also be prosecuted using the Continuing Criminal Enterprise Statute; (6) Criminal copyright infringement; (7) Money laundering and related offenses; (8) Bringing in, aiding or assisting aliens in illegally entering the country (if the action was for financial gain); and (9) Acts of terrorism (Cornell University Law School, 2013).

follows. First, the “free ride is not allowed” of illegal activity. In particular, with regard to the victimless crimes, e.g., pornography and bribery, there is no specific victim, and “free ride” is rampant, because there is no civil damage. Second, if criminal proceeds in excess of civil damage amount are left in the hands of criminals, the interests of the “windfall” is given to the victim (unjust enrichment), under the system that gives the victim the right to recover the profit²⁰⁸. Therefore, criminal proceeds entire should be confiscated by the criminal forfeiture instead of civil one. The third factor is that the enforcement of criminal sanctions is in place in each country. However, if the criminal proceed is transferred to non-criminal, it cannot be forfeited as a rule. In addition, property that can be confiscated is limited to tangible assets. Furthermore, it is only when the revenue is a consideration temporary.

The Organized Crime Punishment Law has more severe provisions. As the result of organized crime, it is possible to confiscate criminal act composition supposed to belong to the organization. The confiscation is not limited to tangible, but the range is expanded to the monetary claims. In addition, it is possible to forfeit by converting the property, as much pursuit as possible. Penalties are also possible at the discretion of the judge.

Criminal forfeiture system of criminal proceeds based on the RICO Act is specified in Art. 1963 (a) and (m)²⁰⁹. Under the RICO Act, it is necessary for the prosecution to bear the burden of proof of the basis of confiscation, as a criminal forfeiture. However, the degree of proof of the prosecutor may be a preponderance of evidence. In comparison with the Organized Crime Laws of Japan, RICO Act has the mechanism, such as easy to confiscate and also target widely. In Japan also, there is a need to expand the scope of forfeiture law against organized crime, leading to corporate crime deterrence (Shiraishi, 2007). The corporate crime revenues may not be remained in the company. If they remain in the company, confiscation is possible by the dual liability rule, but if the business owner is allowed to let the company go bankrupt intentionally, confiscation becomes impossible. In such case, it is effective to deprive the illegal income from the person who is/was a substantial management executive of the company.

²⁰⁸ In the U.S., since the punitive damages are accepted in the civil litigation, such phenomenon occurs.

²⁰⁹ The properties of confiscation are (1) All income individually acquired or held by Art. 1962 violation; (2) All the profits, securities, claims, property, receivables that the company has; (3) The revenue obtained directly or indirectly by illegal means that violated the Art. 1962; (4) All the property derived from this revenue; (5) All the fruit of all revenue; (6) All the Alternate property, i.e. if by the acts or omissions of act of accused, when the location of property to be confiscated is not known, it is transferred, sold to a third party, or the value has decreased significantly, any other property of the accused can be confiscated, to the extent the value of the property.

To deprive criminal proceeds effectively, it is necessary to deprive the profit from representatives or criminals before the revenue is consumed. In the Art. 348 (1) of Code of Criminal Procedure, it is specified that “When the court, in rendering a fine, petty fine or collection of a sum of equivalent value, deems that it will be impossible or difficult to execute the judgment should there be a delay until the judgment becomes final and binding, the court may order the accused to provisionally pay an amount equal to the fine, petty fine or collection of sum of equivalent value, upon the request by a public prosecutor or ex officio.”

4. Summary

Giving a monetary punishment, (1) needless to say to the criminal individuals, (2) sanction of criminal corporation, which means the fine to the company, and (3) the decision-maker of the crime shall also be punished. It is difficult to determine reasonably the amount of fine imposed on the criminal company.

Moreover, in the case of small and medium-sized businesses, there is a possibility to avoid forfeiture of the property by the top action of letting the company go bankrupt. A legal framework which is extensive and easy to confiscate like U.S. RICO Act needs urgently. Cesare Beccaria²¹⁰ (1738 – 94) says in his book, “Crime and Punishment,” that the promptness of punishment is more useful because the less the distinction of time that passes between the crime and the punishment, so much stronger and durable in mind the association of these two ideas: crime and punishment, in such considered as one cause and effect of each other and therefore required (Villarejo, 2012, p. 56). However, in order to deter corporate crime, the only punishment is not effective. Reforms in the decision-making process of the company are inevitable. That is, after observing at which level the criminal decision has been made, it is necessary to establish appropriate measures. Thereby, it is possible to prevent recidivism.

Section 4. Criminal punishment and administrative penalty

²¹⁰ Italian criminologist, economist and jurist, born in Milan, whose opinions were formed after the study of 18th century writers ascribed to French Enlightenment, the encyclopedic and especially Charles-Louis de Montesquieu.

As the assumption of the discussing the sanction systems of criminal, administrative and civil, the relationship between public law and private law is to be considered. Modern laws of Japan were crafted after the German public law studies. Therefore, initially, the legal system had been constructed in the framework of dualism of public law and private law. Then, the economic activities were incorporated into the state-controls, private law portion was fused to the public law system, and the intermediate law region was formed. As a result, it is supposed that Japan has established three systems: the private law areas in which the principles of freedom and equality rule, the public law area in which the principle of power rules, and the economic law area in which principle of economy controls. In other words, as the interpenetrating or mixing zone of the private law and the public law, the economic law area accounted for the position in the capitalist economy and society. The economic law is substantially equivalent to the “control law.” Therefore, even in the three typical law systems, the economic law and public law share the same concept in terms of the power of the nation, and they are in a position at odds with the private law.

The difference between the public law and the private law appears most clearly in the form of maintaining social order and the punishment for the violation. For example, consider the comparison with the civil damages as a representative of private law, and the punishment of criminal law as the representative of the public law. The criminal law disciplines the behavior of the people and maintains the social order by the nation’s imposition of penalties against the people directly. As the nature of the punishment, the typical theories are the retribution theory, educational theory, and the deterrence theory. On the other hand, the civil law intends to protect the social order, through the State’s intervention in the fight among people, with the force to solve the dispute. The form of civil sanction against the violation of the social order is the damages between the parties, of which nature is said that it consists of the functions of damage compensation, sanctions, and the deterrence of perpetrator’s acts (Inoue, 2002). Comparing the fines as a criminal punishment, it is not true that the criminal punishment is heavier than the civil sanctions or the administrative sanctions. However, in general, it is considered that the heaviest sanction is the criminal punishment in terms of the stigma. This is because people are aware that the act contrary to the criminal law (crime) has more anti-social nature in general than the act contrary to the civil or administrative law (Hayashi, 2000).

1. Criminal punishment and administrative penalties to white-collar crime

In the past, there was a qualitative difference between the administrative offense and the criminal offense, i.e. the criminal offense was a natural crime, and the administrative offense was a legal one. The natural crime is considered, at any time and any society, as the act of evil, such as murder, theft or arson. The administrative crime is the act that violates the laws and regulations set forth the need of enforcement, which is originally legal and has not anti-sociality or anti-morality. However, the act has become illegal after the enactment of the administrative laws and regulations. Recently, however, it has been denied that the crimes are divided into two, administrative and criminal offenses (Uga, K., Ohashi, Y. & Takahashi, S., 2003). Thus, the difference between the two is only a quantitative difference of minor crime or serious crime. Virtually the law imposes an obligation based on the administrative acts first, and then disposes administratively against the violation (such as an instruction to stop a business). If one does not follow the governmental instruction or order, the punishment is imposed. That is, an administrative disposition is made first, and then the imposition of administrative penalties, which plays an inhibitory role. Based on the different functions among the criminal punishment, administrative punishment, and the administrative penalties, respectively, it is considered appropriate that in the cases that the law purpose can be achieved by the administrative punishment or penalties, the application of criminal punishment is unnecessary, and in the vicious or serious cases, the criminal punishment is applied to achieve the law purpose with the addition of moral condemnation²¹¹.

The next problem is that who identifies as a serious case or a minor case. If one is dealing for many years either the administrative case or criminal case only, he/she may misunderstand the border between the two, and determine the prosecution or non-prosecution from a self-centered standpoint. In order to prevent this problem, it is necessary to establish the “Disciplinary Review Board²¹²,” that determines what is the most appropriate measure to prevent crime among the criminal punishment, administrative punishment, administrative penalties and the rejection, under the consultation of the professional public prosecutors and civilians elected.

²¹¹ For example, Japan FTC mentioned this concept in the “Anti-monopoly Law Review”, (Japan FTC, 2004).

²¹² The image of this Board is depicted on Fig. 18, and described in detail in the Chapter 10.

2. Sanction system

As the sanction system for maintaining social order, the public law was positioned as being more stringent than the private law, and in the public law, the order of criminal punishment, administrative punishment, and administrative penalties had been formed. However, this order has recently been collapsed since about 10 years ago. By introducing the penalty system in violation of securities law and antitrust law, which raised the amount of penalty considerably, it has become a punishment heavier than the criminal punishment, as the sanctions substantially²¹³. Further, the problem of double punishments of the criminal fine and the administrative penalty occurred. As the sanction of a corporation, it can be considered as the transition to the idea of Western World where they punish with penalties or fines, rather than criminal punishment. The problem here is that it is considered there is a problem in terms of due process, in the sanctions by government agencies, based on the proofs and procedures that are less stringent, at the stage where the penalty brought sever sanctions substantially. However, there is also a way of thinking in terms of crime deterrence, that there is no need to seek a high probative value in the sanctions against corporations. The administrative law of Japan originally had been a sharp distinction between the trial process and the administrative process, under the influence of German law. On the other hand, the U.S. administrative law has established the principle of “putting the administrative acts under the judicial control,” by incorporating a due process doctrine in the administrative process, and treated on the place of justice, which was a good idea to evaluate the substantial evidence capability²¹⁴. It is said that they established the role-sharing in this way between the court as the bastion of human rights and the administrative expertise (Ohama, 2005). In addition, it is considered in broad terms that the Financial Services Agency and the Japan FTC as the government agencies attacked the castle of the prosecution and seized a part of its territory. In any case, the fact that the “order of punishments,” which had been familiar for more than 68 years after the World War II, has been broken down by the world of finance that is most rapidly changing, can be considered that the environment of unified management of the criminal punishment and

²¹³ Since such financial crime is not included in the scope of this thesis, the details are omitted,

²¹⁴ According to the case law of the Tokyo High Court on Aug. 29, 1953, “the substantial evidence is the evidence which can be a reasonable basis for the decision of fact. Namely, if a reasonable person considers rationally the fact-finding may be reached on the basis of the evidence, the evidence is the substantial evidence. If there is substantial evidence, it binds the court, and the court will review the only point whether it is reasonable to certify such facts from the evidence obtained through the administrative punishment (Supreme Court precedent on July 10, 1975).

administrative penalty, is emerging, which is the reform proposal of this thesis to deter white-collar crime.

3. Legislative theory to solve problems

The raising penalties produce the problems in terms of the double punishments, the due process, and the protection of human rights. In order to avoid these problems, and to deter corporate crime, four reform approaches can be considered: (1) Unify the punishment to the criminal punishments; (2) Unify the punishment to the administrative penalties; (3) Notification system; (4) Establish the “Sanctions Act” that includes criminal punishments and administrative penalties. There are advantages and disadvantages, respectively.

(1) Unify the punishment to criminal punishment

This approach is the most simple and straightforward. Stigma and threat of “criminal punishment” are also expected as the deterrent effect. However, when performing punish both individuals and the corporations in “dual liability”, the proof level increases, and it is difficult to function as a punishment. To avoid this problem, we have to recognize officially the criminal ability of the corporation, and capture the criminal law provisions to punish a corporation, of which proof level is to be set lower than that of criminal cases in general.

(2) Unify the punishment to the administrative penalties

It is also possible to unify the punishment to the administrative penalties, under the premise of reducing the level of crime proven for corporations (currently, it is true). Criminal punishments are imposed for individuals, separately. In this approach, there is a need to review the way of administrative punishment, and to organize the relationship with the dual liabilities. In addition, the complexity of the punishments in the different court proceedings of corporations and individuals occurs.

(3) Notification system

The notification system is the system that previously had been used in indirect taxes and duties. When an illegality is recognized, the Chief of the Regional Taxation Bureau, the District Director, or the Customs Director notified the offender that the offender should pay the forfeiture of the amount equivalent to the target of the fine. It was optional for the offender to pay or not the money and goods that had been notified. If the offender did not fulfill the notice, it became criminal charges, and subjected to prosecution. At the time of the legislation of this law, the number of violation disposals was very large, and this system

was designed to handle it effectively²¹⁵. In this system, if exclusive rights have been granted to accuse like the FTC, there is no double punishments. In addition, there is the advantage of the disposition equal to the fine and imposing quickly as an administrative penalty. However, for the case that the violation is not clear, it is a problem how far the proof level and the severity of the procedure are required to the administrative agencies.

(4) Establish the new “Sanctions Act” that includes criminal and administrative sanctions

This approach is “to consider as a unit to deal with illegal actions,” without division of the criminal punishment and the administrative penalties. If the seriousness or the gravity of a crime is spread continuously from the lightest to the gravest, it is nonsense to draw a line between the administrative penalties and the criminal punishments. It is the classification that lawmakers in the past put their own theory and ignored the principle to determine the punishment according to the degree of damage or risk caused by the violation of laws or regulations. As for the white-collar crime, the boundary of criminal punishment and administrative penalties should be eliminated, and the offenders should be punished in accordance with a continuous scale of damage and risk incurred. The familiar example of a speeding driver is described in the footnote²¹⁶. There are countless cases that the law does not keep up with the technological advances. The punishment for corporations and individuals should be improved daily, to maintain rationality. Otherwise, the public confidence in the judiciary is lost and even law enforcers ignore the old fashioned law, and opt for arbitrary executions. Then, the social order cannot be maintained. It is necessary to establish the system of sanctions as a continuous spectrum, from the lightest level of “persuasion or reasoning”, to the gravest of “deprivation of license” or “dissolution order” to the criminal corporation, or the life imprisonment to the individuals. Shiraishi (2007, p. 107)

²¹⁵ In 1967, a similar system has been implemented for the traffic infringement notice system, which continues to the present.

²¹⁶ In most countries, a road traffic act specifies a speed limit at the time of driving a vehicle. In Japan, the violation that exceeds 30 km/h over the speed limit of the road shall be subject to criminal punishments, while in case of the excess being less than 30 km/h, it is treated as the administrative penalty. The rationale does not exist in the separation of 30 km/h. Driving at the speed that significantly exceeds the limit is dangerous indeed. Therefore, it is reasonable to impose a penalty for the purpose of preventing the risk of accidents. However, there is not such a big difference between administrative penalty and criminal punishment in the excess of 30 km/h and the excess of 29 km/h. The lawyers who legislated this rule in the past may argue that the level of 30 km/h was decided because they had to draw a line at somewhere. It is reasonable to assume that the risk of accidents would increase continuously along with the speed of the vehicle. In other words, the administrative sanction of “XX yen (or Euros) each” per one km/h exceeding the speed limit of the road should be imposed, because the sanction should be proportional to the potential risk. Today, since the advances in measurement technology have made it possible to measure the velocity accurately, it is possible to adopt a sanction in such way.

points out that substantial government agency makes a punishment on behalf of the judiciary, and such cases are increasing as the recent trend in Japan. He also has questioned the change in the order of punishment system is not allowed²¹⁷. However, his recognition of the issue is narrow-minded. He is merely sad the situation of the turf war over punishments between administrative and judicial power. This problem must be resolved at a higher dimension. The conflict of criminal punishment and administrative penalties must be sublated as the form of the new “Sanctions Act,” which is discussed in detail in Chapter 9.

Section 5. Theory of sanction

1. To toughen punishment of administrative penalty

It is progressing in Japan to toughen punishment of administrative penalty. The problems in this trend are sorted out as follows.

(1) By toughening punishment of administrative penalty, the issue of double punishments with the criminal punishment occurs.

For example, “The comments on the Antimonopoly Act review and the concept of the Japan FTC” including raising the amount of the administrative penalties, are as follows (Japan FTC, 2004):

- a. In order to achieve the purpose of prevention of cartels, rigging-bids, etc., the increased penalties are the administrative measures to collect the money that exceeds the amount equivalent to unjust enrichment. On the other hand, the main concept of the criminal punishment is to focus on antisocial, anti-morality of violations of the past, and the addition of moral condemnation for actors of violations from the view point of retribution. Along with this, it is also expected to deter such acts as the general deterrence effect. Thus, the criminal punishments and the administrative penalty system are considered fundamentally different, when comparing the spirit, purpose, nature and the content.
- b. On the other hand, in the sense that the purpose of sanctions is to prevent the

²¹⁷ Shiraishi argues that this is the problem in the economic and social changes, and that whether we assign priority to either secure the sanctions based on the rigor of justice or strengthening the enforcement of laws/regulations based on the mobility and the expertise of administrative.

violation, and the criminal punishment is also expected as an effect to deter violations (general deterrence), a portion is common to both sanctions. Therefore, FTC has determined that the provision of the adjustment clause to deduct an amount equivalent to one-half of the fine from the amount of the penalties is appropriate, based on the governmental purpose of the violation prevention. By this, FTC considers that no constitutional issue will occur about the cases that criminal punishments (fines) and the administrative penalties are imposed cumulatively for a case.

This view is a far-fetched logic, and the Supreme Court of Japan may indicate unconstitutional, if a case is brought to the Court. However, as the administrative side, it is the decision due to the frustration, under the disadvantaged situation of conservatism and the slowness of the criminal punishment system, against daily worsening and increasing white-collar crime (in this case, economic crime of corporations, in principle).

It is believed that the effect of prevention of violations also exists in the criminal punishments of the “fine.” That part is in common with the administrative penalties. However, it is difficult to evaluate monetarily how much fine corresponds to the effect of prevention. The main concept of the criminal punishment is the addition of moral condemnation, from the retribution point of view. Bearing in mind that the prevention of violations is one of the functions of criminal punishments, FTC considered it reasonable that one-half of the fine is to be deducted from the amount of the penalty, and that it should not impose a heavy burden, in order to achieve the government objective of preventing violations. The above penalty may not cause a constitutional problem on the cases that both criminal punishments (fines) and the administrative penalties are imposed. If the equivalent amount of money to the fine can be fully deductible from the penalties, another problem that they deal with the fines and the penalties at the same level will occur, although they have different natures, at the first set out. Although the claim of this administrative body of FTC has a point, it is far from the fundamental solution. First of all, it is based on a bureaucratic idea that they are considering as the pattern of the administrative penalty and criminal punishment being competing each other. By integrating the two sanctions simply, they could be sublated as the “Sanctions Act,” in terms of the “sanctions to the offenders, depending on the extent of the damage or risk caused by each offender.”

(2) Problem on due process occurs from the differences in procedures between the criminal punishment and the administrative penalty

There is a difference of the proof level between the criminal punishment and the

administrative penalty. In general, the proof level in administrative penalties is lower than that of the criminal punishments. Accordingly, when the government penalties become heavier, the substantial sanctions are imposed under the lower proof level. This becomes a concern when the factual “substantial evidence rule” is applied to restrain the finding of facts, in the subsequent criminal justice²¹⁸. The Supreme Court of Japan ruled the relationship between the procedures of criminal punishment and the administrative penalty, as follows (Supreme Court of Japan precedent, 1992):

“Security of legal procedures set forth in Art. 31²¹⁹ of the Constitution is related to criminal proceedings directly. For administrative procedures, it is not appropriate to determine that all of them are outside the security according to Art. 31, only because it is not a criminal proceeding. However, there are naturally differences in the nature of the criminal proceedings and the administrative proceedings. Therefore, it is not always intended to require that such opportunities are given to the other party of administrative sanction as a prior notice, an excuse and an opportunity of defense, and they are to be determined in a comprehensive comparison of the contents of limited rights and profits to receive by the administrative penalty, the nature and the degree of the restriction, and the contents, degree and the urgency of the public interest to be achieved by administrative sanction.” In other words, due diligence related to administrative penalty can basically be a legislative discretion²²⁰.

Also the judgment of the court on the administrative penalty (fines) as a monetary sanction approved the legislative discretion of the procedure that is different from the criminal proceedings, as ruled by the Nagoya High Court²²¹. That is to say, with respect to

²¹⁸ For example, if government agencies found the factual findings of illegality, though a sloppy inspection (they do not have the investigation right), and then after, the defendant attempts to rectify the error of the fact-finding in the criminal trial, the fact that has been approved already cannot be overturned.

²¹⁹ Art. 31 of the Constitution: No person shall be deprived of life or liberty, nor shall any other criminal penalty be imposed, except according to procedure established by law.

²²⁰ Although there is an objection in this respect, it will be presented at another chance.

²²¹ The plaintiff runs a public bath in Aichi Pref. The ruling of Nagoya District Court for the complaint to revoke the fines disposal of 56.4 million yen imposed by the Kasugai City Water Authority (defendant), based on the city ordinance, is the following (Nagoya District Court, 2004):

“Generally, when a local government imposes penalties, such as the disposal of fines, to a suspect who is suspected a violation of laws or regulations, it can be said to listen to the situation directly from the suspect, contributes to the proper finding facts prior to the disposal and desirable from the protection point of view of the interests of the suspect. However, ‘granting an opportunity to excuse,’ has been left to the reasonable discretion of the head of the local government to select the concrete embodiment, whether by oral statement, written statements, dialogical procedure, or by inquisitorial system, as long as it is not inconsistent with the purpose.”

the case that was brought into justice, it has been established that the administrative punishment procedures are not necessarily strict, compared with the procedure of civil proceedings or criminal proceedings, but according to the actual situation of the government, they are ordained legislative discretionary. As a result, it will be a difference in the results caused either by administrative measures, or by criminal proceedings. Moreover, the choice of the procedures has been held solely by the administrative authorities and prosecutors. There is no option for the defendant. In some legislation of the administrative authorities, including city ordinance, there is insufficient granting opportunity of defense. At present, because various procedures are mixed, and the departments in charge are different, the punishment imposed on the offender includes the legal instability, which may become lighter or heavier.

2. Degree of proof and burden of proof in criminal and civil proceedings

In Art. 318 of the Code of Criminal Procedure, the proof of the criminal proceedings is defined that “the probative value of evidence shall be left to the discretion of the judge,” and it defines a free conviction principle. The standard of proof is the “advanced probability,” or “after the pursuit of certainty as not allow the possibility of the existence of opposite fact, the ‘convinced proof of crime’ is said to be enough.” On the other hand, in accordance with Art. 247 of the Code of Civil Procedure with regard to proof degree in civil litigation, “the court shall decide whether or not the allegations on facts are true, when making a judgment, in light of the entire import of the oral argument and the result of the examination of evidence, and based on its free determination.” As for proof degree, it is the advanced probability in the light of the rule of thumb in the case law, to consider all the comprehensive evidences and the proof of a causal relationship of litigation on a specific case to prove the relationship that caused the particular result, rather than the natural scientific proof that does not allow one point of doubt, and the determination may need to have a belief true to the extent that a normal person does not have a doubt, and that is sufficient (Supreme Court of Japan precedent, 1975).

However, in the Code of Criminal Procedure, the public prosecutor needs to prove the existence of matters pursuant to it and the facts constituting the offense, to the “extent that you do not put a reasonable doubt,” because the principle of “when in doubt, for the

accused²²² works. As the result, in the criminal proceedings, the prosecutor bears the burden of proof of the 90% to 100%. On the other hand, in the civil litigation, “advanced probability” is the “extent to which ordinary people of the society rely on this safely in daily life.” In practice, the degree is said to be from 70 % to 80 % (Harada, 2003, p.32). As the basis of the burden of proof in civil litigation, there is the principle called “consideration of the fairness of the parties and the legal stability of the parties.” Therefore, in the recent cases of medical malpractice litigations or pollution problems, the move to ease the certification degree can be seen, from the point of view of weak relief (Kobayashi & Yasutomi, 2002, p. 261).

Because the burden of proof theory in Japan has been under the influence of German law, the burden of proof and the degree of certification are considered separately. However, in the Swedish law, for example, the “burden of proof problem contains both the distribution of burden of proof, and the determination of the degree of certification; to be more precise, the degree of proof is obtained embodying the burden of proof.” In the U.S., they take the idea of step-by-step proof degree. Namely, the proof degree²²³ that is required for the jury to the finding of facts is different in civil litigation from criminal litigation; in the criminal case more than 95 %, in civil litigation usually good if there is a conviction of more than 51 % proof degree (preponderance of evidence). In the case of fraud, unfair threat, the loss of contents of the certification and the proof of the change of the contract in writing, the confidence level of 70 % to 80 % is required and clear and proved compelling is applied (clear and convincing proof). This approach of the step-by-step proof degree sorts the risks between the parties. The combination with the burden of proof and the spectrum proof levels like this enables the flexible allocation of risks among the parties concerned. In the case of criminal proceedings, the degree of proof exists at the edge of the spectrum, because of the assumption that “when in doubt, for the accused.”

3. Degree of proof and burden of proof in administrative litigation

Since the need for clarification of facts in administrative litigation is stronger than civil litigation, there is the view that the degree of proof in administrative litigation should set

²²² The principle of “in dubio pro reo” (Latin for “when in doubt, for the accused”) means that a defendant may not be convicted by the court when a doubt about his or her guilt remains.

²²³ The level of proof in the U.S. is classified as follows. Certainty: 100%; reasonable doubt: 95%; clear and convincing: 80%; preponderance of evidence: 51%; probable cause: 40-50%; reasonable suspicion: 20%; and hunch: 5% (Shiraishi, 2007, p. 121).

higher than that of the case of civil litigation, generally. However, some argue that under the request for the protection of the rights of citizens, it should be set lower than normal degree of proof on the contrary (Hagiwara, 2002, p. 216). In other words, the rigor of the proof of burden in the administrative penalties and procedures in the administrative litigation is not required as such high level as in the criminal proceedings, but is not the same as civil proceedings. In reality, it is determined by the discretionary legislation and management in the disputes in each category, because the administrative punishment procedure is regulated by the discretionary legislation. As the result, it is possible to decide in the spectral choices to certificate the burden. Although the rigidity of criminal justice is a cause, the expansion of administrative discretion is not to be allowed indefinitely. The degree of proof in criminal proceedings is the one step higher than that in civil litigation. Because the nature of the criminal proceedings is the imposition by a punitive authority of the State, it is considered that the requirement must be set strictly. However, under the degree of proof being set high, the prosecutors, who have to bear the burden of proof for the facts of the crime configuration requirements, should have means to fulfill its burden. If not given, criminal proceeding does not work. Those means are the rights of investigation of police officers and prosecutors. Similarly, if a high degree of proof burden in the administrative punishment is required for the government authorities, it is necessary to provide them the means, such as, “administrative investigation,” “enforcement” and the “immediate enforcement.”

The administrative investigation is the act of collecting information by administration, for example, entering into private sections, in order to obtain the materials and information of the acts of people or business activities, and to do fair administrative actions. Basis of express provision of the law is not needed in the case of any investigation that not contrary to the will of the other party, but is required in the forced investigation. It is necessary to investigate in the way that does not bear on the other side subjected to investigation as possible, irrespective of forced or voluntary investigation. Warrant principle is applied in the case of use of physical force.

The enforcement is the act to achieve the purpose to force in accordance with the law, by a government agency, which has given a notice, an instruction or a demand, on the basis of the law, to the other party, in case the other party does not follow. It reduces the efforts of a trial, for example, for the agency. It is applied on a daily basis to seizure of delinquent, and eviction of squatters.

The immediate enforcement is the act to implement and realize the desired purpose immediately, without a notice, an instruction or a demand. It applies, for example, to the case of destruction of a building to prevent the fire spreading by firefighters, to enter a land or a building at the time of an important incident by police officers, the protection of people or drunken person by police officers, involuntary hospitalization of the patient with an infectious disease, etc.²²⁴

In the case that an administrative penalty similar to the criminal punishment is imposed to a corporate crime, the burden of proof and the degree of proof of the criminality should be the same level as criminal punishments. In the case of corporate crime, the investigation may be easy, because there are a large number of people who know the facts, and the information necessary to prove the criminality. However, since the vast evidences and stakeholders exist in the company, it is easy for them to make a secret arrangement (to team up to lie), and to destruct the evidences, which occurred often²²⁵. In addition, it has been difficult for government (also for law enforcement) agencies to find the criminal facts, because of their international economic activities. The author considers that as a countermeasure, it is necessary to relax the requirements for the enforcement and the immediate enforcement. Before an enforcement or criminal investigation, if the company destroys or conceals the evidences, the verification means other than the testimony of the stakeholders may be lost. In Japan, since the plea bargaining system does not exist, it becomes difficult to clarify the whole picture of crime in such case. As a system similar to the plea bargaining, there is a leniency system. It is the system that if one cooperates with the investigation by filing voluntary cartels or rigging-bids, a reduction and an exemption of the penalty is approved. In Japan, it was introduced in the revised Antimonopoly Act of 2006. The full amount of the penalties will be exempted from the company which applies first before the FTC's on-site inspection, and that company can avoid the criminal charges, as well. It is reduced by 50 % for the second, and for the third, 30 %. Up to three companies can enjoy the reduction of 30 % after the on-site inspection (Asahi Shimbun Newspaper,

²²⁴ Before the World War II, broad powers belonged to police agency, and it was understood that the immediate enforcement of the term of modern administrative law was applicable by police agency only, and that the system was the specific law for police.

²²⁵ It is a famous story that the officials of Arthur Andersen, a former accounting firm in the U.S., ordered the shredding of important Enron documents under the guise of reminding employees about the company's document retention policy. To help dispose of 30 boxes of documents, Andersen called a company named "Shred-It," whose motto was "Your secret are safe with us." Some two tons of documents were destroyed after Andersen executives acknowledged an SEC investigation into Enron's accounting practices was "highly probable," but before the SEC formally stepped in (Reiman & Leighton, 2010, p. 144).

2008). Leniency system²²⁶ is a typical example of voluntary compliance. In Spain, the leniency system was introduced on Jul. 3, 2007, as the “Ley 15/2007 de Defensa de la Competencia.”

The author emphasizes the importance of the approach for a large-scaled corporation to change the criminal decision-making process. However, it is necessary to investigate whether they just pose as changed the process superficially and has not changed or altered actually. In particular, in the case of habitual criminal corporations, there may be cases that they just fix the documents formally, and remain the original criminal decision-making process substantially. As the means against these corporations, law enforcement or government authorities can take the active monitoring. That is, wiretapping of telephone and e-mail, and the surprise investigation.

According to the report of Asahi Shimbun Newspaper (2013), in the room of a building in Rome, there is a communication interception facility of Rome District Prosecutor's Office, where more than 100 investigators from the police are wearing the headphone, facing the PC, and monitoring the conversation of bribery between politicians and mafia, with pricking up their ears²²⁷. The tapping in Japan is about 20 - 30 lines of mobile phone. In 2012, it was 32 lines in total. Wiretapping Act of 2000 is criticized for “violating the confidentiality of communication,” and the targets are limited to the crime of firearms, drugs, and organized murder²²⁸.

In case the administrative authorities are accepted to use the means more than ever, such as wiretapping, they must commit not to use corporate and personal information obtained, in any purposes other than the investigation of the case. It is also necessary to impose severe punishment on the official who violates the commitment. On top of that, with respect to particular cases, if the cooperation between the administrative and the law

²²⁶ As of Mar. 2010, more than 50 countries and regions over the world have implemented it. It has a large effect in the revelation of cartels.

²²⁷ They can sniff 2,000 lines at a time, and it is a state-of-the-art facilities. The prosecutor, Rabiani said, “Communication means had steadily made progress, and the Global Positioning System (GPS) built-in smartphones enable them to grasp the trend of organized crime than ever.” Italy is the “wiretapping superpower.” About 135,000 cases were detected of the wiretapping of Mafia crime, e.g. smuggling of weapons and drugs, the corruption investigation, in 2011. The investigating authorities pretend a plumber skilled in the art of tapping and will also listen to the conversation with a gimmick wiretap in car interior. But now, the conversation intercepted is about 5 % of the total. The wiretaps, such as e-mail and Internet mobile phones, account for more than 80 %. If the court admits, wiretapping can be started immediately. Usually it continues for 15 days, but if it is an organized crime, it continues for 40 days and can extend further. The wiretapped contents are disclosed to the defenses at the trial.

²²⁸ The wiretapping continues for 10 days in principle, and can be extended further up to 10 days. They notify the parties after the end.

enforcement authorities is made, e.g., exchanging information, more efficient search and investigation can be expected than now.

4. Psychological approach to corporate crime

Psychological approach to deter corporate crime has been performed since 1990s (Tomkins, et al., 1992). Early studies have focused on defining the psychological characteristics of corporate crime and scandals (Hans, 1990). In the subsequent studies, the researches including empirical analysis have been carried out about the relationship between corporate crime and profit-centric enterprise, the size of the organization, hierarchy within the company, and also the degree of concentration of power (Fox, 1996). Their conclusions are summarized that (1) Group behavior which is characteristic in business activities affects the individual behavior in general; (2) Corporate culture or environment that is easy to cultivate illegal activities not only let an individual be involved in the illegal acts, but also give the individual rationality to criminal behaviors (Punch, 2000); (3) Within a hierarchical organization, an individual will not act as an independent decision-maker, but as an agent for the organization. Therefore, the individual does not take the responsibility of his/her own actions, and falls into the state of just simply follow orders, like robots; (4) Various factors, such as decentralization of responsibility, specialized roles, and imperfections of information, dilute the individual responsibility, which apt to commit a criminal decision (Tomkins, 1992); (5) A company becomes the shareholder of other companies, and the relationship between the company and the owner as a natural person becomes more dilute, which increases the corporate crime risk (Coleman, 1982); (6) The ability to manage the system to punish disobedience and non-cooperation is important for corporate crime deterrence (Prilleltensky, 1994); and (7) As the general causes, poor performance, weak internal control, concern with short-term financial arrangements, and less concern with long run portfolio diversification are pointed out (Baysinger, 1991, pp. 341-376).

In Japan, the studies on the relationship between an organization and individuals are popular in these days, because the cause of corporate crime has been recognized as the problem of the corporate culture. In addition, the systematic violation is always performed through the decision-making, and collective decision-making is a direct cause of the violation (Okamoto & Kamata, 2006, p. 6).

According to the study of Okamoto et al., the organization of too much emphasis on

the relationship between the people (i.e. dependent culture on individual skills) is prone to scandal. The branch point of allowing illegal activity or not, depends not only on the individual “personal characteristic,” but also on the degree of the “character formation as an organizational member.” If the attribution to a group is strong, the psychological control attempts to reduce the discomfort caused by the gap between the self-norm and the group norm, and try to make the self-norm closer to the group norm. Business employees become to accept the corporate logic of profit priority as a “matter of course” or “unavoidable”, and to ignore the public interests, which is because of this psychological control (Nitta, 2004, p. 26). Taking together the above, the psychological findings on corporate crime can be summarized as the following.

- (1) Corporate crime and scandals are caused by the collective decision-making, which is carried out as a collection of individual decision-making, but it is easy to shift to the more risky way than the individual decision-making.
- (3) Individual decision is affected by the corporate culture, in addition by the individual characteristics.
- (4) Accordingly, the “individuals affected by the organization” should be considered as the “different individuals from the normal individuals,” in the decision-making problems of corporations.

The sociologist Coleman says, “Legal rules designed to deter individual wrongdoing are not simply transferable to the corporate setting (Coleman, 1982). The criminologist Sutherland (1940) says in his *“White-collar criminality”* that the characteristics of the crime of elite salaried staff are “systematic destruction of evidence and making a secret arrangement” and the “lack of guilt.” According to Sutherland, most corporate crimes are not prosecuted, because of the above characteristics. Intellectual level or the level of judgment of a group is significantly poorer than that of a single human, due to a psychological effect, which can be applied to the corporate crime. However, the reason why corporate crime occurs is not so simple. The differential association theory²²⁹ of Sutherland explains why the white-collar crime occurs as follows. “White-collar crime is a normal day-to-day act in a certain sense for companies and salaried staffs in line with the era, or

²²⁹ The first explicit statement of the Sutherland’s theory of differential association appears in the 1939 edition of *“Principles of Criminology”* and in the fourth edition, he presented his final theory, which has nine basic postulates. In summary, he believed that an individual’s associations are determined in a general context of social organization and thus differential group organization as an explanation of various crime rates is consistent with the differential association theory (Greek, 2005).

the wisdom of adults that should be learned.”

5. Economic approach to corporate crime

The economic approach to crime deterrence began from the crime model of Becker (Akiba, 1993, p.32). His idea is based on the expected value utility theory, that is, if expected value of utility by a crime is higher than that by legitimate business activity, people commit the crime. The author has developed a formula to compute the value of a crime. The “value of a crime (E)” is defined as the amount obtained by subtracting the loss from the benefit of the crime. Then, “E” can be calculated by the formula:

$$E = A + B\delta(1 - fa) - pGi - Rj.$$

Where,

A: The amount of cash robbed (yen)

B: The amount of goods robbed (yen)

δ : Discount rate of a fence who buys stolen goods

f: Forfeiture rate of stolen goods by the police

a: Arrest rate of criminals

p: Term of imprisonment in the case of jailed (years)

G: Annual income of the offender (yen/year)

i: Probability that the offender is imprisoned

R: The amount of property penalty (yen)

j: Probability that the property penalty is imposed

It is important to keep the value “E” in the deep “out-of-the-money”²³⁰ in order to deter an economic crime. In other words, the condition of “ $E < 0$ ” has a deterrent effect. However, from the above formula, in order to keep the value “E” negative, criminal justice system must increase the forfeiture rate of stolen goods, the arrest rate of criminals, the term of imprisonment, and the probability that the property penalty, which costs a lot.

6. Two-story structure theory of Katsuhito Iwai

Katsuhito Iwai (1947-) established the “Two-story structure theory” of a corporation in his book, “*To whom does the corporation belong?*” (Iwai, 2005). According to his theory,

²³⁰ The state of “out-of-the-money” is a loss when one exercises the option, i.e. committing a crime. In case of call option, the market price is cheaper than the exercise price. The state of profit is “in the money,” and the state of zero profit is “at the money.”

a corporation has two-story structure, i.e. the shareholders own the first floor as an object, while on the ground floor, the corporation that is owned by the shareholders owns the assets of the corporation. In other words, a corporation is the organization which is constructed by the combination of double ownership relationships. If the first floor is focused, the American style of corporations is emphasized, and if the ground floor (i.e. the human aspect of a corporation) is focused, the Japanese style is emphasized. K. Iwai argues that the shareholder sovereignty theory²³¹ is the error of law theory, because it looks at the first floor only. Iwai's corporate governance theory based on the two-story structure theory is that a corporation and its management are connected by fiduciary relationship²³². Therefore, if managements did not exercise their duty as to monitor and supervise the misconduct of an employee, or, if they did not exercise their duty as to improve the bad corporate culture and business quality, the breach of fiduciary duty of the managements occurs to the entire stakeholders. Further, as the content of the duty of care of directors, there is an obligation to construct an internal control system²³³. However, the decision to establish an internal control system is a matter of business judgment, and the broad discretion is given to the directors²³⁴. It is reasonable to pursue the liability of individuals in the organization through the administrative penalty. As the premise, it should be a possible sanction that the responsibility of the person who was obliged to build an internal control system is clarified and punished by the accountability within the company, which cannot be made by the criminal law.

7. Administrative penalties as sanctions of corporations

There are various types of administrative penalties, as shown in Fig. 15. Recently, however, the administrative authorities require the reports including compliance system to the corporations, in most cases. Here, the two discretions of the authorities are problems: (1) the discretion of the contents of the business improvement instruction and the order; and (2) the discretion of the judgment on the reports and the compliance programs

²³¹ The theory opposed to the shareholder sovereignty theory is the principle of stakeholders. In accordance with the Freeman's definition, the stakeholders are all affecters and affectees of corporate policies and activities, including shareholders, employees, suppliers, clients, and local residents (Freeman, 1984).

²³² The managements' (or directors') duty of the fiduciary relationship is legally prescribed in the Art. 355 of Companies Act: "Directors shall perform their duties for the Stock Company in a loyal manner in compliance with laws and regulations, the articles of incorporation, and resolutions of shareholders meetings.

²³³ Osaka District Court ruled it on the Daiwa Bank New York branch incident (Sep. 20, 2000).

²³⁴ Tokyo District Court ruled it on Yakult incident (Dec. 16, 2004).

provided by corporations. Since there is not a unified law in such administrative penalties, the lead authority decides at their own discretions, which indicate an unbalance among the ministries. The reason of such wide discretions in the administrative penalties is the expertise of individual business field²³⁵. Ultimately, when compared the amount of professional, technical knowledge between the administrative authorities and the courts, the knowledge level of the courts is apparently lower, which creates discretion rights in the administrative authorities that have a higher knowledge level²³⁶. In addition, the gap of professional, technical knowledge level between administrative authorities and the business operators provides another problem. According to Mueller (1993), if an administrative authority has the lower technical knowledge level than business operators, it results that (1) the authority can only receive the reports and compliance programs, and (2) the moral hazard would occur in the corporations, such as the submission of incorrect reports or false programs. Various disasters in Japan (e.g. the Fukushima #1, many pharmaceutical scandals, the ignorance of wrong seismic calculations by architects) are rooted in this problem. In the recent white-collar crime, which is highly sophisticated and tends to involve bureaucrats, since there is an asymmetry of information, technical knowledge and the experiences, the administrative penalties cannot easily be imposed by any administrative office to corporations, in general. Criminal law enforcers also hesitate to prosecute the executives of corporations suspected, due to the same asymmetry of information.

8. Effect of sanctions and market conditions

The market conditions are distinguished by the number of suppliers of goods and services: monopolistic, oligopolistic, and competitive market. The effect of sanctions to each category is shown below.

²³⁵ For example, comprehensive political value judgments in the immigration control administration; scientific and technical expertise considerations in hot spring drilling permit; Academic educational, professional and technical judgment in the textbook authorization; overall judgment based on scientific expertise knowledge in nuclear plant construction permit, etc.

²³⁶ Dennis C. Mueller (1940 -), a Professor of Economics (Emeritus) at the University of Vienna, describes that: (1) If the result is uncertain and the information is asymmetric, exercise of power can occur; (2) If the result is sure, a substantial power is not generated in the authority, and the discretion is extinguished; (3) However, in the situation of the result being uncertain, even if a person has a large power nominally, if he/she does not have the know-how required for management and supervision, it is not possible to have a larger right than those of lesser levels with know-hows required (Mueller, 1993, pp. 248-49).

Market	Monopolistic	Oligopolistic	Competitive
Cost of sanction and monitor	Small	Medium	Large
Effect of propagation of information (a)	Large	Medium	Small
Effect of selecting other provider (b)	Small	Medium	Large
Overall sanction effect: (a) X (b)	Small	Medium	Small

- Monopolistic market: Since the target corporation is only one, the cost of monitoring and the sanction is small. The awareness of the corporation is high, and the propagation of the reputation or evaluation is rapid. However, even if the reputation of the corporation becomes worse, the consumer has no other choice to buy. Therefore, overall sanction effect may be small²³⁷.
- Oligopolistic market: Since the number of suppliers is limited, the administrative authorities should pay the cost of sanction, and provide a measure to deter crime.
- Competitive market: Since the number of suppliers is large, the cost of monitoring and the sanction may be huge. In this case, the purchasers should have the ability to receive information about the products and the suppliers. The supplier can change its name, in case the reputation becomes worse. Therefore, overall sanction effect is small.

Section 6. Monitoring and market competitiveness

As the typical cases, the monitoring and the market competitiveness of three cases are considered: the false labeling of foods, recall problems of the automobiles, and the incorrect reporting of nuclear power plant.

1. Realities of enforcement and monitoring by the administrative authority
 - (1) False labeling of foods

Labeling investigation based on the JAS Act is divided into two: the general investigation and the special investigation. The general investigation is the observation at a frequency of once per year for about 30,000 retail stores nationwide. The items of the investigation are selected as one item each from agricultural products, livestock products, and seafood²³⁸. About 2,000 staffs in the agricultural administration offices also investigate the manufacturers of the products. The investigation manual is not disclosed, because it

²³⁷ TEPCO is in this category.

²³⁸ The items of the special investigation for the retail stores are decided in advance, to confirm the displays whether they are appropriate.

would inform the investigation methods to the vendors. If misconduct is found, the instruction is issued, and if it is not followed, the order is made. The improvements based on the instructions have not been generalized, due to the varieties of business categories (retail and wholesale), business scales, and the types of organizations. The monitoring system using the consumers has the access of about 1,000 cases per month, through the “Food labeling watcher system” of 4,100 entrusted consumers (Shiraishi, 2007, pp. 230-31).

(2) Recall of cars

In order to produce and sell the vehicle, based on the vehicle model designation system, it must undergo the tests of MLIT. However, endurance tests, e.g. deterioration of the brake, are not included. Accordingly, there is no way other than to check the internal test data of the manufacturer on this problem. However, the manufacturer may tamper the data. Therefore, the establishment of the corporate compliance systems is important. However, MLIT does not check the compliance system. If a problem occurs in a type of cars, a recall²³⁹ is made by the manufacturer, in general. This system started in 1969, and strengthened the penalties in 2002²⁴⁰. However, the basic structure of the recall system has not changed, i.e. the judgment of a failure is left to the manufacturer. Therefore, the implementation of the improvement is delayed, in case a manufacturer determines the cause of an accident is the poor maintenance or incorrect operation of users, and then the damage would increase. The example is the truck incidents of Mitsubishi Fuso. MLIT issued only the business improvement instructions. Since 2005, however, they began to issue the instructions to improve the internal systems, for the recall cases²⁴¹. For the vehicle manufacturer that made a serious misconduct related to a recall, MLIT does not impose sanctions, but requires generous additional matters, which has an effect of delay of an approval substantially (MLIT, 2004). About the safety of the vehicle, there is the opinion

²³⁹ The recall system is that in case a car manufacturer acknowledges that the structure, equipment or performance of a car does not meet the Road Vehicles Safety Standards, and that the cause is in the design or manufacturing process, the manufacturer notifies the facts and the necessary improvement measures to comply with the Standards to MLIT, and recovers and repairs the defects free of charge.

²⁴⁰ The penalties are: for the recall instruction violations, breaches of duty to notify remedial actions, false notifications, false reports, and rejects of inspections, the imprisonment for one year or less, the fine of 3 million yen or less, or both (Road Transport Vehicle Act, Art. 106-2). For the manufacturer, it rules that the fine is 200 million yen or less (ditto, Art. 111).

²⁴¹ In Feb. 2006, the automobile traffic bureau director issued “Remediation instructions related to the defective car-related activities” addressed to the president of MMC, and in Jul. 2006, he issued “Improvement instruction” addressed to the president of Toyota Motor, etc.

that the safety performances of the vehicle itself should be evaluated rather than monitoring the manufacturer. However, such accidents as the trucks of Mitsubishi cannot be prevented under the current system. Since automobile market is oligopolistic, the effect of sanctions is great, as the result of the change to another manufacturer's products and propagation of reputation. In view of government side, it is easy to pay costs to the disclosure regarding the quality of the vehicle, and it should be so. The accident reports are decreasing, because monitoring manufacturers by the government is strengthened as the result of the reports. However, the reports from the vehicle users, e.g., truckload carriers and taxi companies, have increased. The user intends to avoid liability thereby. Therefore, even if there is few recalls from the manufacturers, the opportunity of recall recommendations by the government increases. In other words, monitoring by the market compensates for the lax monitoring of the government.

(3) Safety management of nuclear power plant

For the safety management of nuclear power plants, on the basis of the pipe failure accident²⁴² in Aug. 2004, at Mihama power plant of KEPCO, METI required (1) the report of the piping of power generation facilities, which have a possibility of thinning due to the corrosion or erosion, and (2) the establishment of a systematic and unified quality assurance system (e.g., a check list of the equipment), which enables planned inspections by the safety organization. To ensure safety, a prerequisite is that the inspection has been carried out properly. However, a fraud on the voluntary inspection of nuclear power plant occurred in TEPCO²⁴³, even earlier than KEPCO. As the result of safety management review, penalties are not imposed on power generation companies, even if there is a deficiency in the implementation system of self-inspection. The administrative agency is monitoring all the nuclear power plants. However, monitoring the details of the 48 nuclear

²⁴² On Aug. 9, 2004, KEPCO had an accident that the condensate pipe was damaged in the turbine house of Unit 3 Mihama nuclear power plant. The downstream portion of a flow meter orifice of the condensate pipe broke due to the gradual reduction of the thickness. Through the breakage, steam and hot water at about 140°C erupted. The location of the pipe where damaged was not listed in the check list, and they had not performed the measurement of the thickness of the pipe, up to the accident. Five workers who were preparing the works of periodic inspection, at the time of accident, were killed, and six people were seriously injured.

²⁴³ Tampering incident of the voluntary inspection records of TEPCO: There were 29 tampering in the self-inspection records of 13 nuclear plants, such as hiding cracks in parts, of which inspections took place in the 1980s and 90s. The incident was discovered from whistle-blowers of American engineers GE International who made the inspections in July 2000, of the 13 plants. In 2002 Nuclear Safety Agency has published the incident, five executives of TEPCO resigned. However, METI did not criminally charge against TEPCO, and it was only a reprimand after all. It is no exaggeration to say that such a generous treatment for large companies grew the impudent of TEPCO, and caused the disaster at the Fukushima nuclear power plant.

power units, as of Jan. 2014, is impossible technically and in the aspect of human resources. Then, the administrative body has to receive only the reports of inspections and test results from the power companies, and evaluates them. Further, severe punishments are to be imposed for fraudulent reports such as KEPCO and TEPCO. It means that the government monitors proper compliance and its operation, at the same time of expecting the deterrent effect of criminal charges. There are only 10 regionally monopolized power companies in Japan. Thus, the buyer of the electric power can only be supplied with electric power from a specific regional power company. Even if that company committed misconduct, publicized it, and generated bad reputation, there is little effect of monitoring and sanctions by the market. Therefore, it is necessary to strengthen the personal punishments and the company itself, under the raised fines (Shiraishi, 2007, p. 243). In addition, there is a need to monitor by the staff including outside members.

2. Evaluation of monitoring system by the administrative authority

Since the number of target suppliers of the monitoring system of MAFF is more than 30,000, it is not effective. However, since food products relate life and health, monitoring misstatement related to food quality display is required. Under the quality labeling standard system of JAS Act, it is required to display (1) the name and the place of origin for fresh foods, (2) the aquaculture and thaw, in addition to (1) above for fishery products, and (3) the name, ingredients, quantity, expiration date, consumption limit, preservation method, and about the manufacturer for processed foods. Currently, Japanese consumers generally do not purchase the foods produced in Fukushima Pref. and imported from China. Therefore, supermarkets do not showcase such foods. However, since the display of the production place of the raw materials is not mandated for processed foods, such possibility is high that they make processed foods with Chinese vegetables which contain prohibited pesticides, or with foods of Fukushima Pref. which are contaminated by radioactive substances. Restaurants serving cheap foods are the same. The development of the free inspection system using simple DNA testing equipment is awaited.

Section 7. Constitution, culture and responsibilities of an organization

1. Failure of compliance program

There exist some companies that repeat misconducts, and that do not capitalize on

the scandals of other companies. They have the corporate structure to ignore the instructions and monitoring of government. They have maintained for decades the culture to downplay the implementation and monitoring of the compliance system. For example, Seibu Railway group²⁴⁴, MMC group²⁴⁵, Snow Brand group²⁴⁶, and ZEN-NOH group²⁴⁷. In this section, the way of management of misconducts after the occurrence of scandals in these groups is considered.

The measures to prevent misconduct recurrences in the groups were common. They were the resignations of the presidents, the developments of corporate action guidelines and code of ethics, strengthening the quality control departments, the establishments of employee consultation, the developments of crisis management manuals and the consumer consultation response manuals, the review of corporate ethics education, and the internal investigations. On the other hand, the measures that have been made so far from the last scandals, were (1) the establishments of corporate ethics committees, (2) the participations of external members in the operational audits, (3) the appointments of outside directors and auditors, (4) monitoring the prevalence of corporate ethics, and (5) submissions of the pledges by all employees. It is thought that to involve the external members in the monitoring corporate management, and a written undertaking to all employees, have taken one step ahead from the conventional reform by executives only. They have prevented the misconduct since then. In the cases of food-related, small and medium-sized businesses, it has been the pattern that such measures do not work, and repeat the misconducts, which result in the bankruptcy when they get stuck.

2. Effective compliance program

The U.S. also had similar problems. In Nov. 2004, they revised the mitigation of sentencing in the U.S. Federal Sentencing Guidelines, i.e. (1) substantial separation of the executive body and regulatory body, (2) the need of providing information to the regulatory body, (3) the promotion of corporate culture on corporate ethics, and (4) the board of directors' periodic verification of the effectiveness of compliance program and periodic

²⁴⁴ In Apr. 2004, profit sharing incident to the extortionist. In Oct. 2004, misstatements of securities report.

²⁴⁵ In 1997, profit sharing incident to the extortionist, and false report incident to the Dep. of Transportation. In 2002, false report on the wear limit of hub. In 2002, hidden defects of the propeller shaft (found in 2004).

²⁴⁶ The food poisoning incident of Snow Brand Milk Products occurred in 2000. Beef impersonation incident of Snow Brand Food Co., Ltd. occurred in 2002.

²⁴⁷ The misstatement incidents of foods occurred in 2001, 2002, and in 2003.

reporting and understanding. These additional elements are required, but not sufficient. It is meaningless to fix a form of compliance program only, and the corporate constitution and the conscious transformation of all employees must be made.

On the other hand, from the fact that the mission of a corporation is to maximize the profits, the design of the compliance program must produce the greatest effect at the lowest cost. In addition, the expansion of government agencies to monitor can expect the effect of increasing the number of discovering violations, but it has a negative aspect of increasing social costs. Finally, we need to give up the idea to eradicate the white-collar crime. Instead, we calculate the social losses due to white-collar crime (L), the cost of government agencies to reduce white-collar crime ($C1$), and the additional costs in the corporations ($C2$). Then, the following formula must be satisfied.

$$\Delta C1 + \Delta C2 < \Delta L \quad (\text{where, } \Delta \text{ means the amount change (plus value))}$$

In other words, such policy should be adopted that the value of $\frac{\Delta L}{\Delta C1 + \Delta C2}$ is as great as possible beyond one.

3. Simon's decision-making theory in an organization

Herbert A. Simon²⁴⁸ wrote "*Administrative Behavior: a Study of Decision-Making Processes in Administrative Organization*" (1947), in which he distinguished between "value judgments" (which lead toward the selection of final goals) and "factual judgments" (which involve the implementation of such goals). The task of rational decision-making is to select the alternative that results in the more preferred set of all the possible consequences²⁴⁹. The value judgments are the standards of rational decisions (e.g., customer-first principle, short-term profit-first principle, or stock price maximization principle), which can be the corporate culture that binds from the top to the bottom of an organization. In the Simon's theory of decision-making, there was a manualized decision-making, which is a routine decision-making and can be transferred from a generation to the next generation. The rigging-bids are the example of this type of

²⁴⁸ Herbert A. Simon (1916-2001) was an American political scientist, economist, sociologist, psychologist, and professor at Carnegie Mellon University. His research ranged across the fields of cognitive psychology, cognitive science, public administration, economics, management, philosophy of science, sociology, and political science. He was one of the most influential social scientists of the 20th century.

²⁴⁹ This task may be divided into three required steps (Simon, 1976, p. 67): (1) The identification and listing of all the alternatives; (2) The determination of all the consequences resulting from each of the alternatives; and (3) The comparison of the accuracy and efficiency of each of these sets of consequences.

decision-making. Therefore, in order to deter white-collar crime, it is necessary to correct the corporate culture and the manualized decision-making system.

Chester Irving Barnard²⁵⁰ (1938) pointed out that “the decisions that an individual makes as a member of an organization are quite distinct from his personal decisions.” Personal choices may be determined whether an individual joins a particular organization. As a member of an organization, however, an individual makes decisions not in relationship to personal needs and results, but in an impersonal sense as a part of the organizational intent, purpose, and effect. Organizational inducements, rewards, and sanctions are all designed to form, strengthen, and maintain this identification.

4. Corporate punishment theory

In Japan, criminal ability of a corporation was not recognized in the past. Since 1960s, however, the need for corporate punishment has increased, and the opinion affirming the criminal ability of corporations has become influential. The punishment rationale is the theory of “Supervisory responsibility of the corporation to employees who made the violation” (negligence responsibility theory) has become a leading theory. In addition, the negligence was determined under the “negligence estimation theory” (which is immunity if the corporation demonstrates that it is no-fault)²⁵¹. Corporate punishment in Japan is based on the dual liability. In other words, the monetary penalty is imposed to the violated actors and the corporation as well. However, when viewed in terms of the effect of monetary sanction, even if the statutory penalty of fine is enough to individuals, often insufficient for a corporation that has huge assets. Then, it has become influential that we disconnect the linkage of these monetary sanctions, and that it should define the upper limit of the monetary sanction for a corporation to the extent that having a sufficient effect different from that of the individuals. For example, the fine of “unreasonable restraint of trade crime” of Antitrust Law was increased to 500 million yen as the upper limit for corporations only, in the revision of 2002.

If the offender is an employee, the director’s liability is recognized as the negligence

²⁵⁰ Chester Irving Barnard (1886 – 1961) was an American business executive, public administrator, and the author of pioneering work in management theory and organizational studies. His landmark book, *The Functions of the Executive*, sets out a theory of organization and of the functions of executives in organizations.

²⁵¹ Negligence estimation theory is stated in the Supreme Court case law on Mar. 26, 1965. <http://www.courts.go.jp/search/jhsp0030?hanreiid=50709&hanreiKbn=02>

of duty as the corporate representatives. Therefore, the possibility of no-fault immunity is observed. However, if the offender is a representative of a corporation, the intention or negligence of the representative is an act of corporate responsibility, and there is no room for immunity. For the understanding of the criminal liability of corporations as above, there are also a few critical opinions. For example, (1) Extended theory: the view that rather than limiting to the representative, the range of director's obligation underlying negligence of the corporation should be extended to senior managements, (2) Corporation responsibility theory: as long as the violation of an employee has a business relationship, it should be the responsibility of the corporation without having to go through the negligence of the director, (3) Organizational model theory: to affirm the criminal liability of corporations, it is necessary that a valid system for crime prevention lacked in the corporation itself, in addition to the negligence of the director.

It is a theoretical task to configure rationally the structure of the criminal liability of corporations, while assuming criminal ability of it²⁵².

5. The relationship among COSO framework, internal controls and criminal law

In the common law, the tendency of legislation that imposes criminal liability directly to the company can be seen (Shiraishi, 2007). As a constituent element of a crime, the company's management system (e.g., the criminal corporate culture or the failure of management) is a problem. However, the corporate culture has not always been documented. Such ambiguous crime requirement is contrary to the principle of clarity of criminal law, because it harms the crime predictability of citizens. Therefore, it is necessary to clarify the concept of criminal corporate culture and the failure of management. Apart from the criminal law, there is also a movement which aims to enhance and strengthen the internal controls, in order not to cause a failure of management²⁵³.

Currently, COSO framework is the worldwide standard as the idea and the evaluation method of internal controls²⁵⁴. According to COSO framework, the objectives of

²⁵² The student battleship. Consulted on Jan. 12, 2014, in <https://sites.google.com/site/hougakuten/pan-li-bai-xuan/xing-fa-zong-lun/3-s40-3-26zui-er-xiao-pan-liang-fa-gui-dingto-fa-renno-guo-shi/-jie-shuo-3-s40-3-26zui-er-xiao-pan-liang-fa-gui-dingto-fa-renno-guo-shi>

²⁵³ In the U.S., in response to the financial scandals of Enron and WorldCom in 2000, in the Sarbanes-Oxley Act of 2002, establishment and maintenance of internal controls are mandated by law. In Japan, the financial report from the fiscal year ended Mar. 31, 2004, the description of the internal control system is required.

²⁵⁴ COSO framework is the common internal control model against which companies and organizations may assess their control systems, publicized by the Committee of Sponsoring Organization of the Treadway

the internal control are (1) Effectiveness and efficiency of operations, (2) Reliability of financial reports, (3) Compliance with applicable laws and regulations, and (4) Safeguarding of assets. In order to attain these objectives, five interrelated components provide an effective framework for describing and analyzing the internal control system implemented in an organization, i.e. control environment, risk assessment, control activities, information and communication, and monitoring²⁵⁵. Although the internal control and the corporate culture may be clarified through the utilization of COSO framework, the problems of the criminal law on the internal control are still outstanding. They are:

(1) The positioning the internal control obligations in the criminal law

In order to obtain the due diligence defense and the mitigating circumstances in sentencing, a corporation not only pays due diligence to deter and detect corporate crime, but also promotes the corporate culture that raises corporate ethics and law-abiding awareness.

(2) Whether the contents of the internal controls can be used as the requirements of criminal law or not

The standard of internal controls is based on COSO, which originally intended to ensure the reliability of financial reports, and was not such high level control system as a part of duty of care of a good director. Criminal negligence of directors and supervision corresponds to the high level duty of care of a good director, which includes the internal control system as a part.

(3) Whether audit firm can evaluate the internal controls

There is an issue that the internal controls of corporations can be evaluated by audit firms²⁵⁶. And, in case that an audit firm lacks the recognition of illegality, can it be said that there are reasonable grounds, under the criminal law? In other words, if the audit is not adequate under the general standard, the liability is again imposed on the corporation, because the judgment of the audit firm is not that of the State.

(4) Effective internal control and criminal law

In order to obtain the reason to reject the criminal responsibility and the mitigating circumstances in sentencing, it may be ideal to perform more than enough internal controls,

Commission, U.S.A., in 1992.

²⁵⁵ Public draft in 2005 in Japan adds the utilization of information technology.

²⁵⁶ In Japan and the U.S., certified public accountants of audit firms take the roles of evaluating the internal controls.

under the detailed internal rules and strict organizational management. There are, however, two problems: the excessive costs of corporations and effectiveness of internal controls. If the State monitors and supervises all the individuals in the corporations, it costs a huge amount, and therefore, the State forces such monitoring and supervision on each corporation. Then, in case of a failure of such monitoring and supervision, the State imposes sanctions to the corporation, which is much cheaper socially²⁵⁷. If the State imposes too much duty on internal controls, the costs of corporations become huge and the transferring the responsibility to corporations becomes meaningless. The other problem is the effectiveness of the complex internal controls. According to Kenichiro Mogi²⁵⁸, heavy decision cannot be directed from the provisions of laws and regulations, but from the intuition in the end. This methodology is a scientific conclusion along with the process of judgments in the brain. He also mentions that it is the reason why the constitution of the U.K. is non-codified. The more important thing is not to compile thick manuals or strict rules, but to foster the corporate culture that roots adequate ethics and common sense in an organization.

As a conclusion, there is a gap between the requirements of criminal law, which is strict and exhaustive internal controls, and the effectiveness of the control system.

²⁵⁷ The Law Reform Commission of Canada (1996) describes the above conceptual idea among the State, corporations and the individuals.

²⁵⁸ Kenichiro Mogi (1962 -) is a Japanese brain scientist. He is a senior researcher at Sony Computer Science Laboratories and a visiting professor at the Tokyo Institute of Technology.

Chapter 8: The Crime of Criminal Justice System

Section 1. Why is the criminal justice system failing?

1. Recidivism of white-collar crime

As a classical study, Sutherland analyzed the behaviors of 70 of the 200 largest U.S. corporations over a period of some 40 years, and mentioned in his book (Sutherland & Cressey, 1974, p. 41) that, "The records reveal that every one of the 70 corporations had violated one or more of the laws, with an average of about 13 adverse decisions per corporation (the range of from one to 50), and that about 90 % of the large corporations studied would be considered habitual white-collar criminals." In the U.S., a recent study of offenders convicted of federal white-collar crimes found that white-collar criminals are often repeat offenders (Weisburd, Chayet, & Waring, 1990, p. 352). The reasons why white-collar criminal corporations are recidivist offenders are that (1) very high profit margins of white-collar crime, (2) a chance of being caught is low, (3) a chance of being subject to criminal punishment is very low, and (4) even subject to criminal punishment, it is a very lenient punishment. In other words, between the sloppy criminal law and administrative monitoring that decisively lacks the human resources, white-collar criminals are enjoying illegal profits.

2. Complexity of white-collar crime

As compared with street crime, white-collar crime is generally complicated, and the expertise is required to deter. There may be many cases that prosecutors and judges also are at the mercy of the different expertise in each case. Administrative agencies would be superior in the expertise. However, they also fall far short of the practitioners of the private sectors. In addition, in conjunction with advances in modern technology, white-collar crime has become clever, complex and internationalized. On the other hand, criminal law is hard to say that is improving daily and has been updated adequately. Sometimes, there is no specific law to crack down, when enforcement agencies extend the interpretation of similar laws. In case that the application of criminal law is impossible, an acquittal or lenient judgment increases. Legislators also do not start their jobs until mass media becomes noisy. Citizens normally do not consider white-collar crime as a criminal case, and show much

interest in the street crime.

3. Why are white-collar criminals treated leniently?

The reasons why punishments for offenses of corporate executives are more lenient than those of street crimes can be summarized in the following four opinions²⁵⁹ from the defenders of the present legal order (Reiman & Leighton, 2010, p. 71).

(1) Intended or not intended

The offender who deliberately attempts to harm another is really worse than the executive who harms another without aiming to, even if the degree of harm is the same. Thus, street crime is rightly subject to criminal justice, while the cost-cutting executive who endangers his workers is rightly subject to non-criminal safety regulations.

<Counterargument>

It is true that an attacker aims to harm his victim in a way that a corporate executive who maintain an unsafe workplace does not. However, the action of the executive is intentional nonetheless, and that is what makes his actions appropriately subject to criminal law. The theorist of criminal law, Hyman Gross (1979, p. 78) says, "What really matters here is whether conduct of a particular degree of dangerousness was done intentionally, and whether the actor wants or aims to harm someone is a different matter, which is relevant to the actor's degree of culpability." While the street crime intentionally damages a particular individual, the executive knowingly, recklessly or negligently, subjects a large number of workers to a risk of harm. By not harming workers purposely, the executive leaves more to chance, but by subjecting large numbers to risk, he/she increases the possibility that someone will be harmed (Reiman & Leighton, 2010, p. 72). Additionally, some street criminals mention that they did not commit crime intentionally at the courts. Similarly, some executives may save the costs to protect the safety of employees, for the purpose of obtaining life insurance money, secretly. The intention cannot be determined objectively, but exists deep in one's heart.

(2) Direct or indirect

Being harmed directly by an offender is more terrifying than being harmed indirectly and impersonally, as by a safety hazard, even if the degree of harm is the same.

< Counterargument>

²⁵⁹ The discussion in this part assumes that the executive is a president of a manufacturing company, who saves the costs to protect the safety of workers.

Direct personal assault is terrifying in a way that indirect impersonal harm is not. The deaths of some safety hazards – living in the fear of a cancer by the radioactive materials from a nuclear power plant and becoming fatal – may well be as terrifying as or more terrifying than some direct personal assaults. Even granting direct assault is usually more terrifying than indirect harm, it does not mean that indirect harms should be treated as non-criminal regulatory matters (Reiman & Leighton, 2010, p. 75). Under the circumstance that the dangerousness of the side effect of a pharmaceutical is publicized, the bureaucrats who took no action to recover it can be direct offenders. The administrator who did not detect unlicensed medical doctor can also be another direct offender.

(3) Illegitimacy or legitimacy

Someone who harms another in the course of an illegitimate and purely self-interested action is more evil than someone who harms another as a consequence of a legitimate and socially productive endeavor.

< Counterargument >

No doubt, street crimes are illegitimate and purely self-interested actions. As described in the previous Chapters, however, some actions taken by the executives of corporations or other organizations were not legitimate but purely self-interested actions (e.g., disguising the origin of food). Under the backdrop of the benefit supremacy in the capitalist society, it is wrong to consider all the acts of business owners are legitimate.

(4) Against victim's will or not

The harms of street crimes are imposed on their victims against their wills; while the risk of harms of white-collar crimes, e.g., occupational hazards, are consented to by the workers when they agree to the job.

< Counterargument >

Workers may consent to a risk only if they know about it, and often the risks are concealed. The residents around the Fukushima #1 had been told that there was no risk in the nuclear power plant. Moreover, the above view overestimates the degree to which workers freely consent to the conditions of their jobs. Although no one is forced to accept a particular job, virtually everyone is forced by the requirements of necessity to take a job. And a worker can choose a job only when there is an opening, which means that workers cannot simply choose their jobs at will (Reiman & Leighton, 2010, pp. 76-77). However, the victims of current white-collar crime are not as simple as Reiman and Leighton assert. The damages of white-collar crime are expanding much broader than the range of occupational

hazard. What is particularly malicious and difficult to detect is the crime committed by executives of various organizations. One day, the employees are suddenly informed by media reports of the wrong management. In the worst case, the company went bankrupt, and employees will wander around the streets. It is exactly an act against the will of the victims.

Finally, the idea that the harms of street crimes are more evil than indirect harms is a part of the common moral beliefs, and that this makes it appropriate to treat street crime with the criminal justice system and the indirect harms with milder regulatory violations (Reiman & Leighton, 2010, p. 77). As the background of this moral belief, there is a strong intention of those in power and the rich that they do not want the citizens to focus on the white-collar crime, because it may endanger the social order and the existing hierarchy, especially in the cases of white-collar crimes that have strong connections with the power.

4. Let the white-collar crime fit the harm and the sanction fit the gravity of crime

The criminal justice system must make good to protect society. This requires that the criminal law should be revised so that the crimes reflect the real harms that individuals pose to society. The white-collar crime should be prosecuted and punished as vigorously as the street crime. The harms of white-collar crime are enormous, as shown in Chapters 2 to 4. Kip Schlegel asserts that a standard of “reckless supervision” is built into sentence guidelines for corporate offenses, so that individuals with supervisory authority could be held responsible for failure to exercise that authority when there is substantial risk of harm (Schlegel, 1990, p. 137)²⁶⁰.

Russell Mokhiber (1988, pp. 38-65) sets out 50 recommendations to the new criminal laws, to deter white-collar crime. Some of them are: (1) that corporate executives are required to report activities that might cause death or injury, (2) to make it a criminal offense to willfully or recklessly fail to oversee an assigned activity that results in criminal conduct, (3) to enable prosecutors to bring federal homicide charges against companies that have caused death on a national scale, (4) to hold corporations responsible for how they respond to wrongful acts, (5) to facilitate class action suits against corporations, (6) to require convicted companies to notify their victims and to make restitution to them, (7) to

²⁶⁰ The Sarbanes-Oxley Act of 2002 is a step in this direction by requiring executives to certify the accuracy of financial statements. This principle should be applied more widely in other business areas than financial business.

protect whistleblowers from reprisal, (8) to increase the penalties for convicted corporate executives, (9) to make it a crime for a corporation to have a faulty system for ensuring compliance with the law, and (10) for serious or repeated offenses, to execute corporations by stripping them of their corporate charters. Such laws would make the criminal justice system's response proportionate to the real harms in the society.

Section 2. Who is profiting in the crooked criminal justice system?

The current criminal justice system effectively weeds out the rich²⁶¹ and those in power, so that the vast majority of those in prison came from the lower classes²⁶². This weeding-out process starts before the law enforcement agencies go into action. In Chapters 2 to 4, the author argued that the prosecutors could not indict many illegal actions committed by the corporate executives, at least as dangerous as the street crime included in the current criminal law. Most of the dangerous white-collar actions are excluded from the definition of crime, because of the sloppy updating by the legislature. Or it may not be sloppy, but intentional. This weeding-out process does not stop at the definition of crime, but continues throughout each level of criminal justice system: arresting, prosecution, sentencing, probation, and parole, as pointed out by Philip Hart (1972, p. 158). In other words, for the same criminal behavior, the rich and those in power are less likely to be arrested; if arrested, they are less likely to be charged; if charged, less likely to be convicted; if convicted, less likely to be sentenced to prison; and if sentenced, less likely to be sentenced longer prison terms, than the member of the lower or middle socioeconomic classes²⁶³.

²⁶¹ The definition of the riches in this thesis is the persons who own financial net assets of about one billion yen (approx. 7.1 million Euros) or more.

²⁶² Anacharsis, a Scythian philosopher in the early 6th century B.C., mentioned that "Written laws are like spiders' webs; they will catch, it is true, the weak and the poor, but would be torn in pieces by the rich and powerful. (Consulted on Jan. 25, 2014, in <http://quotationsbook.com/quote/22563/>)

²⁶³ More than 70 years ago, Sutherland wrote that: "First, the administrative processes are more favorable to persons in economic comfort than to those in poverty, so that if two persons on different economic levels are equally guilty of the same offense, the one on the lower level is more likely to be arrested, convicted, and committed to an institution. Second, the laws are written, administered, and implemented primarily with reference to the types of crimes committed by people of lower economic levels (Sutherland, 1939, p. 179).

Chapter 9: Revolutionary Reform of Criminal Justice System

Section 1. Strengthening prosecution authority of indictments

1. Overview of the Public Prosecutors Office in Japan

The function of the Public Prosecutors Office is to exercise control over all the works handled by the public prosecutors. According to the website information of the Ministry of Justice²⁶⁴, the public prosecutors offices consist of the Supreme Public Prosecutors Office in Tokyo, 8 High Public Prosecutors Offices²⁶⁵, 50 District Public Prosecutors Offices and 438 Local Public Prosecutors Offices in major cities, wards or towns. Public Prosecutors Offices are staffed with public prosecutors²⁶⁶ and public prosecutors' assistant officers. In criminal cases, public prosecutors have the power to investigate, decide whether or not to institute prosecution, request proper application of law by courts and control and supervise the execution of judgment, and furthermore, as representatives of public interests, they may perform such other functions as are authorized by the Civil Code and other laws. The number of suspects handled by the public prosecutors offices in 2005 as the Penal Code offenses was 1,341,790. As of 2011, 11,802 people were working in the offices in total²⁶⁷. The workflow of criminal proceedings is shown on Fig. 16. The actual track records in 2010 are tabulated on the Table 19, which is summarized as follows: (1) Their jobs were occupied by the traffic accidents and violations of the Road Traffic Law (74% of total suspects); (2) 51 % of the general offenses under the Penal Code was theft, and 64 % was the street crimes; (3) As for the disposition, non-prosecution occupied 58 %, while prosecution was only 33 %; (4) In the judgments of the courts, fine was 85 %, not-guilty 0.02 %, and dismissal of prosecution 0.09 %.

2. Reform plan of the Public Prosecutors Office

²⁶⁴ Homepage of the Ministry of Justice consulted on Jan. 16, 2014, in <http://www.moj.go.jp/ENGLISH/PPO/ppo-01.html>.

²⁶⁵ They are in Tokyo, Osaka, Nagoya, Hiroshima, Fukuoka, Sendai, Sapporo and Takamatsu.

²⁶⁶ They are Prosecutor-General, Deputy Prosecutor-General, Superintending Prosecutors, Public Prosecutors and Assistant Prosecutors.

²⁶⁷ Public Prosecutors and Assistant Prosecutors were 2,690, and Public Prosecutor's Assistant Officers and Others were 9,112. (http://www.kensatsu.go.jp/gyoumu/Guide_to_the_Public_Prosecutors_Office.pdf.)

On Apr. 5, 2012, Ministry of Justice made the announcement on the “Status of Progress in Public Prosecutors Office Reforms,” (Ministry of Justice, 2012). As a part of reforms, the Supreme Public Prosecutors Office established “The Principles of Prosecution²⁶⁸” in Sep. 2011. The above reforms focused (1) Establishment and activities of expert committees, i.e. Expert Committees on Finance and Securities, on Special Negligence, on Forensic Science, on Intellectual Disorders, on International Affairs, and on Organizational Management; (2) Establishment of Public Prosecution Reform Promotion Office; (3) Establishment of Inspection Guidance Division; (4) Configuring the horizontal checking system on investigations conducted solely by the Special Investigation Department; and (5) Trial of voice and video recording of examinations on suspects. All of them are based on their recent failures. Although those targets are better than nothing, the abnormalities of their track records mentioned above are untouched. One of the most curious things is that the judgments of not-guilty and dismissal of prosecution were only 0.11 % of the total judgments, which means more than 99 % of indicted suspects were convicted. It means that the incidents that might not be convicted had not been prosecuted, i.e. non-prosecution occupied 58 % of the total disposals of the public prosecutors offices. It should also be corrected that the prosecutor’s performance evaluation system is depending on the rate of conviction at the courts. This system suppresses the rate of prosecution at the level of public prosecutors, which means some (or many) white-collar criminals have not been prosecuted, and the criminals are committing the same crime without punishment. In other words, public prosecutors consider that many white-collar crimes are not clear to be convicted or not at the courts. This is an evidence of the sloppy criminal law.

3. Establishment of “Disciplinary Review Board (tentative name)”

General idea

- The Disciplinary Review Board (“Board”) shall be the “Art. 3 Committee”²⁶⁹, which

²⁶⁸ Supreme Public Prosecutors Office. (2011). The Principles of Prosecution. Consulted on Jan. 16, 2014, in http://www.kensatsu.go.jp/oshirase/img/kensatsu_no_rinen_english.pdf.

²⁶⁹ The “Article 3 Committee” is the Committee based on Art. 3 of the National Government Organization Act. For example, Central Labor Relations Commission, and Public Security Examination Commission are in this category. Cabinet Office Establishment Act permits to place a Committee as an external organ of the Cabinet Office, such as Fair Trade Commission, and the National Public Safety Commission. On the other hand, Article 8 of the National Government Organization Act places the Council Organization, as the administrative institutions of the country. The difference between the “Art. 3 Committee” and the “Art. 8 Committee (Council)” is the presence or absence of independence in a nutshell. Art. 3 Committee is assumed to have the right to view the so-called national intention, generally, while Art. 8 Committee (Council) is only a collegial institutions

means an independent organization from the government.

- The Board decides to prosecute or not for all the white-collar criminal cases. In addition, the conventional case which was treated as an administrative sanction is also judged by the Board as to prosecute as a criminal case, or to impose an administrative sanction, in a similar way as today.
- Civilians are included in the members of the Board. Those civilians are elected, which gives them a certain power against professional prosecutors.
- The Board is installed in all the locations where public prosecutors offices exist.
- The numbers of the civilian and the professional prosecutors are seven and eight, respectively, per one team, including a chairperson of the Board who is elected from the professional prosecutors in a team. The number of teams to be organized is determined from the number of cases in the respective territory, as needed.
- Prosecution and the detail of an administrative sanction are determined by majority vote in a team. The chairperson decides in the case of a tie vote.

4. New legislation of “Sanctions Act”

In a position to cover conventional criminal punishments and administrative penalties, the author propose the legislation of new “Sanctions Act,” in order to deal with corporate crime of any sized enterprises. The Sanctions Act deals with the matters that cannot be covered by criminal law, e.g., “obligation to make a compliance system,” “confiscation of crime proceeds without an upper limit,” “enforcement of organizational reform,” and “clarification of disposal of the responsibility in the internal stakeholders.” On the other hand, it is clearly defined to fit, as well as the degree of proof, burden of proof and procedures. The decision of prosecution or non-prosecution based on the Sanctions Act cannot be changed, even though the activation of command authority by the Minister of Justice.

The administrative sanctions based on the Sanctions Act are determined after holding the public hearings to consider the stories of the plaintiff (disposal accusers) and the defendant (the disposer), if necessary. The contents of sanctions are to be flexible to enable the guidance and instructions in its entirety, such as a variety of instructions of measures, i.e. business improvement order, to stop some or all of businesses, stopping

and deprivation of registration, intrusive interventions inside the enterprise, the formulation, implementation, monitoring and evaluation of the compliance programs.

Section 2. Strengthening the check system of the prosecutors

As the horizontal checking system on investigations conducted solely by the Special Investigation Department, the superintendent examination prosecutor system was established and entered into force on May 1, 2011 (Ministry of Justice, 2012). This system was created because of the various scandals of public prosecutors offices, as mentioned below.

1. Necessity of checking system

The public prosecutors are the national public officers, who have passed the “bar examination” with excellent results, which is said to be one of the most difficult examinations to pass in Japan. However, there is a problem with its closed nature of the prosecutors only in the organization. Too much emphasizing its independence may have produced self-righteous constitution which does not accept criticism from others (Toshio Ogawa, 2013, p. 179). Some examples of its endemic diseases are described in Table 20.

2. New establishment of “Inspector General of Prosecutors”

This institution is responsible for not only the inspection of the works that the Public Prosecutors Offices have been conventionally performed, but also for the inspection of the newly established “Disciplinary Review Board.” In addition to the “regular inspection,” of once a year, the “extraordinary inspection” is performed whenever necessary. The institution submits a report to the Prime Minister through the Minister of Justice, and the results are published on the website at the same time. The points of the inspection are whether the determination of the prosecution or non-prosecution is based on a rational basis, whether or not due to the pressure from another organization or outside individuals, whether confession statements in the investigation stage are not forced by a prosecutor or police officer, etc. In order to attain these aims, this institution must include some academic expertise from universities and some representatives of citizens.

Chapter 10: Conclusion

1. Strengthening criminal law or administrative law cannot deter white collar crime

All sorts of white-collar crime are rampant in Japan. It is difficult to deter these crimes by the criminal law only, and there is a limit in administrative law. There is a meaning in the civil law which seeks damages cases, but the effect of suppressing the recidivism is small. For the companies of top-down management, i.e. relatively small companies, sanctions against representatives mean a sanction to the company. In the case of large companies, however, punishment to the company is difficult by the current criminal law, because, (1) the decision-making system is organized, (2) it is difficult to identify the real decision-maker, (3) it is difficult to obtain a clear evidence of the involvement in the crime of the top management, and (4) it is difficult to require mandatory establishment of the measures to prevent recidivism, e.g., the development of compliance program, after the resignation of the top managements.

It is conceivable that we deal white-collar crime with the severe sanctions of administrative law. In the case of administrative sanctions, there is the advantage that it can clarify the responsibilities of true internal control system, which cannot be punished by the criminal law. However, in the recidivist companies of white-collar crime, since the compliance program is not functioning properly, they repeat misconducts. Therefore, it is necessary in such case that the sanction shall enter into such level as to make the compliance program function properly. That is, it is not a formal disposal, but a discretionary disposal is desirable. The management and supervisory framework of the current administrative authorities cannot perform such a discretionary disposal, because it causes enlargement of the government, and the increase in costs. Moreover, the bureaucrats of some ministries (e.g., the MHLW, the METI and the MLIT), have collusions with industries, and have a poor motivation to perform a quick crackdown and disposal. Further, they are susceptible to the pressure from politicians, and business leaders.

2. Historical considerations

The Penal Code was originally enacted for the purpose of cracking down street crime and maintaining the social order. At that time, white-collar crime was merely bribery, and vicious large-scaled scandals did not exist as today. Also, Penal Code was created by

some elites who were in the rich class with power, at that time. After the revisions of several times, the upper and the rich class have come to recognize that the frequent occurrences of street crimes are beneficial for them. The reason is that, for the upper class (a few overwhelmingly in terms of numbers), the attacks from the lower and middle class (the absolute majority of the society) have always been the most dangerous threats, and so they have spread the ideology that “since the street crime is a serious threat caused by the lowest class, to combat against it is to ensure public order,” to the middle class, in order to avoid the attacks from the middle class. They have continued discriminatory application of criminal law to the lower classes in the society. In the U.S., most African Americans are in the lower classes, and deemed to be street criminals. Politicians and mass media unite to focus on increasing the street crimes, which has facilitated the interest of citizens towards the street criminals, and has diverted attention from social and environmental problems that have produced crime. They have sent the messages that “crime is always criminal’s responsibility,” and “criminals are in a poverty class.” As a result, the criminal law is best cited when they crack down street crime of the poor, and they have dealt the crime of the rich (i.e. white-collar crime) with a generous sanction with a quibble.

In the U.S., massive financial crimes occur in about every 10 years, i.e. S&L scandals in 1970s - 80s, financial scandals of Enron, WorldCom, etc. in 1990s and 2000s, and the financial meltdown of so called subprime mortgage incidents since 2007. As the result that the defects in the criminal code are exposed, similar large-scaled white-collar crime occurs repeatedly; it means that the white-collar crime deterrent effect of the criminal law does not work at all. Not only that, masterminds of these incidents had gained enormous profits before being arrested and prosecuted, by selling their own shares²⁷⁰. Penal Code does not have the ability to crack down the crime of the rich. All of these phenomena are what the rich and those in power have intended.

3. What is the real purpose of the criminal justice system?

The real purpose of the criminal justice system is that it deters crime and maintains

²⁷⁰ Ken Lay, then CEO of Enron, cashed in \$103 million of his own shares in the company. Enron executives sold nearly a billion dollars’ worth of stock, while Enron investors collectively lost about \$60 billion. Gary Winnick, then Chairman of Global Crossing, sold more than \$760 million in shares before the announcement and devaluation of the stock. The \$1 million fine was a petty cash for him. Richard Fuld, then CEO of Lehman Brothers, sold \$490 million in stock sales and had a \$34 million annual salary before the firm filed for a bankruptcy. (Reiman & Leighton, 2010, pp. 140 - 54).

the security of the society. However, in reality, white-collar crime offenders especially upper class rich people are easily slip through from the net of the system, and the poor in the lower classes are incarcerated in large amounts in prison, under the name of the street criminals. The criminal justice system has planted such ideology that the poor bottom socioeconomic class is a threat, to the general public. The important ideology for the rich and those in power includes the followings.

- (1) There is no responsibility on the social circumstances that street crime has occurred, but the offenders should take the full responsibilities of such crime.
- (2) Criminal justice system sends the message that the “social order itself is not intolerable injustice but reasonable,” by focusing on the responsibility of individual criminals.
- (3) There is the need to continue to be a true threat of the street crime, in order to divert the public attention from the crime-ridden social circumstances.
- (4) Therefore, all the measures taken to reduce the street crime must fail and the crime should continue to occur forever.
- (5) Citizens consider poverty equals crime.

As for white-collar crime, the above is valid. However, the real offenders²⁷¹ of white-collar crime belong to the upper class of the rich, far from poverty. So, the rich and those in power try to treat white-collar crime as mere rule violation, rather than a criminal case. They strongly oppose to amend the criminal law to place white-collar crime on the same level as the street crime. Mass media do not try to pursue the liability of the criminal corporation and the top management, due to the pandering to shareholders and those in power, and they report white-collar crime as mere “accidents” instead of “incidents.” They often hesitate to make an assertion to book as a criminal case, and exonerate them by a resignation and apology conference of the top managements. The worst case for the top of criminal company is not to be incarcerated, but a simple resignation as a lizard’s tail.

4. For whom criminal justice system exists?

Finally, one question remains that for whom the criminal justice system exists. The answer is that it is the system of those in power, by those in power, for those in power. The rights and interests of ordinary citizens are not protected by it, and it is the mechanism that

²⁷¹ The real offenders do not mean the tails of lizard, but the executives of large corporations.

one is sent to prison as a criminal, along with the poor people in the lowest class, if he/she is careless even a little. The careless person serves as an example for the other citizens who have not been arrested with good luck by chance. It is the ceremony that requires the subordination under the social power. Although mass media make a drama poorly as the case of white-collar crime, e.g., a drama of the computer crime or an environmental destruction drama, the scenario normally ends in the lizard's tail off, and such drama is rare as to step into the constitution of the criminal corporation. The television stations focus to earn high ratings of "bloody street crime programs," according to the unwritten rule of drama production site: "If it bleeds, it leads"²⁷², and it is rare to deal with white-collar crime without bloodshed. As a result, even in the white-collar crime of reality, the citizens have been brainwashed to consider the incident is completely solved by the dramatic arrest and prosecution of or killing the person in charge, e.g., a plant superintendent. They expect neither the scenarios in-depth, such as the motivation, modus operandi, etc., of the criminal corporation, nor the changes of its compliance program.

5. Summary

As the result of reviewing white-collar crimes, which are not referred to as crimes, the following conclusions are obtained.

- (1) Under the current criminal justice system, it is impossible to deter white-collar crime. Therefore, catastrophes or major incidents may occur in the future repeatedly. Because, in the punishment of white-collar crime, it is not to pursue the responsibility of the criminal corporation (or an organization, including a government office), but ends always with the "lizard's tail off," and the top of the corporation "announces to resign" at a press conference. Because the criminal constitution of the organization does not change, they repeat crime of the similar type. The recidivisms of Green Cross, MMC group, the MHW, etc. are the typical examples.
- (2) The criminal punishment cannot deter white-collar crime, because it is difficult to punish and correct the internal control system of the criminal corporation, although it is necessary to change the compliance constitution of the corporation.
- (3) The administrative sanction cannot deter white-collar crime, because administrative

²⁷² A basic fact in the news media is that, if a story involves a brutal death or injury of some kind (or the likelihood of it), it is likely to get higher ratings. The more lurid the story is, the better its chances of being the ratings leader (<http://tvtropes.org/pmwiki/pmwiki.php/Main/IfItBleedsItLeads>).

authorities have neither authority to investigate, to arrest nor to indict, and they have been derision of the corporate managements. In addition, even they impose a fine²⁷³, it is a paltry amount of money for large companies, and does not effect as a deterrent. For small business owners, when a considerable amount of fine is imposed, they establish another company, transfer the business from the criminal company after the bankruptcy of the original company, and repeat the same criminal acts. Administrative punishment is the act imposed by the hand of justice in the end. Justice is so careful to apply penalties that it leads to the situation in which a lot of breaches of duties are left, which indirectly weakens the deterrent effect of administrative sanctions.

(4) There is an unreasonable break, no continuity, no consistency of its disposals, between the criminal and administrative punishments. Criminal prosecution has been conducted at the discretion of public prosecutors, and such abnormal state continues that more than 99% of the cases prosecuted are ruled as guilty at the courts. In the case of white-collar crime, if the prosecutor in charge feels that the possibility of guilt is low, which is popular, the case is not prosecuted because the performance of the prosecutor becomes worse. On the other hand, since there are constraints of resources, time and budgets, it is impossible by the administrative penalties to crackdown all the violations in practice, although it is stipulated legally. They have to enforce selectively.

(5) From the above, for the punishment of white-collar crime, it is necessary to establish an organization that, with the combination of administrative functions and the advantage of the criminal investigation rights of police and prosecutors, enables to select and apply any form of sanctions from the wide range of spectrally continuous system of sanctions, such as prosecution, instruction, guidance, and changing the constitution from the criminal one to comply the compliances of the company. This organization is the new Disciplinary Review Board ("Board") of Fig. 18. As the comparison with the new system, Fig. 17 indicates the current process.

(6) The Board is organized as the "Art. 3 Committee," which is independent from the legislative, administrative and judicial body. It is a powerful organization with a punishment right to prosecute or not, or to impose any administrative sanctions. Such organization rots easily and is prone to make scandals, from the past experiences. Thus, a third-party

²⁷³ Administrative penalty that can be prescribed by an ordinance of the local government is an imprisonment for two years or less, or a fine of one million yen or less (Art. 14, Paragraph 3 of the Local Government Act). It is insufficient as effectiveness of collateral required by the ordinance.

organization is required to monitor the Board. It is the “Inspector General of Prosecutors.”

(7) Various laws are necessary to implement such reforms. They are, for example, “Sanctions Act,” “Act of Disciplinary Review Board,” “Act of Inspector General of Prosecutors,” “Act of Termination of a part of Criminal Law,” “Act of Termination of a part of Administrative Law,” “Code of Criminal and Administrative Procedures,” and “Election Law of the Disciplinary Review Board Members.”

(8) It becomes possible by the above reforms to determine the prosecution, non-prosecution or the disposition corresponding to the conventional administrative sanctions, in a unified manner, from the viewpoint of the various factors, e.g., damage and motives, size of organization, and the degree of the adhesion with the power, among the punishments and the sanctions, which are continuous spectrally. If it is determined on the basis of the above factors, white-collar crime is not treated lightly, compared to the street crime, and the severity of punishment gives assent to the public recognition. Then, it can be expected that the public confidence in the judiciary will be restored, and citizens who are interested in participating to the Board will increase. As a prerequisite, it is necessary to face with a severe punishment for misconduct or an omission by the member of the Board, e.g., deprivation of citizenship, or incarceration.

(9) It is the reform on a broad scale to take the criminal justice back to the hands of citizens, from the hands of the rich and those in power, which is positioned as the major reform since the people’s revolution in the Western countries. As well as for the other countries in the Asia, Japan was economically poor, and did not have enough time to develop an wealthy citizen class, and reached current modern society, by following the process of “monarchy” ⇒ “military” ⇒ “democracy.” In other words, Japan is the unique nation that the transition to the democratic society was attained without a people’s revolution. Now is the time when we should cause the “people’s revolution” to take the criminal justice back to the hands of citizens, ahead of the Western countries.

Appendix

Figures

Fig. 1 Electric power demand in Japan²⁷⁴

(in fiscal year 2012²⁷⁵)

Total: 851,590 GWh²⁷⁶

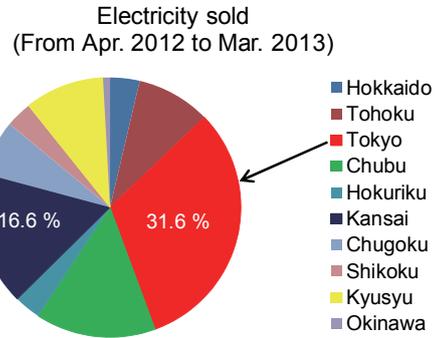
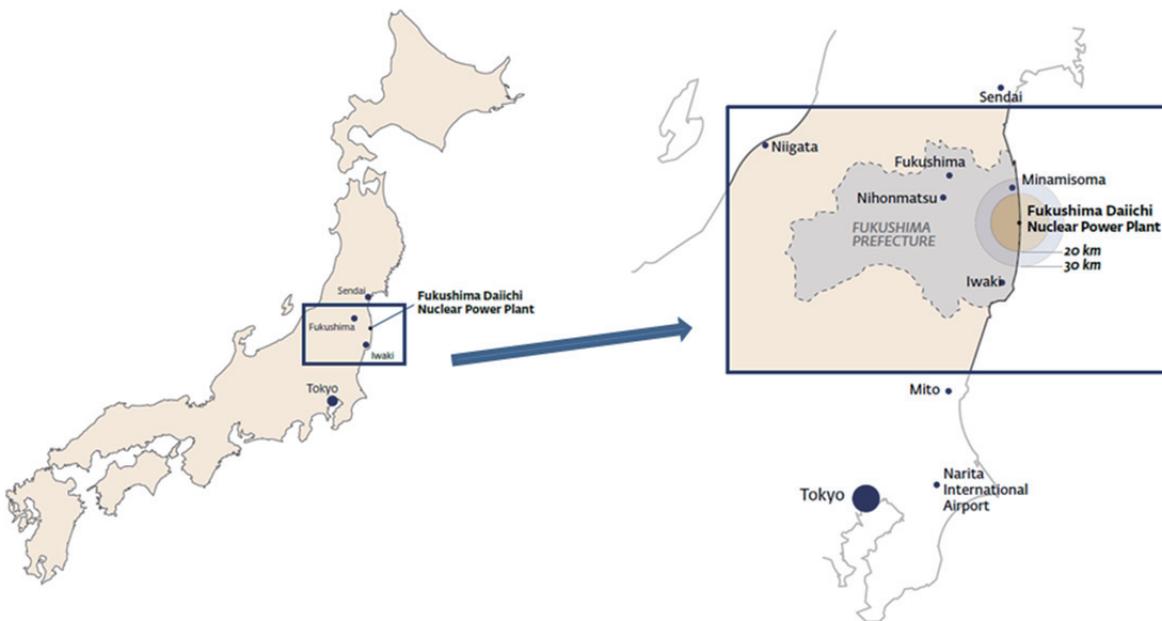


Fig. 2 Location of the Nuclear Power Plant of Fukushima, Japan²⁷⁷



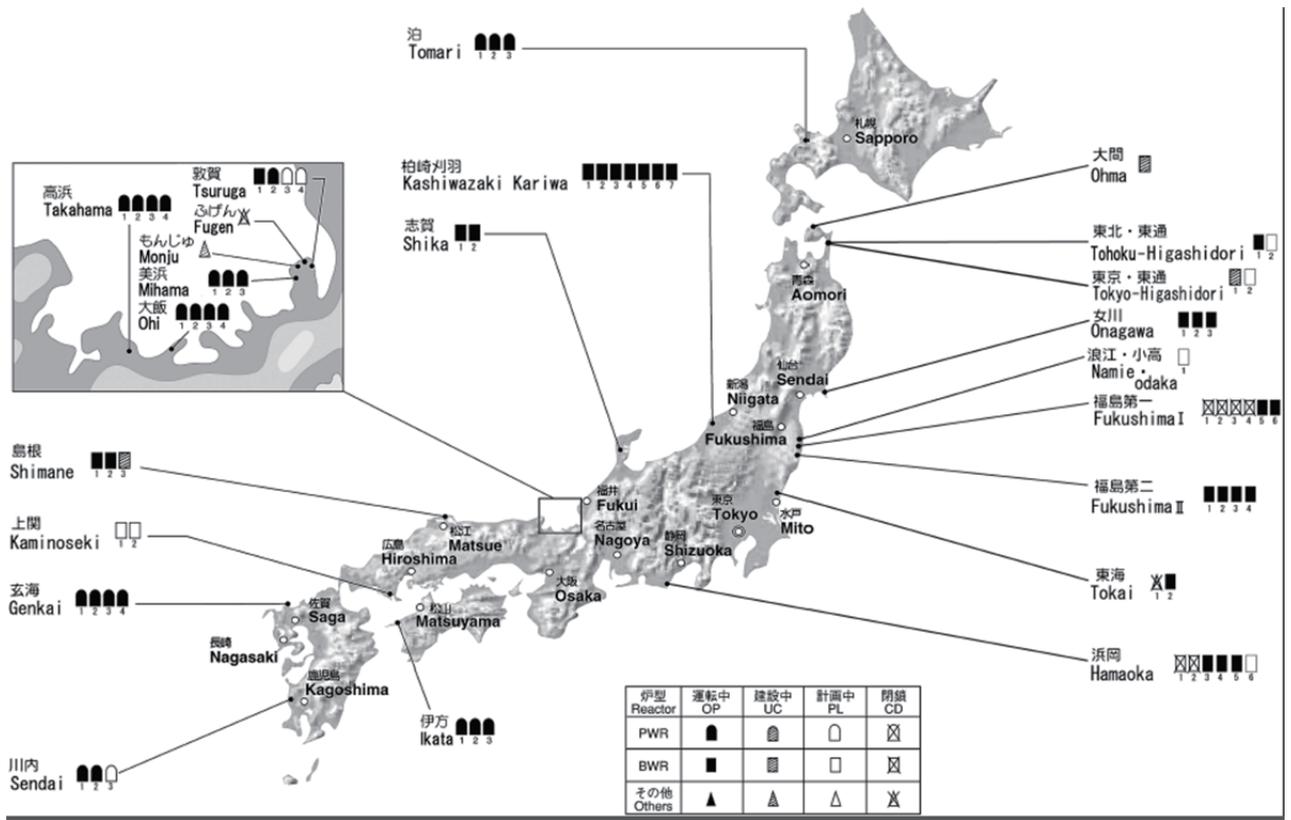
²⁷⁴ The Federation of Electric Power Companies of Japan. (Apr. 4, 2013). Consulted on Mar. 20, 2014, in http://www.fepec.or.jp/library/data/demand/_icsFiles/afieldfile/2013/05/14/kakuhofy2012_20130514.pdf.

²⁷⁵ Fiscal year 2012 terminates on Mar. 31, 2013.

²⁷⁶ In Spain, 248,811 GWh (Demand, from Feb. 2012 to Jan. 2013). Red Eléctrica España, Monthly bulletin, Feb. 2013. Consulted May 6, 2013, in http://www.ree.es/sistema_electrico/pdf/boletin_mensual/peninsular/feb2013.pdf.

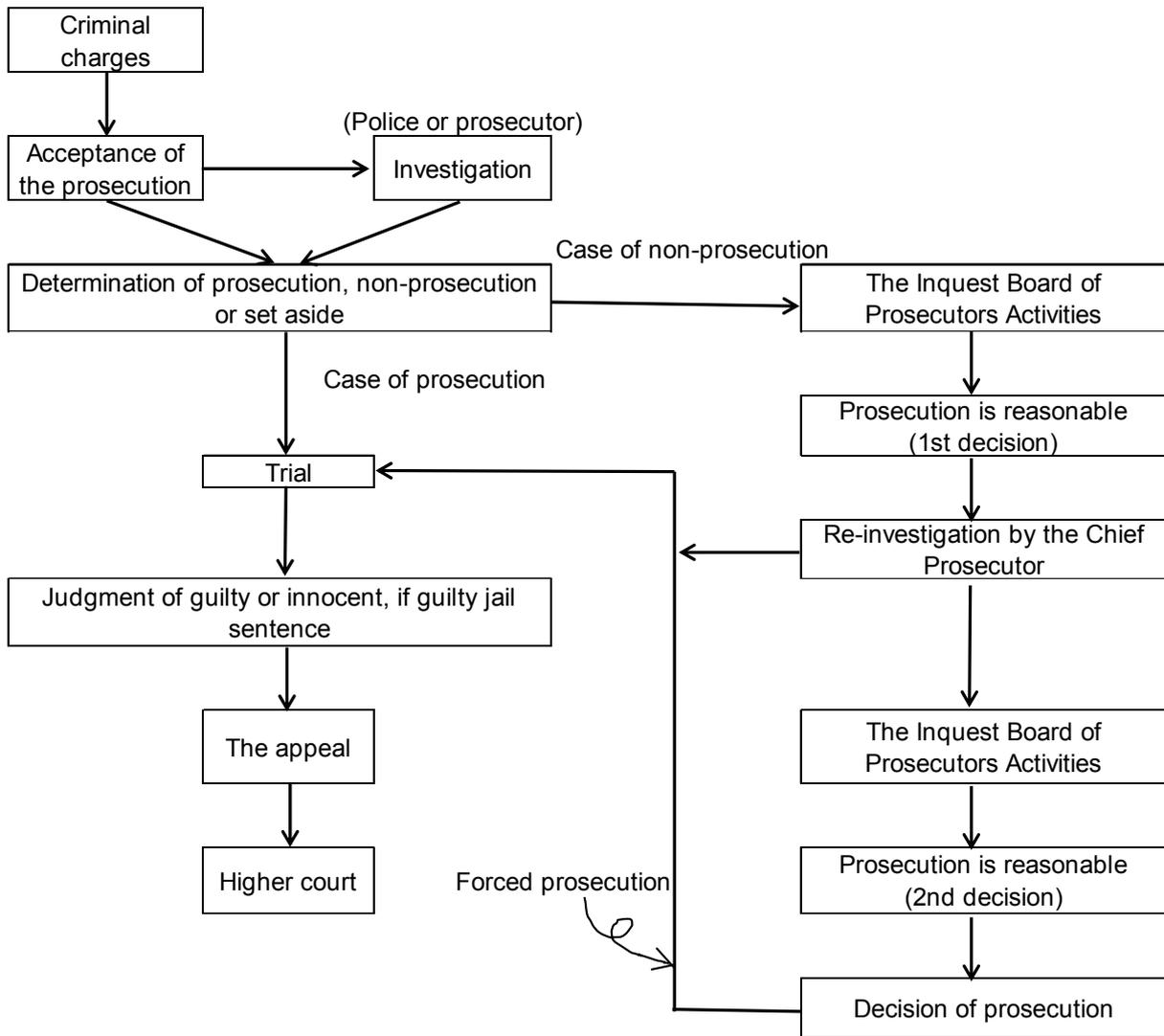
²⁷⁷ Source: The National Diet of Japan Fukushima Nuclear Accident Independent Investigation Commission.

Fig. 3 Nuclear power plants in Japan²⁷⁸



²⁷⁸ Source: Japan Atomic Industrial Forum, Inc. (2013). *Press Kit*. Policy and Communication Dept. Jul. 16, 2013. Consulted on Jul. 24, 2013, in http://www.jaif.or.jp/ja/joho/press-kit_nuclear-power_japan.pdf.

Fig. 4 Current judicial system of Japan



The “Inquest Board” functions as the checking system of the prosecutor activities, especially their decision of non-prosecution, by the citizens. When the Board decides twice that an incident shall be prosecuted, then the suspect is forcefully prosecuted by the lawyer (on behalf of the prosecutor) who is nominated by the court.

Fig. 5 Aircraft accident rates and onboard fatalities by year²⁷⁹

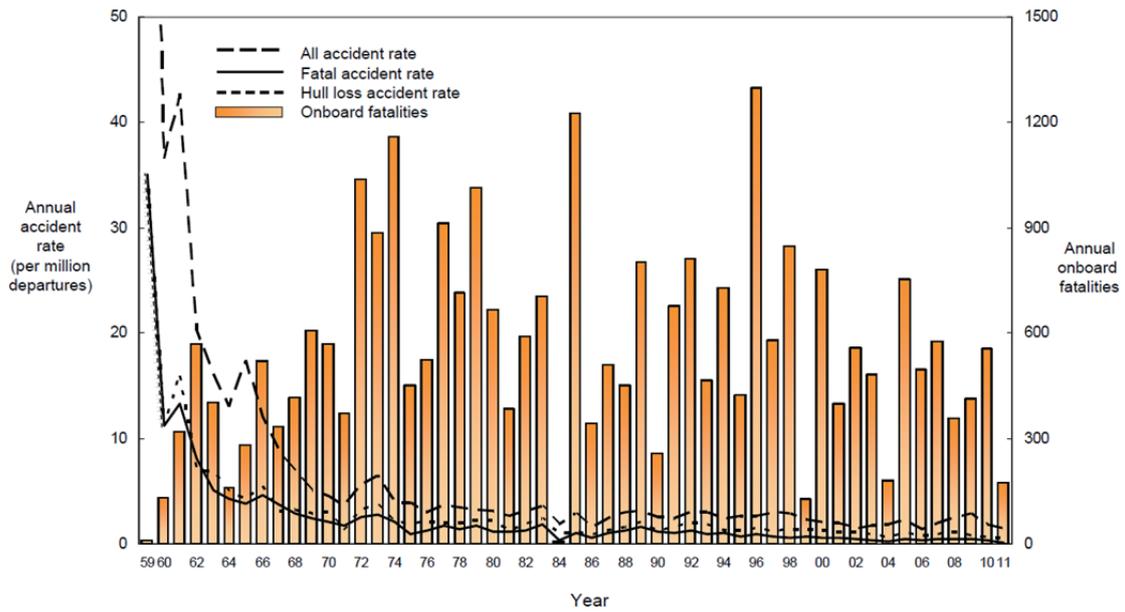
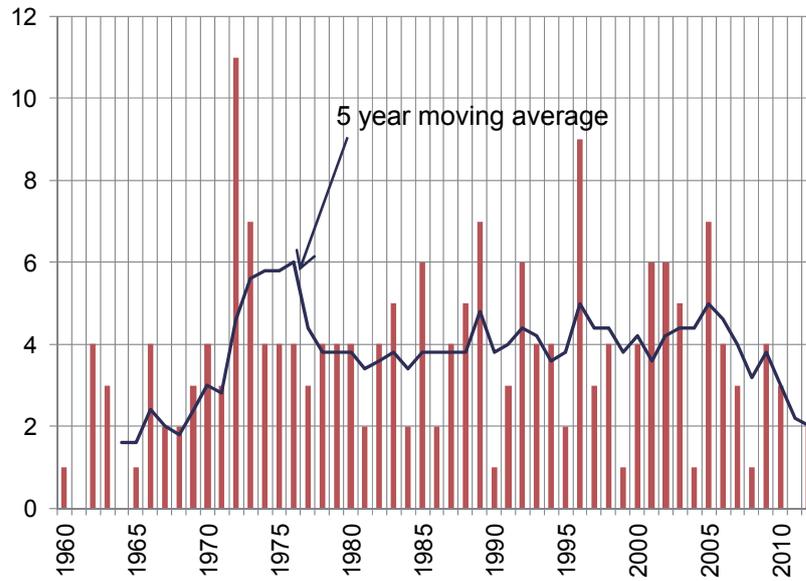


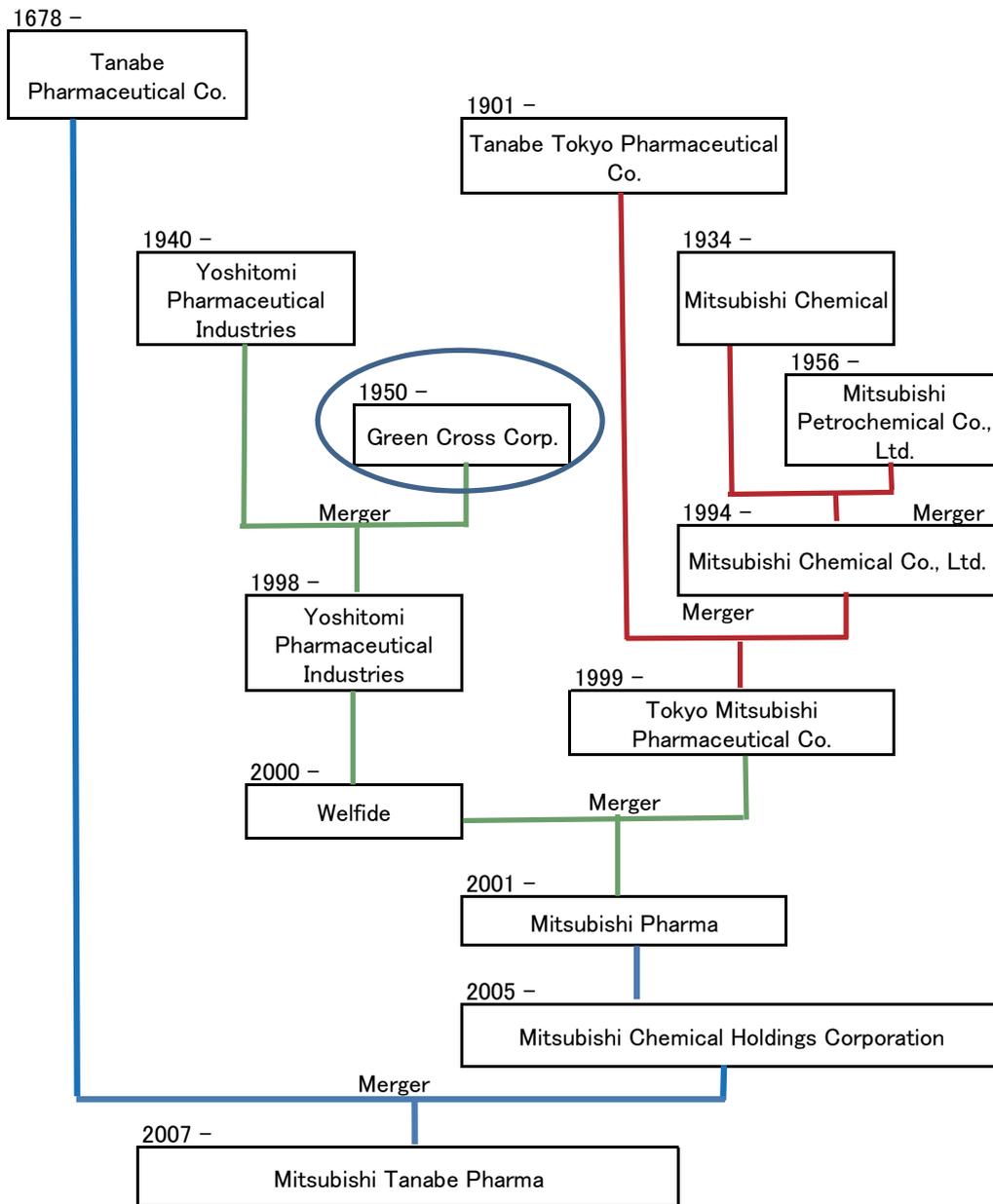
Fig. 6 Number of aircraft accidents with 100 or more fatalities by year



Source: Statistics, PlaneCrashInfo.com database. <http://planecrashinfo.com/cause.htm>.

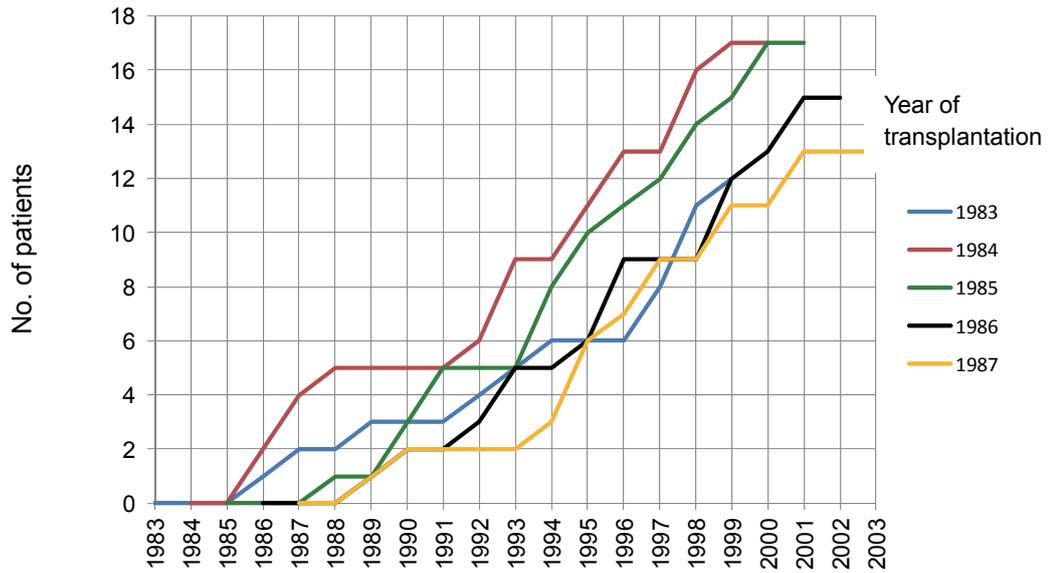
²⁷⁹ Worldwide Commercial Jet Fleet: 1959 through 2011. Source: Aviation Safety, 2013.

Fig. 7 History of Mitsubishi Tanabe Pharma



Source: History of Mitsubishi Tanabe Pharma. Consulted on Aug. 29, 2013, in <http://www.mt-pharma.co.jp/shared/show.php?url=../company/history.html>.

Fig. 8 Patient occurrence of transplantation of dried human dura mater by year



Source: Sato, T., 2002.

Fig. 9 General scheme of the adhesion among academic, bureaucracy, industry and politician
(The triangle of corruption is defined as the triangle of bureaucracy, university and the industry.)

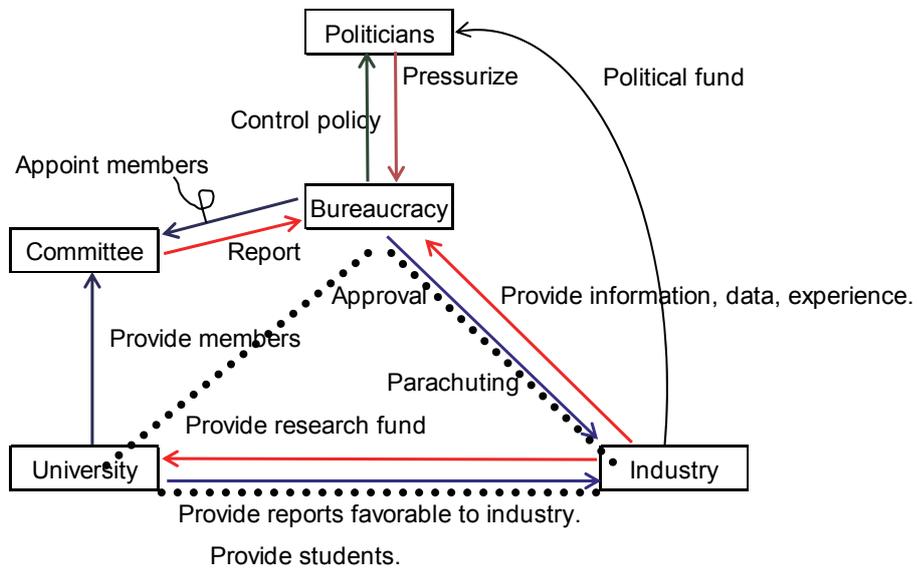


Fig. 10 Trends of medical school admissions in Japan

(Source: MHLW, 2012b.)

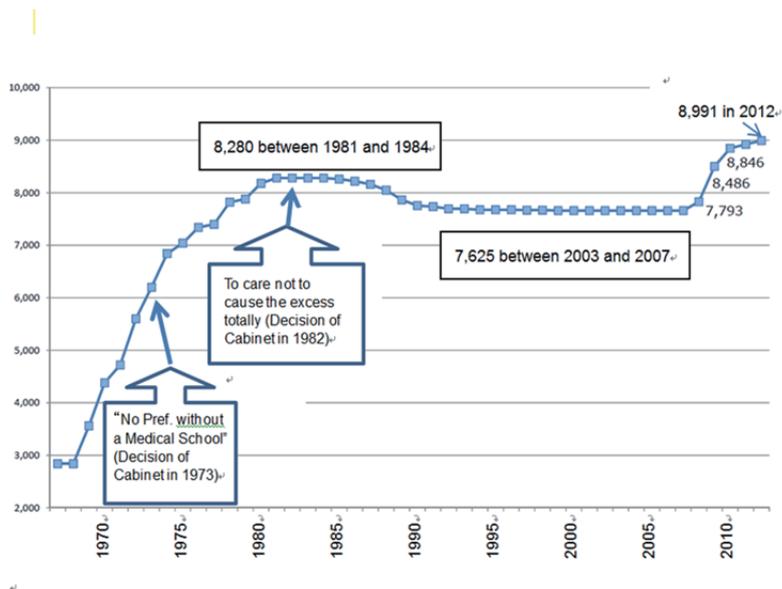
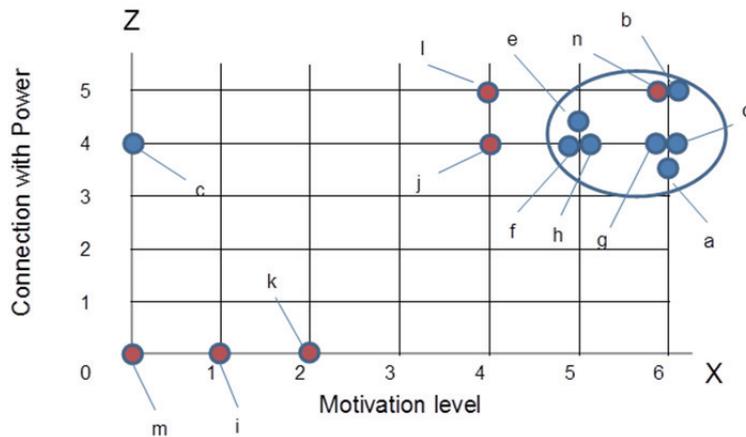


Fig. 11 Typical crimes development on X-Z plane

Blue points indicate white-collar crimes and red points indicate non-white-collar crimes



	Criminal organization or Incident		Criminal organization or Incident
a	Pharmaceutical companies	h	Financial scandalous companies
b	Nuclear Power Companies	i	Robbery
c	Institutes (architects, fake doctors)	j	Terrorism
d	Consumer product manufacturers	k	Arson or other crime for fun
e	Airline and railway companies	l	Hate crime (e.g., Rodney King incident)
f	Food misrepresentation producers 1	m	Daily traffic accidents
g	Food misrepresentation producers 2	n	War crime

(The items from "i" to "n" are the typical examples of non-white-collar incidents.)

Fig. 12 Typical crimes development on Y-Z plane

Blue points indicate white-collar crimes and red points indicate non-white-collar crimes. The signs of "a" to "n" are identical to those in Fig. 11.

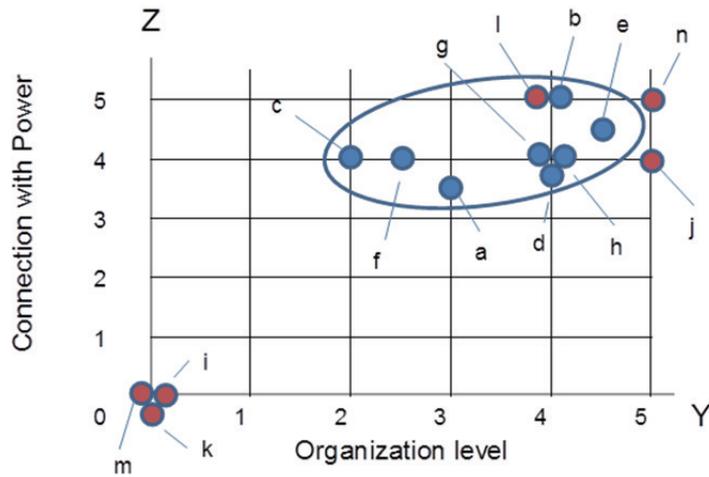


Fig. 13 Locations of various crimes in the 3-D crime model

Round points above blue bars indicate white-collar crimes and X points above brown bars indicate non-white-collar crimes. The signs of "a" to "n" are identical to those in Fig. 11.

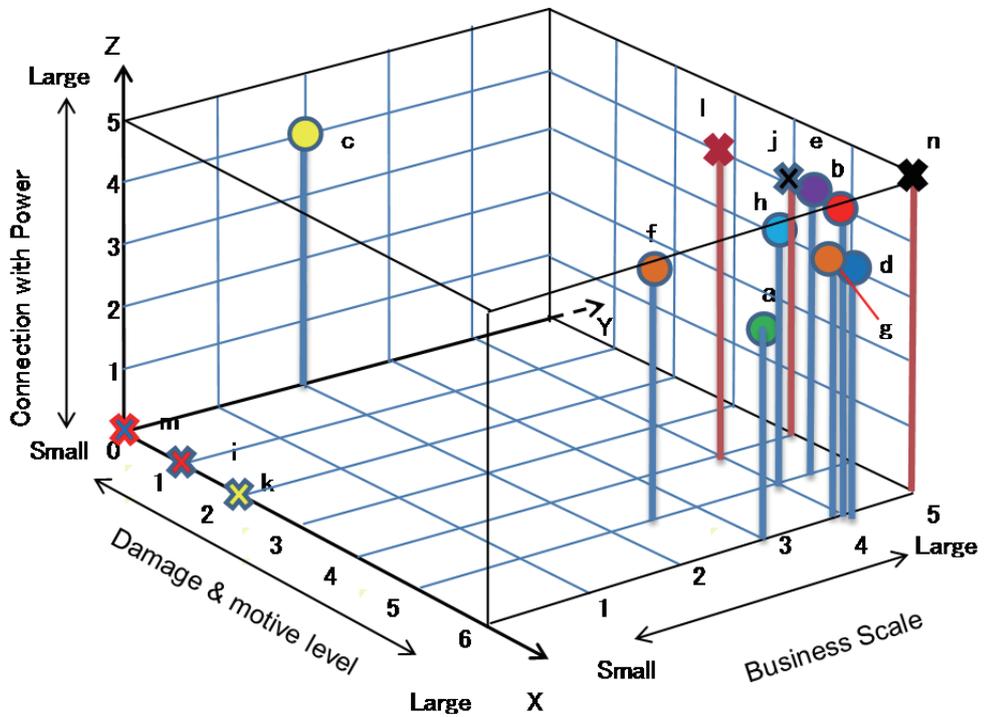


Fig. 14 Length of each crime from the origin of the 3-D crime model²⁸⁰
 (Green bars are white-collar crimes, and blue bars are non-white-collar crimes.)

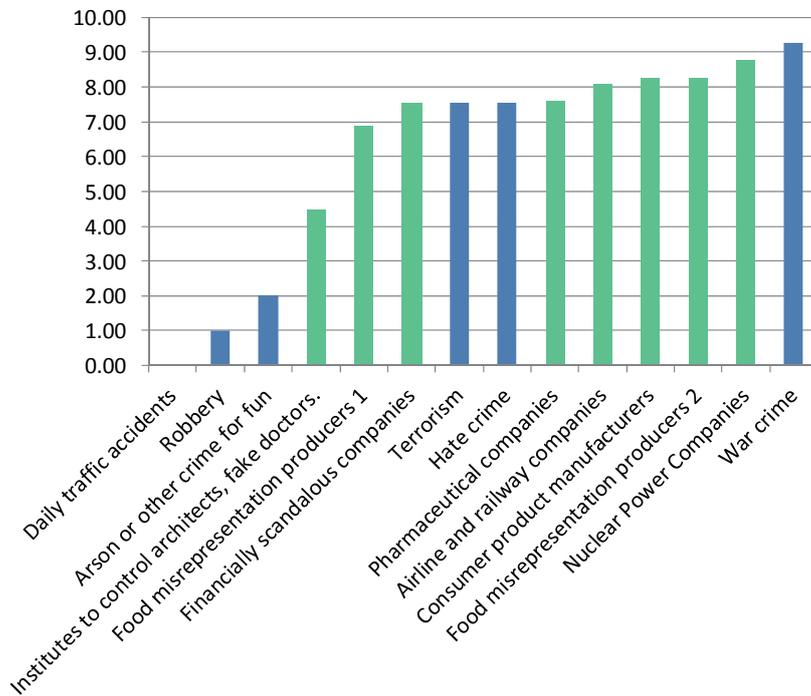
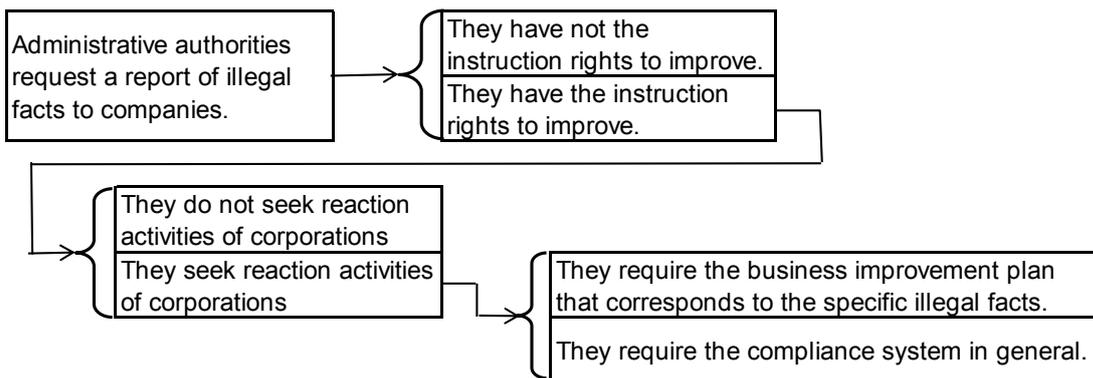


Fig. 15 Type of administrative penalties²⁸¹



²⁸⁰ The “length” of each crime can mean a sort of degree of the difficulty to deter or eliminate the crime.

²⁸¹ This figure is based on the description of Shiraishi (2007).

Fig. 16 Workflow of criminal proceedings²⁸²

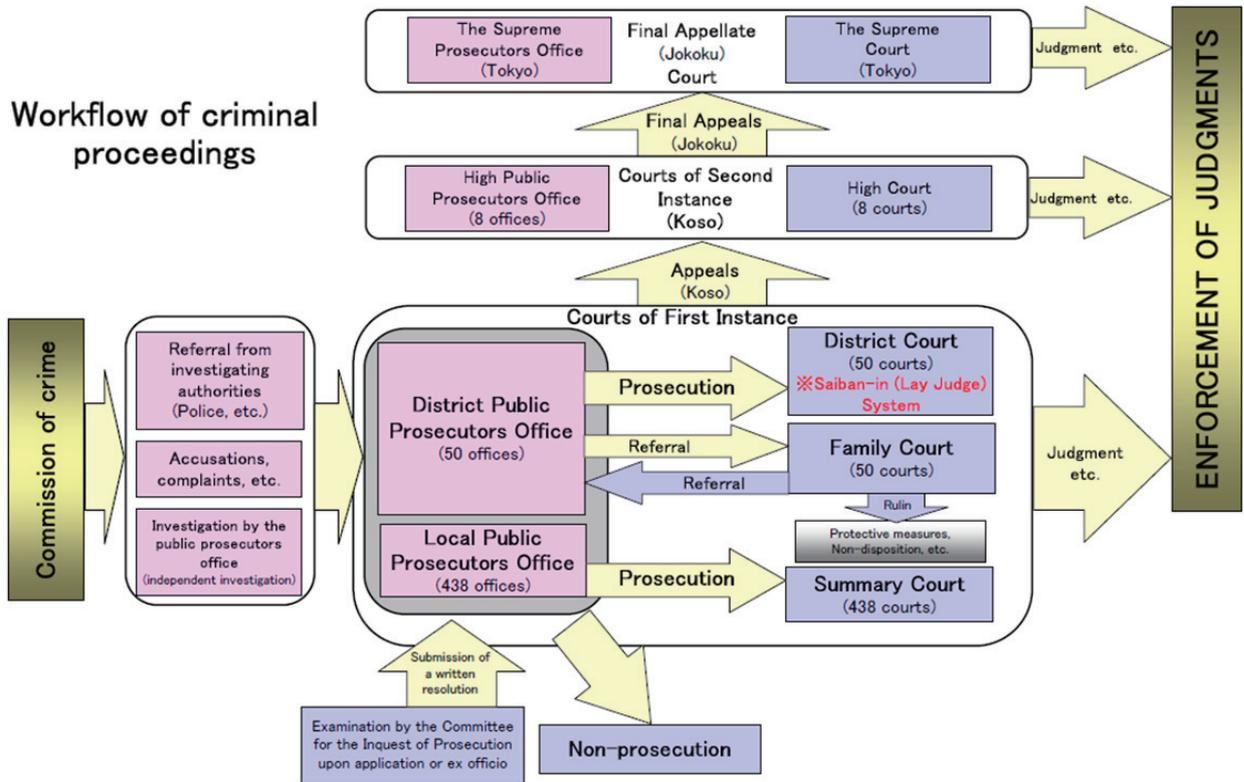
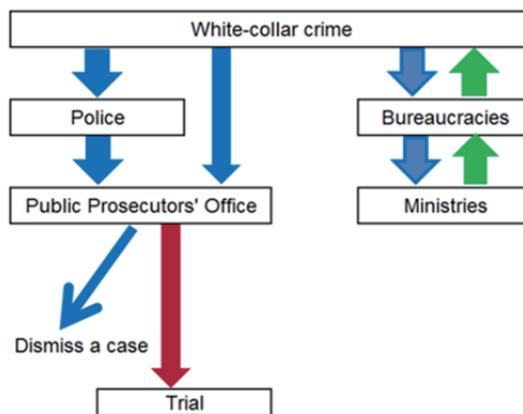


Fig. 17 Current prosecution process of white-collar crime

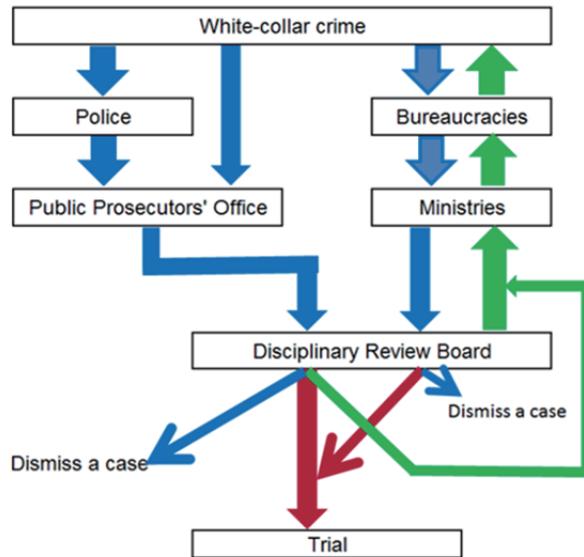
(Red arrow: Prosecution; Green arrow: Administrative disposal)



²⁸² Source: Guide to the Public Prosecutors Office. Consulted on Jan. 16, 2014, in http://www.kensatsu.go.jp/gyoumu/Guide_to_the_Public_Prosecutors_Office.pdf.

Fig. 18 Prosecution process after the reform

(Red arrow: Prosecution; Green arrow: Administrative disposal)



Tables

Table 1. Comparison of the disasters of nuclear power stations and atomic bomb

Comparison of emissions of radioactive substances into the atmosphere

Radionuclides (elemental symbol)	Half-life	Decay mode	Emission of radioactive substances (10 ¹⁵ Bq [*])		
			Chernobil**	Fukushima***	Hiroshima atomic bomb****
Noble gases					
Krypton 85 (85Kr)	10.72 years	β	33		
Xenon 133 (133Xe)	5.25 days	β	6,500	11,000	
Volatile element					
Tellurium 127m (127mTe)	109.0 days	β		1.1	
Tellurium 129m (129mTe)	33.6 days	β	240	3,3	
Tellurium 131m (131mTe)	30.0 hours	β		5	
Tellurium 132 (132Te)	3.204 days	β	~1,150	88	
Iodine 131 (131I)	8.04 days	β	~1,760	160	63
Iodine 132 (132I)	2.3 hours	β, γ	1.04	0.013	
Iodine 133 (133I)	20.8 hours	β, γ	910	42	
Iodine 135 (135I)	6.6 hours	β, γ	250	2.3	
Cesium 134 (134Cs)	2.06 years	β, γ	~47	18	
Cesium 136 (136Cs)	13.1 days	β	36	-	
Cesium 137 (137Cs)	30.0 years	β	~85	15	0.089
Moderate volatiles					
Strontium 89 (89Sr)	50.5 days	β, γ	~115	2	11
Strontium 90 (90Sr)	29.12 years	β	~10	0.14	0.058
Rutenium 103 (103Ru)	39.3 days	β, γ	>168	0.0000075	23
Rutenium 106 (106Ru)	368 days	β	>73	0.0000021	1.1
Antimony 127 (127Sb)	3.9 days	β		6.4	
Antimony 129 (129Sb)	4.3 hours	β		0.14	
Barium 140 (140Ba)	12.7 days	β	240	3.2	71
Involatiles					
Itrium 91 (91Y)	58.5 days	β, γ		0.0034	11
Zirconium 95 (95Zr)	64 days	β	84	0.017	14
Molybdenum 99 (99Mo)	2.75 days	β	>72	0.0000067	
Cerium 141 (141Ce)	32.5 days	β	84	0.018	25
Cerium 144 (144Ce)	284 days	β	~50	0.011	2.9
Praseodymium 143 (143Pr)	13.6 days	β		0.0041	
Neodymium 147 (147Nd)	11.0 days	β		0.0016	
Neptunio 239 (239Np)	2.35 days	β	400	0.076	
Plutonium 238 (238Pu)	87.74 years	α	0.015	0.000019	
Plutonium 239 (239Pu)	24,065 years	α	0.013	0.0000032	
Plutonium 240 (240Pu)	6,537 years	α	0.018	0.0000032	
Plutonium 241 (241Pu)	14.4 years	β	~2.6	0.0012	
Plutonium 242 (242Pu)	376,000 years	α	~0.00004		
Curium 242 (242Cm)	162.8 days	α	~0.4	0.0001	
Total			13,194	11,347	222

*Bq (Becquerel)

The becquerel (symbol Bq) is a unit for the international system of units measuring radioactive activity. A becquerel is defined as the activity of a quantity of radioactive material with decay of a nucleus per second.

**Chernobil

UN, Scientific Committee on the Effects of Atomic Radiation. (2011). "Annex D. Health effects due to radiation from the Chernobyl accident". Sources and Effects of Ionizing Radiation, UNSCEAR 2008 Report vol. II: Effects, Report to the General Assembly Scientific Annexes C, D and E. New York: United Nations. pp. 70-71. ISBN 978-92-1-142280-1. http://www.unscear.org/docs/reports/2008/11-80076_Report_2008_Annex_D.pdf. Table A1. Revised estimates of the total release of principal radionuclides to the atmosphere during the course of the Chernobyl accident"

***Fukushima

Nuclear and Industrial Safety Agency (Oct. 20, 2011). Modification of the data of release of radioactive material into the atmosphere.

****Hiroshima

Nuclear and Industrial Safety Agency (Aug. 26, 2011). The release of radioactive material into the atmosphere by atomic bomb of Hiroshima.

Table 2. Train accident of JR Hokkaido

Date	Train	Accident / incident
May-11	Limited express "Super Ozora #14"	Derailed in a tunnel, and burst into flames. Six-car vehicle was burnt down. The communication between the operation command post and the crew was sluggish, and the passengers escaped by opening the emergency doors of the train. No one was killed by this accident. However, 39 people of 248 were taken to hospital. Many parts were missing on the vehicle side.
Feb. 2012	Freight train	Derailment occurred on the Ishikatu line.
Feb. 2013	Limited express "Super Soya #2"	Raised smoke from under the floor on the Hakodate Main Line.
Mar. 2013	"Hokuto #5"	Raised smoke from under the floor of the vehicle, on the Muroran Main Line.
Apr. 2013	Limited express "Hokuto #20"	Raised fire from the engine, on the Hakodate Main Line.
May-13	Limited express "Super Kamui #6"	Raised fire from under the floor, on the Hakodate Main Line.
Jun. 2013	Local train	Passed in the state in which the crossing bar was not down completely on the Hakodate Main Line. The cause is reported that the cable for supplying a signal for detecting a train dropped.
Jul. 6, 2013	Limited express "Hokuto"	Was traveling with fire, while sprinkling the engine lubricating oil, due to the damage of diesel engine.
Jul. 14, 2013	The high-speed train of "Ishikari-liner"	Smelled nasty like rubber burnt.
Jul. 15, 2013	Limited express "Super Ozora"	Fire broke out on the switchboard of the train and the emergency stop device did not work.
Jul. 17, 2013	Limited express "Super Hokuto"	Departed while a passenger's arm was sandwiched by the door, at Oshamambe station, and the conductor operated the emergency brake. The sensor of the passenger door did not work.
Jul. 19, 2013	Local train	The wheels of the train of Esashi line became idle, and escaped by sprinkling sand on the rail. The cause has not been determined.
Jul. 22, 2013	Limited express "Super Tokachi"	Raised white smoke, due to the failure of the exhaust valve of the piston.
Sep. 7, 2013	Limited express sleeping car "Hokutosei"	Because the train driver had been forgotten the switch off of ATS of the locomotive, emergency brake was activated. Then, in order to pretend to a car trouble that the cause of the emergency brake activation, he destroyed the ATS equipment with a hammer.
Sep. 19, 2013	Freight train	Derailment occurred in Onuma Station of Hokkaido.
Sep. 22, 2013	-	Makoto Nojima, president of JR Hokkaido, announced that they left a total of 97 abnormal locations, such as the spread of the rail.
Nov. 15, 2013	-	A number of tampering problem of the rail abnormality in JR Hokkaido, Hakodate track maintenance employees in the control room had discarded the handwritten ledgers of inspection to be used as evidence.

Source: Digital newspaper of each accident or incident.

Table 3. Aircraft accident due to pilot / crew error and airline problem

Date of accident	Airline/Flight	Number of deaths	Incident / Phenomena & Probable cause
	Comment		
May 22, 2010	Air India Express Flight 812 (B737-800, delivered in Jan. 2008)	152 pax & 6 crews	Overshot the runway on landing and crashed. Captain's failure to discontinue the "un-stabilized approach" and his persistence in continuing with the landing, despite three calls from the First Officer to "go around," and a number of warnings from the EGPWS. Contributing Factors to the Accident was that the Captain was in prolonged sleep during flight (90 min.), which could have led to sleep inertia (Paljor, 2010). Co-pilot or any other crew did not wake him up earlier.
	There existed the circumstances that crew members could not comment a captain liberally in the cockpit, which is a Crew Resource Management (CRM) problem.		

Nov. 12, 1996,	Saudi Arabian Airlines (B 747 - 100B) & Kazakhstan Airlines Ilyushin II-76	349 on board of both flights	Mid-air collision occurred in the west of New Delhi, India. The cause was the serious breach in operating procedure due to the "lack of English language skills" on the part of the Kazakhstani aircraft pilots to follow ATC instructions.
	The decision of International Civil Aviation Organization (ICAO) to address language proficiency for pilots and air traffic controllers is a long standing argument and was first made by the Assembly in Sep. 1998, as a direct response to this accident, as well as previous fatal accidents where the lack of proficiency in English was a causal factor (ICAO, 2011). The universal ATC language is English. However, in some countries, such as France, China, Spain, some Latin American countries, Russia and a part of Canada, pilots/controllers from the same State speak their own native languages. ICAO accepts such communications in other than English language. However, ICAO requires that the English language shall be available on request at all stations on the ground serving designated airports and routes used by international air services (ICAO, 2010).		
Sep. 5, 2005	Mandala Airlines[1] Flight 091 (B 737-230 Adv)	149 fatalities	Crashed into a heavily-populated residential area just after taking off in Medan. The aircraft took off with improper take-off configuration, i.e. with retracted flaps and slats, causing the aircraft failed to lift off. Improper checklist procedure execution had led to failure to identify the flap in retract position. This incident was caused by pilot errors.
	Since the errors were so primitive that investigators had to doubt whether the education and the training of the crew members in the airline had been made appropriately or not. Cardig International acquired this airline for US\$34 million in Apr. 2006. In 2007, Mandala Airlines transformed its image into a modern LCC airline satisfying international standard of safety.		
Jun. 1, 2009	Air France Flight 447, an Airbus A330- 203	216 pax & 12 crews	Crashed into the Atlantic Ocean. Temporary inconsistency between the measured speeds, likely as a result of the obstruction of the pitot tubes by ice crystals, causing autopilot disconnection and reconfiguration to alternate law; the crew made inappropriate control inputs that destabilized the flight path; failed to follow appropriate procedures for loss of displayed airspeed information; and was late in identifying and correcting the deviation from the flight path, etc. (BEA, 2011)
	The most important skill for the crew members is to handle the aircraft under an emergency situation, especially to recover from the stall. Regular training and the repetition using flight simulators may be necessary for all the crews. Under the globalization of the economy, and the popularization of tourism, ICAO or other organization should control the education, training, and the investigation of each airline, including those in developing countries.		
Jan. 1, 2007	Adam Air[2] Flight 574 (B 737-4Q8) The plane was 18 years old.	102 on board	Crashed into the ocean near Polewali in Sulawesi. The pilot error and a faulty navigation device downed the aircraft. While cruising at 10,668 m, the pilots became preoccupied with troubleshooting the two IRSs. The autopilot became disengaged and the pilots failed to correct for a slow right roll even after a bank angle alarm sounded (Ionides, 2008).
	In Aug. 2008, the Indonesian police named Sandra Ang, the airline owner, as a suspect for money embezzlement. The financial losses from the embezzlement reportedly amounted to approx. US\$210 million. This is a typical white-collar crime committed by the owner of an airline company, under which many passengers lost their lives, because the airline neglected safety in order to save money (Fitzpatrick, 2007).		
Nov. 12, 2001	American Airlines Flight 587 (Airbus A300-600)	260 on board & 5 on the ground.	Crashed into the Belle Harbor neighborhood of Queens, a borough of NYC, shortly after takeoff. The cause was the first officer's overuse of rudder controls in response to wake turbulence or jet wash from a JAL B747-400 that took off five minutes before it.
	It is not clear why the captain rushed to depart from the JFK International Airport. If he could have stayed for another 10 minutes on the runway or taxiway, the aircraft might not have been involved in the wake turbulence of JAL aircraft (Bella & Benjamin, 2011). It is strongly required to regulate the wake turbulence separation standard that can be applied to all the major airports in the world (FAA, 2012).		
Feb. 16, 1998	China Airlines Flight 676 (Airbus A300-622R)	196 on board & 7 on the ground.	Crashed into a road and residential area near Chiang Kai-shek International Airport, Taiwan. The visibility was bad and the control tower had asked the pilot not to land (Gargan, 1998). After the crew acknowledged the clearance of making landing the airport, the captain decided to go-around, but it was too late and crashed (Ladkin, 1998).
	CAL, owned indirectly by the government, is the largest airline in Taiwan. CAL has caused numerous incidents and accidents since its formation. Throughout the 1990s, the airline employed many ex-air force pilots. Due to the airline's poor safety record in the 1980s and 1990s (Refer to Table 3 in Appendix), CAL began to change its pilot recruitment practices and began to actively recruit civilian-trained pilots with proven track records. They also modified its maintenance and operational procedures. These decisions have improved safety record, culminating in the company's recognition by the IATA Operational Safety Audit (IOSA).		
Jul. 28, 2010	Airblue[3] Flight 202 (Airbus A321-231)	146 & 6 crews on board	Crashed in the Margalla Hills north of Islamabad. The captain ignored or did not properly respond to a multitude of ATC directives and automated cabin warning systems.
	The first officer passively accepted the captain's actions, after the captain on multiple occasions took a "harsh, snobbish and contrary" tone with the first officer and "berated" him (Ellick, 2010). It may not be a problem in the normal circumstances on the ground or in the air, but in an emergency a captain should cooperate with other crews and ATC staff (CRM issue).		

Aug. 16, 2005	West Caribbean Airways[4] charter Flight 708 (MD-82)	152 & 8 crews on board	Crashed in a mountainous region in northwest Venezuela. The crew failed to operate the aircraft within its normal parameters, which resulted in a stall that was not properly recovered from due to poor decision-making and poor communication between the pilots (CRM issue).
	The poor financial position of the airline came under criticism. The airplane was almost refused to takeoff at the previous stop due to non-payment of catering and food service fees. The crew had not received regular paychecks in several months, and the captain was reportedly forced to moonlight as a bartender to provide income for his family (Hradecky, 2010).		
Jun. 30, 2009	Yemenia[5] Flight 626, an Airbus A310-324	153 pax & crews on board	Crashed while approaching to Prince Said Ibrahim International Airport. The crew's inappropriate flight control inputs led to an aerodynamic stall. The crew did not react to the warnings being issued by the aircraft (Commission d'Enquete, 2013).
	There were a number of further incidents and accidents (Table 4 in Appendix). It is characteristic that they have suffered from some hijackings in which fortunately no casualty has been recorded so far.		
Aug. 20, 2008	Spanair[6] Flight 5022 (MD-82)	154 people	Crashed just after takeoff from Madrid-Barajas Airport. The crash was caused by an attempt to take off with the flaps and slats retracted, which constituted an improper configuration. All three safety barriers provided to avoid the takeoff in an inappropriate configuration were defeated: the configuration checklist, the confirmation and verify checklist, and Take-off Warning System (TOWS) (CIAIAC, 2011).
	The accident was caused by some primitive, but serious, errors of the cockpit crews, including CRM issues. It can be understood that an airline should have a strong financial standing for safety of flights, and that Spanair could not have provided enough education and training for their crews, because of their poor financial position.		
May 12, 2010	Afriqiyah Airways[7] Flight 771 (A330-200)	104 pax & crews on board	Crashed on approach to Tripoli International Airport, at about 900 m short of the runway. The aircraft was newly delivered in Sep. 2009. The cause of the crash was pilot error. CRM lacked or was insufficient, sensory illusions and the first officer inputs to the aircraft side stick were a contributing factor of the crash (Kaminski-Morrow, 2013).
	David Kaminski-Morrow (2013) indicates that both the pilot and the co-pilot seem to have been unfamiliar with the mechanism of the aircraft, especially various warnings activated during a go-around.		
Jul. 9, 2006	OAD Aviakompania Sibir Airlines[8] Flight 778 (A310-324)	120 pax & 5 crews	Crashed upon landing at Irkutsk International Airport. The plane overshot the runway, sliding over several hundred meters of wet runway and grass. The cause of the accident was the erroneous and uncontrolled actions by the crew during rollout after landing in a configuration with one engine reverser deactivated.
	There were no unified courses in the Russian Federation for flight personnel advanced training that focus on learning the characteristics of CRM when undergoing conversion training from Russian airplane with three or more crew members to airplane with a two person flight crews.		
Apr. 20, 2012	Bhoja Air[9] Flight 213 (B737-236)	121 pax & 6 crews	Crashed on the final approach to the runway, about 5 km short of the Benazir Bhutto International Airport, Islamabad (Hradecky, 2012). The corruption within CAA, due to politically motivated appointments, was alleged to be the prime reason for increase in frequency of technical faults, crash landings and catastrophic air accidents (Abbasi, 2012).
	After this accident, the Bhoja Air fleet size was reduced to one airplane only, despite the Pakistani law required at least three planes in operation. Thus, in May 2012, the Ministry of Defense of Pakistan has temporarily imposed a ban on the operations of Bhoja Airline (Zulfiqar, 2012). The Civil Aviation Authority (CAA), the regulatory authority for maintaining aviation safety standards in Pakistan, faced harsh criticism of Pakistani media for allegedly compromising on safety standards (Siddiqui, 2012).		
Dec. 25, 2003	Union des Transports Aériens de Guinée[10] Flight 141 (B727-223)	133 pax, 5 crews & 3 others	Crashed in the Bight of Benin, where has a long association with slavery, and the shore being known as the Slave Coast. It was severely overloaded with passengers and cargo, and the aircraft's center of gravity was well out of limits
	Exact number of passengers was not known, as there were more passengers aboard than were listed on the manifest (BEA, 2005). Why can such airline exist as a commercial airline? There must be a certain criteria that restrict the freedom of entering aviation business.		

Jan. 8, 1996	Air Africa (Antonov An- 32B)	237 pax & on the ground	Crashed when the overloaded aircraft, wet leased from Moscow Airways, overshot the runway at N'Dolo Airport in Kinshasa, Democratic Republic of Congo after failing to take off and ploughed into Kinshasa's Simbazikita street market.
	The aircraft was operating out of license (Learmount, 2007). The Russian pilots were charged and convicted of manslaughter, each receiving the maximum two-year sentence. At trial, they admitted that they were using borrowed clearance papers, that they knew the flight was illegal, and that the flight was actually bound for Angola. They mentioned that they had done it many times before, but they did not know if there were weapons on board (Rider, 2006).		
Aug. 14, 2005	Helios Airways[11] Flight 522 (B737-31S)	115 pax & 6 crews	A lack of oxygen incapacitated the crew, leading to the plane's eventual crash after running out of fuel. In Dec. 2004, the aircraft experienced a rapid loss of cabin pressure, and the crew made an emergency descent. During the two months before the crash, the aircraft's environmental control system required repair five times (AAIASB, 2006).
	It was a serious mistake for the captain that he did not confirm the normal configuration before start to fly. The size of the airline, Helios Airways, was also a problem. Before the accident, they operated only four Boeing B737 aircraft[12].		
Apr. 15, 2002	Air China[13] Flight 129 (B 767- 200ER)	129 on board	Crashed into a hill near Busan, South Korea. The crew performed the circling approach, not being aware of the weather minimal for landing, and in the approach briefing, did not include the missed approach, among the items specified in Air China's operations and training manuals.
	The crew exercised poor CRM and lost situational awareness during the circling approach to the runway. When the first officer advised the captain to ascend again for landing, about 5 seconds before impact, the captain did not react, nor did the first officer initiate the missed approach himself.		
Jan. 3, 2004	Flash Airlines[14] Flight 604 (B737-300)	135 pax & 13 crews	Crashed into the Red Sea shortly after takeoff from Sharm el-Sheikh International Airport. The findings of the investigation are controversial. The NTSB and the BEA concluded that the pilot suffered spatial disorientation, and the co-pilot was unwilling to challenge his more experienced superior. Furthermore, both officers were insufficiently trained. Egyptian authorities disagreed with this assessment, attributing the cause to mechanical issues (Egyptian Ministry of Civil Aviation, 2006).
	Flash Airlines had a past record of neglecting maintenances. In 2002, Swiss aviation authorities performed a surprise inspection on the aircraft which crashed in this accident. They discovered missing pilot oxygen masks, a lack of oxygen tanks, and inoperable cockpit instruments. The Swiss grounded the aircraft until Flash repaired the plane. Several days later, Switzerland banned Flash. Poland also banned Flash. Further, four operators in Norway ceased contracting with them (Brady, 1999).		
May 5, 2007	Kenya Airways[15] Flight 507 (B737-800)	114 persons	Shortly after take-off, at about 300 m from Douala International Airport, the aircraft entered into a slow right roll that increased continuously and eventually ended up in a spiral dive (Williamson, 2012). The CCAA found that the aircraft departed without receiving clearance from ATC, although the weather was stormy. The other factors contributed the accident were inadequate operational control, lack of crew coordination, coupled with the non-adherence to procedures of flight monitoring, and confusion in the utilization of the autopilot (Kaminski-Morrow, 2010).
	The CCAA cites a "lack of rigor" in piloting and poor situational awareness, noting that the crew did not properly scan their instruments despite the lack of external visual references. Since the aircraft was new (6 months old at the time of accident), it is natural that the crews were not familiar with the electrical mechanism of the aircraft, especially under the abnormal situation.		
Aug. 23, 2000	Gulf Air[16] Flight 072 (A320-212)	143 on board	Crashed into the shallow waters, at 5 km from the Bahrain International Airport, on approach to the airport. The captain did not adhere to a number of Standard Operating Procedures (SOPs), and CRM issue. The airline's flight data analysis system was not functioning satisfactorily, and the flight safety department had a number of deficiencies and cases of non-compliance (Aviation Safety Network, 2013).
	The Emirate of Abu Dhabi decided on Sep. 13, 2005, to withdraw from Gulf Air and establish its own airline, Etihad Airways ^[17] . This was a turning point for the Gulf Air from the expansion to the contraction. Etihad Airways has become a competitor of Gulf Air. In May 2007, the government of Bahrain claimed full ownership of the airline, because joint-owner Oman withdrew from the airline. The heavy competitions against Etihad Airways and Emirates ^[18] are hard challenges for the Gulf Air.		

Notes

[1] Tigerair Mandala (formerly Mandala Airlines) is a low-cost airline headquartered in Jakarta, Indonesia and is an associate company of the Singapore-based Tigerair Group.

- [2] PT. Adam Sky Connection Airlines was a privately owned airline based in West Jakarta, Indonesia. It operated scheduled domestic services to over 20 cities and international services to Penang and Singapore. Its main base was Soekarno-Hatta International Airport, Jakarta. In Feb. 2009, Indonesia commercial court officially certified the airline as bankruptcy.
- [3] Airblue Ltd. is a private airline in Islamabad, Pakistan. It is Pakistan's second largest airline with over 20 % share of the domestic market. Airblue operates scheduled flights operating 30 daily services linking four domestic destinations Islamabad, Lahore, Karachi and Peshawar with international services to Dubai, Abu Dhabi, Sharjah, Muscat, Istanbul and Manchester. Its main base is Jinnah International Airport, Karachi. As of Aug. 2013, Airblue Fleet consisted of 8 Airbus aircraft with an average age of 8.6 years.
- [4] West Caribbean Airways S.A. was a commercial airline founded in 1998 with its headquarters in Medellín, Colombia. In 2005, after the crash of Flight 708 in Venezuela, the company's fleet was grounded and ceased operation.
- [5] Yemenia, also known as Yemen Airways is the national airline of Yemen, based in Sana'a. It operates scheduled domestic and international passenger flights to destinations in Africa and the Middle East, as well as to Asia and Europe out of its hubs at Sana'a International Airport and Aden International Airport.
- [6] Spanair S.A. was a Spanish airline, based near Barcelona. Until 2009, it was a subsidiary of the SAS Group; the same parent company in control of Scandinavian Airlines and held shares slightly under 20 % of the company. Spanair provided a scheduled passenger network within Spain and Europe, with an extension to West Africa. On Jan. 25, 2011, the company was in the "Emergency Financial Situation." The Catalan government approved a 10.5 million Euros loan plan in order to save it. The revenue improved and the company was cutting costs. However, on Jan. 27, 2012, the airline ceased operations due to financial problems.
- [7] Afriqiyah Airways was established in Apr. 2001 and commenced scheduled services on Dec. 1, 2001. The airline is ultimately owned by the Libyan government, based in Tripoli, Libya. Before the Libyan civil war of 2011, it operated domestic services between Tripoli and Benghazi, and international scheduled services to over 25 countries in Europe, Africa, Asia and the Middle East. Since the end of the war, it has been rebuilding its business.
- [8] OAO Aviakompania Sibir, operating as S7 Airlines, is the airline based in Novosibirsk Oblast, Russia. As of 2008, it was Russia's largest domestic airline, based on the number of passengers. As of Jun. 2013, they had 52 aircraft, 37 Airbus and 15 Boeings.
- [9] Bhoja Air (Bhoja Airlines Pvt., Ltd.) was a privately owned domestic airline based in Karachi, Pakistan.
- [10] Union des Transports Aériens de Guinée (United Air Transport of Guinea in English) (also known as Union des Transports Africains or Union des Transports Africains de Guinée) was a Guinean and Lebanese regional airline.
- [11] Helios Airways was established on Sep. 23, 1998, and was the first independent privately owned LCC airline in Cyprus. It has based on the Larnaca International Airport in Larnaca. It was acquired in 2004 by Libra Holidays Group of Limassol, Cyprus. Flights ceased on Nov. 6, 2006, because the company's aircraft were detained and its bank accounts frozen by the Government of Cyprus.
- [12] Source: Planespotters.net. Consulted on Aug. 22, 2013, in <http://www.planespotters.net/Airline/Helios-Airways#AirlineFleetList>.
- [13] Air China was established and commenced operations on Jul. 1, 1988, as the result of the Chinese government's decision in 1987 to split the operating divisions of Civil Aviation Administration of China (CAAC) into six separate airlines: Air China, China Eastern, China Southern, China Northern, China Southwest, and China Northwest. Air China was given the responsibility for intercontinental flights and took over the CAAC's long haul aircraft (B747s, 767s, and 707s) and routes.
- [14] The Flash Airlines was established in 1995 as Heliopolis Airlines. It received its certificate of operation from the Egyptian authorities in 1996. It became a member of the Flash group in 2000. During that year Flash Airlines had one Boeing B737-300 with another that joined in 2002.
- [15] Kenya Airways Ltd. is the flag carrier of Kenya, with the head office in Nairobi. It was founded in 1977, after the dissolution of East African Airways. It was wholly owned by the Government of Kenya until Apr. 1995, and was privatized in 1996. Kenya Airways is currently a public-private partnership. The largest shareholder is the Government of Kenya (29.8 %), followed by KLM (26.7 %). As of Jun. 2013, they had 43 aircraft in service.
- [16] Gulf Air is the principal flag carrier of the Kingdom of Bahrain, based on the Bahrain International Airport. The airline operates scheduled services to 41 destinations in 30 countries across Africa, Asia and Europe. As of June 2013, they have 26 aircraft in service.
- [17] Etihad Airways is the flag carrier of the United Arab Emirates. Established in Jul. 2003 and based in Abu Dhabi. The name derives from the Arabic word for "union." The airline operates more than 1,300 flights per week to 86 destinations in the Middle East, Africa, Europe, Asia, Australia and the Americas, with a fleet of 69 passenger aircraft and 11 cargo freighters. Etihad Airways is the second largest airline in the United Arab Emirates, after the Dubai-based airline Emirates.

[18] Emirates is the airline based in Dubai, United Arab Emirates. The airline is a subsidiary of The Emirates Group, which is wholly owned by the Investment Corporation of Dubai, which is a part of government of Dubai. It is the largest airline in the Middle East, operating over 3,000 flights per week from its hub at Dubai International Airport, to more than 130 cities in 77 countries across six continents. The fleet consisted of 192 passenger aircraft, 10 cargo freighters and 1 executive jet (total 203) as of August 2013, with a further 192 aircraft on order.

Table 4. Aircraft accident due to the structured problem of aircraft

Date of accident	Airline/Flight	Number of deaths	Incident / Phenomena & Probable cause
			Comment
May 25, 2002	China Airlines Flight 611 (B747-209B)	225 on board	Crashed into the Taiwan Strait, 20 minutes after taking off. The cause of the crash was improper repairs to the aircraft 22 years earlier. On Feb. 7, 1980, this aircraft had a tail-strike accident while landing in Hong Kong. Part of the plane's tail was damaged in the incident, and the permanent repair was conducted by a team from China Airlines in May 1980, which was not in accordance with the Boeing Structural Repair Manual (SRM).
	Similar faulty repair following a tail-strike caused an accident. On Aug. 12, 1985, 5 years after the accident aircraft's repair, JAL Flight 123[1] had crashed, killing 520 people on board. That crash had been attributed to a faulty repair to the rear pressure bulkhead by Boeing maintenance specialists. In both crashes, the faulty repair had been an incorrectly installed doubler plate (Wen-Lin, Guan & Yong, 2004).		
Jul. 17, 2007	TAM Airlines Flight 3054 (A320-233)	181 pax, 6 crews & 12 on the ground	Overran the runway, crossed a major thoroughfare during rush hour, crashed at high speed into a TAM Express warehouse adjacent to a filling station and exploded. one of the thrust levers, which control engines, was in position to accelerate when it should be in idle, but it was not proved if there was mechanical or human failure as the cause of the accident.
	Several factors may have contributed to the accident, such as a high volume of rain on the day, with the formation of puddles on the runway, as well as the absence of grooving.		
Jan. 30, 2000	Kenya Airways Flight 431 (A310-300)	169 pax & 10 crews	Crashed into the sea, off the coast of Côte d'Ivoire, shortly after taking off from Félix Houphouët-Boigny International Airport. The trigger of the accident was the errant stall warning, and then many human errors were found (BEA, 2004).
Jul. 8, 2003	Sudan Airways[2] Flight 139 (B737-200C)	117 on board	About 15 minutes after takeoff it experienced a loss of power in one of its engines. The flight crew prompted to return to the airport of departure for an emergency landing. In doing so, the pilots missed the airport runway and the airplane descended until it hit the ground.
	The aircraft hadn't been serviced for years because the airline was unable to get spare parts for the maintenance of the fleet due to the sanctions of the U.S. (Quist, 2003). All the events of Sudan Airways including hijackings are included in the Table 7 of Appendix.		
Sep. 2, 1998	Swissair[3] Flight 111 (MD-11)	229 on board	It crashed into the Atlantic Ocean southwest of Halifax International Airport, Nova Scotia, at 8 km from the shore. Flammable material used in the aircraft's structure allowed a fire to spread beyond the control of the crews, resulting in the loss of control and crash of the aircraft (TSB, 2012)..
	According to the TSB report, aircraft certification standards for material flammability were inadequate in that they allowed the use of materials (e.g., MPET[4]) that could be ignited and sustain or propagate fire.		
Jul. 17, 1996	Trans World Airlines[5] Flight 800 (B747-100)	230 on board	Exploded and crashed into the Atlantic Ocean near East Moriches, NY, 12 minutes after takeoff from John F. Kennedy International Airport. The cause of the accident was an explosion of the center wing fuel tank (CWT), resulting from ignition of the inflammable fuel/air mixture in the tank. The source of ignition energy for the explosion could most likely be a short circuit outside of the CWT that allowed excessive voltage to enter it through electrical wiring.
	The design and certification concept that fuel tank explosions could be prevented solely by precluding all ignition sources.		

Notes

- [1] JAL Flight 123 (B747SR) was a Japan Airlines domestic flight from Tokyo International Airport to Osaka International Airport. On Aug. 12, 1985, the aircraft suffered mechanical failures and 32 minutes later crashed on Osutaka Ridge, 100 km from Tokyo. All 15 crews and 505 out of 509 passengers died, resulting in a total of 520 deaths and 4 survivors. It is the deadliest single-aircraft accident in history, and the second-deadliest accidental plane crash in history behind the Tenerife airport disaster. A maintenance manager working for the company killed himself to apologize for the accident. As the background of the accident, there were various problems inside the JAL operation. The head and the bottom engineer were cut out, but the body of JAL remained largely the same as before. Japan Airlines filed for bankruptcy in 2010.
- [2] Sudan Airways is the national airline of Sudan, based in Khartoum. As of Oct. 2012, the company is fully owned by the Government of Sudan. As of Mar, 2010, Sudan Airways was included in the list of airlines banned in the EU.
- [3] Swissair, S.A./AG was the national airline of Switzerland. The airline thrived into the 1980s, when it was one of the “big four” Western European airlines. It was based at Zurich Airport and in Kloten. It was renamed The Swissair Group in 2001. After the economic turndown following the Sep. 11 attacks, Swissair’s assets dramatically lost value, and was kept alive until Mar. 31, 2002 by the Swiss Federal government. On Apr. 1, 2002, the successor airline Swiss International Air Lines was founded on the base of former Crossair, taking over most of the routes, planes and staff of former Swissair. Swiss International Air Lines was taken over by the German airline Lufthansa in 2005.
- [4] MPET: Metallized polyethylene terephthalate. Insulating blankets made with MPET were used as insulation in aircraft until safety concerns resulted in their depreciation.
- [5] Trans World Airlines (TWA) was an American airline from 1925, until bought out by and merged with American Airlines in 2001.

Table 5. Aircraft accident due to the ATC problem

Date of accident	Airline/Flight	Number of deaths	Incident / Phenomena & Probable cause
			Comment
Sep. 29, 2006	Gol Transportes Aéreos Flight 1907 (B737-8EH)	154 pax & crews of B737	Collided in midair with an Embraer Legacy business jet over the Brazilian state of Mato Grosso. The CENIPA[1] report (2008) concludes the accident was caused by mistakes made by both ATC and the Embraer pilots, whereas the NTSB focuses on ATC and its system, concluding that both flight crews acted properly but were placed on a collision course by the ATC controllers.
			The common cause was the ATC errors. The ATC staffs complained about being overworked, underpaid, overstressed, and forced to work with outdated equipment. Many have poor English skills, limiting their ability to communicate with foreign pilots, which played a role in crash of Flight 1907.
Oct. 8, 2001	Scandinavian Airlines Flight 686 (MD-87)	114 on boards of both aircraft & 4 on the ground	Collided on take-off with a Cessna Citation CJ2 business jet, at Linate Airport in Milan, Italy. the “immediate cause” of the accident was the incursion of the Cessna aircraft on to the active runway. Its report has identified a number of deficiencies in the airport layout and procedures (ANSV, 2004).
			The minimum requirements for international airports should be established and updated from time to time, because the aviation technology is being developed year by year. Old fashioned airport is a major cause of accidents.
Sep. 26, 1997	Garuda Indonesia Flight 152 (A300B4)	234 pax and crews	Crashed into woodlands 29 km from Medan in low visibility due to the haze. The aircraft turned left instead of right as instructed by the ATC; The aircraft descended below the assigned altitude of 900 m and thereafter struck treetops at 465 m above sea level.
			The pilot and ATC confused to distinguish the English words of “right now” as the meaning “immediately,” from “right direction at the moment.” Both did not have a good English command, and should not have been qualified as the pilot and ATC staff, respectively.

Note

[1] CENIPA is the Brazilian Air Force's Aeronautical Accidents Investigation and Prevention Center.

Table 6. Aircraft accident due to the other causes

Date of accident	Airline/Flight	Number of deaths	Incident / Phenomena & Probable cause
			Comment
Jul. 15, 2009	Caspian Airlines ^[1] Flight 7908 (Tupolev Tu-154M)	153 pax & 15 crews	Crashed outside the city of Qazvin in north-western Iran. The main reason of the accident was an engine failure and destruction due to a bird strike, which resulted in the loss of control and crash of the airplane.
	Bird Strike Committee of U.S.A. reports that over 250 people have been killed world-wide as a result of bird strikes since 1988; that bird and other wildlife strikes cost U.S.A. civil aviation over US\$700 million per year, 1990-2012; and that about 10,900 bird and other wildlife strikes were reported for U.S.A. civil aircraft in 2012.		
Jan. 15, 2009	US Airways ^[2] Flight 1549	-	After of the miraculous ditching in the Hudson River, 155 passengers and crews were safely evacuated, and the goal of education about bird strikes has been achieved (Dolbeer, 2009).
	In order to reduce the risk of collision of birds when the aircraft is taking off and landing, NEC ^[3] has developed a new continuous monitoring system that detect birds position in and around the airport. NEC has started to sell it (NEC, 2012). This system has already been adopted by the Tokyo International Airport (Haneda).		
May 7, 2002	China Northern Airlines ^[4] Flight 6136 (MD-82)	103 pax & 9 crews	Crashed into the bay near Dalian, shortly after the pilot reported "fire on board. A passenger named Zhang Pilin set fire to the passenger cabin with gasoline, causing the plane to lose control and crash. He had purchased seven air insurance policies worth a total of about US\$187,500 prior to boarding the flight (AirDisaster.com, 2003).
	He committed suicide. Since Sep. 11 tragedy, almost all the airlines have become sensitive about the bringing a bottle of liquid on board, at the airport. In China, however, such measures against terrorists were not provided at least in May 2002.		
Jul. 25, 2000	Air France Flight 4590 (Concorde)	100 pax, 9 crews & 4 on the ground	Crashed into a hotel in Gonesse, France. Five minutes before the Concorde, a Continental Airlines DC-10 had lost a titanium alloy strip, 435 mm long and about 29 to 34 mm wide, during takeoff from the same runway. After reaching take-off speed, the tire of Concorde was cut by the above metal strip lying on the runway.
	To save on weight, Concorde was designed to take off without the assistance of flaps or slats. That required a significantly higher air pressure and tire speed during the takeoff roll. That higher speed increased the risk of tire explosion during takeoff.		
Oct. 31, 1999	EgyptAir ^[5] Flight 990 (B767-300ER)	217 on board	Crashed into the Atlantic Ocean about 100 km south of Nantucket Island, Massachusetts. NTSB found the crash was caused by deliberate action of the Relief First Officer Gameel Al-Batouti, i.e. he committed suicide or terrorism (NTSB, 2002), while the ECAA found the crash was caused by mechanical failure of the airplane's elevator control system (ECAA, 2002).
	It is not rare that two countries or institutions provide different investigation reports.		
May 4, 2002	EAS Airlines ^[6] Flight 4226 (BAC One-Eleven 500 ^[7])	64 pax, 7 crews & at least 78 on the ground.	Burst into flames upon impact in a residential area of the city called Gwammaja. The engines failed following their intake of a large amount of dust. This occurred as a result of the pilot overshooting the runway and continuing the take-off through a grassy area at the end of the runway.
	The EAS Airlines was eventually sold to Chairman of Global Fleet, Mr. Jimoh Ibrahim, who changed its name to Nicon Airways, which operated for a few weeks before its demise (Mikairu & Eteghe, 2012). Both EAS Airlines and Nicon Airlines vanished like smoke on a windy day.		

Notes

[1] Caspian Airlines, established in 1993, operates services between Tehran and other cities in Iran and international flights to Armenia, Syria, Turkey, UAE and Ukraine. Its main base is Mehrabad International Airport, Tehran. The Caspian Airlines fleet was one MD-82 and 4 MD-83, as of Dec. 2012.

[2] US Airways is a major U.S. airline owned by the US Airways Group, headquartered in Tempe, Arizona. It operates an extensive international and domestic network, with 193 destinations in 24 countries in North America, South America, Europe, and the Middle East. The airline is a member of the Star Alliance and utilizes a fleet of 343 mainline jet aircraft, as well as 278 regional jet and turbo-prop aircraft operated by contract and subsidiary airline as US Airways Express.

[3] NEC Corporation is a Japanese multinational provider of information technology services and products, with its headquarters in Minato, Tokyo, Japan. The number of employees in the NEC group companies (consolidated basis) is about 109,000, which is the 9th largest in Japan.

[4] China Northern Airlines was established in 1990. It was one of six major airline corporations that were formed as a result of the breakup of CAAC's airline operations.

[5] EgyptAir is the flag carrier airline of Egypt, based at Cairo International Airport as its main hub. It operates scheduled passenger and freight services to more than 75 destinations in the Middle East, Europe, Africa, Asia, and the Americas. The airline is a member of Star Alliance, having joined on Jul. 11, 2008. As of Nov. 2012, the EgyptAir fleet consisted of 80 aircraft.

[6] EAS (Executive Airlines Services) Airlines was an airline based in Lagos, Nigeria. It operated passenger services within Nigeria and charters to neighboring countries. The airline was established in Dec. 1983. It began operations as EAS Cargo Airlines, but ceased cargo flights in Jan. 1992 and set up an executive jet charter service under the name Executive Airline Services (EAS) in Nov. 1993.

[7] The British Aircraft Corporation BAC One-Eleven was a British short-range jet airliner of the 1960s and 1970s.

Table 7. Fatal airliner hull-loss accidents (aircraft more than 14 passengers)

The number of fatal airliner (14+ passengers) hull-loss accidents and fatalities per year is given. The figures do not include corporate jet and military transport accidents/hijackings.
Last updated: 21 December 2012.

Year	Accidents	Casualties	Year	Accidents	Casualties
2012	23	475	1976	63	1,630
2011	36	524	1975	55	1,186
2010	31	847	1974	62	1,971
2009	31	760	1973	66	1,998
2008	34	589	1972	71	2,375
2007	31	773	1971	47	1,415
2006	33	905	1970	77	1,469
2005	39	1,073	1969	71	1,679
2004	33	454	1968	62	1,381
2003	33	703	1967	63	1,334
2002	43	1,112	1966	58	1,439
2001	35	801	1965	53	1,122
2000	42	1,147	1964	45	1,017
1999	46	696	1963	56	1,265
1998	45	1,229	1962	70	1,681
1997	47	1,266	1961	61	1,334
1996	56	1,831	1960	64	1,395
1995	57	1,205	1959	62	1,044
1994	58	1,452	1958	58	1,088
1993	51	1,142	1957	63	858
1992	57	1,540	1956	49	815
1991	54	1,146	1955	53	562
1990	46	701	1954	49	665
1989	65	1,551	1953	60	873
1988	59	1,145	1952	51	776
1987	44	1,108	1951	60	885
1986	45	826	1950	56	1,054
1985	42	2,010	1949	65	998
1984	39	676	1948	84	1,176
1983	35	860	1947	72	992
1982	37	1,175	1946	65	786
1981	44	896	1945	28	246
1980	45	1,197	1944	27	247
1979	74	1,773	1943	22	199
1978	61	1,250	1942	20	252
1977	59	1,645	Total	3,598	77,690

Source: Aviation Safety Network, 2013.

Table 8. Causes of fatal accident by decade

Cause	(percentage)						
	1950s	1960s	1970s	1980s	1990s	2000s	All
Pilot Error	41	34	24	26	27	30	29
Pilot Error (weather related)	10	17	14	18	19	19	16
Pilot Error (mechanical related)	6	5	5	2	5	5	5
Total Pilot Error	57	56	43	46	51	54	50
Other Human Error	2	9	9	6	9	5	7
Weather	16	9	14	14	10	8	12
Mechanical Failure	21	19	20	20	18	24	22
Sabotage	5	5	13	13	11	9	9
Other Cause	0	2	1	1	1	0	1

Source: Statistics, PlaneCrashInfo.com

<http://planecrashinfo.com/cause.htm>

The above is compiled from the accident database of PlaneCrashInfo.com and represents 1,085 fatal accidents involving commercial aircraft, world-wide, from 1950 through 2010 for which a specific cause is known. This does not include aircraft with 18 or less people aboard, military aircraft, private aircraft or helicopters. "Pilot error (weather related)" represents accidents in which pilot error was the cause but brought about by weather related phenomena. "Pilot error (mechanical related)" represents accidents in which pilot error was the cause but brought about by some type of mechanical failure. "Other human error" includes ATC errors, improper loading of aircraft, fuel contamination and improper maintenance procedures.

Table 9. List of unrecovered blackbox

Date of crash	Flight No.	Airline	Plane type	Presumed location	Notes
Aug. 16, 1965	389	United Airlines	B727-22	Lake Michigan, off Chicago, Illinois	Resting in 76 m of water; FDR was not found.
May. 02, 1970	980	ALM	DC-9-33CF	Caribbean Sea	Resting in 1,500 m of water; neither recorder found.
Jul. 22, 1973	816	Pan American World Airways	B707-321B	Pacific Ocean, off Papeete, Tahiti	Resting in 700 m of water; neither recorder found.
Sep. 30, 1975	240	Malév	Tupolev Tu-154	Near the Lebanese shoreline	Resting in between 600 and 1,000 m of water.
Jan. 30, 1979	Cargo	Varig aircraft PP-VLU	B707-323C	Pacific Ocean, 200 km East Northeast from Tokyo, Japan	Neither recorder found, and the cause of the crash was never determined.
Jan. 01, 1985	980	Eastern Air Lines	B727-225	46 km from La Paz at 5,970 m level of Mt. Illimani.	Due to the inaccessibility, FDR and CVR were never recovered.
Nov. 28, 1987	295	South African Airways	B747-244B Combi	Indian Ocean, near Mauritius	CVR located at 4,900 m; FDR not found.
Nov. 29, 1987	858	Korean Air	B707-3B5C	Andaman Sea	Neither recorder found.
Oct. 04, 1992	1862	El Al Israel Airlines	B747-258F	Groeneveen and Klein-Kruitberg flats, Amsterdam	One Black Box was found. Last 2:45 minutes were unreadable.
Sep. 11, 2001	11	American Airlines	B767-223ER	North World Trade Center, NYC	Terrorist attack.
Sep. 11, 2001	175	United Airlines	B767-222	South World Trade Center, NYC	Terrorist attack.
Oct. 04, 2001	1812	Siberia Airlines	Tupolev Tu-154	Black Sea	Neither recorder found.
Oct. 14, 2004	1602	MK Airlines	B747-244SF	Halifax, Nova Scotia	FDR Recovered; CVR mutilated in post crash fire
Nov. 18, 2009	VH-NGA	Pel-Air	IAI 1124A- II	Norfolk Island	No fatalities.
Jun. 03, 2012	992	Dana Air	MD-83	Lagos, Nigeria	CVR recovered; FDR mutilated in post crash fire

Source: Individual investigation reports of the accidents.

Table 10. List of major medication scandal²⁸³

Thalidomide-induced medication scandal	Thalidomide is the name of sleeping pills, which was sold by Gruyerien Nene tar German company in 1957. Many children with malformation was born as a side effect. Thalidomide was included in the Provins M and Isomin that Dainippon Pharmaceutical had sold in Japan. About 309 people have been victimized in Japan.
Medication scandal of subacute myelo-optico-neuropathy (SMON) disease	Medication scandal that the laxative Chinoform is the cause. After administration of Chinoform, symptoms of abdominal pain, diarrhea, numbness, pain, paralysis, and loss of visual acuity occur. It is said that about 7,500 people have been victimized in Japan.
Chloroquine	When administered chloroquine over a long period of time, retinopathy occurred as the side effect. The typical symptom is weakening eyesight. About 1,000 people have been victimized in Japan.
Irinotecan hydrochloride incident	Irinotecan hydrochloride is the anti-cancer agent used in various cancers, such as colon cancer and lung cancer. Many people have died in the clinical trial stage.
Sorivudine.	Sorivudine is the treatment agent of viral infections that is effective on herpes simplex virus, and varicella-zoster virus. During the study, three people died and dozen also died after the launch.
HIV-tainted-blood scandal	This incident which produced a lot of AIDS patients between the late 1970s and 1980s was caused by the administration of the unheated blood products that AIDS virus is mixed for hemophilia patients. It is said that about 1,800 people were infected with the AIDS virus by the unheated blood products.
Medication scandal of hepatitis	Hepatitis virus had been contaminated in the blood products of the ninth factor products and fibrinogen. They were administered as a hemostatic agent, and produced many hepatitis patients. It is said that about 10,000 people were infected with hepatitis in this case.
Iressa.	It is an anti-cancer drug to suppress the growth of cancer. Sometimes, it developed the acute lung injury or interstitial pneumonia after administration as a side effect. Several hundred people have died in Japan.
Vaccination scourge incident	(Measles-mumps-rubella vaccine, and new diphtheria-pertussis-tetanus combination vaccine) It was administered from 1988 to 1993; but it was canceled because the rate of aseptic meningitis incidence was high.
Stevens-Johnson syndrome	Symptoms appear in the mucous membranes and skin erythema, blisters and erosions. The administration of anti-epileptic drugs or non-steroidal anti-inflammatory drugs is reported as one of the causes. .
Oseltamivir (Tamiflu)	Influenza treatment drug that is sold under the name Tamiflu from Roche of Switzerland. As a side effect, a sudden death, cardiopulmonary arrest, impaired consciousness, pneumonia, choking, and abnormal behavior are reported. However, a part of them is said to be the symptoms of influenza itself.
CJD (Creutzfeldt-Jakob disease)	Because of the fact that there had been a patient of Jacob disease in the dried dura providers, the patients who were transplanted "Lyodura," the dried dura, developed Jakob disease. It was produced by B. Braun Melsungen AG, a leading hospital supply company based in Germany.
Kyoto and Shimane diphtheria vaccination	In 1948, the diphtheria vaccine of which detoxification was insufficient was vaccinated in Kyoto and Shimane Prefectures, and 83 people were killed in total.
Fibrinogen	Hepatitis scandals caused by the use of the blood fibrinogen contaminated with hepatitis C virus. Former Green Cross manufactured and sold it in Japan. It is said that more than 10,000 people infected with hepatitis by fibrinogen in Japan.
Chris machine	It is the unheated blood product of the blood coagulation factor IX being extracted and purified. Due to the use of blood which was infected with AIDS or hepatitis C, it caused the tainted blood scandals of AIDS and hepatitis.
PPSB-Nichiyaku	It is the unheated blood product of the blood coagulation factor IX being extracted and purified. Due to the use of blood which was infected with hepatitis C, it caused the tainted blood scandals of hepatitis.
Hospital diet	Alias, MD Clinic diet. Pharmaceutical products that are made in Thailand for the diet purpose. Psychopharmaceutical drugs and drug components which are unapproved in Japan are included in it. The users have died in dyspnea.
Viagra	Impotence treatment drug. Those who take nitrate-based formulation or nitroglycerin together with Viagra, may die from organs failure or myocardial infarction.

²⁸³ Source: The list of medication scandals. Ichiranya. (<http://ichiranya.com/about.php>)

Table 11. Chronicle of HIV/AIDS events

Date	Event
1980	It began to use unheated blood products (fibrinogen) to the people who delivered a baby with bleeding or surgery. It was the trigger to cause drug-induced hepatitis lawsuit afterwards.
Jul. 16, 1982	U.S. Centers for Disease Control and Prevention (CDC) announced that AIDS and death cases of two hemophilia patients: "Two people were killed among three hemophilia patients who were using the concentrated blood clotting formulation, after they affected with carinii pneumonia."
Aug. 1982	Atsuaki Gunji was appointed to the manager of Biologics Section, Pharmaceutical Affairs Bureau of the Ministry of Health and Welfare (MHW).
Sep. 24, 1982	CDC pointed out the risk of propagation of a rare disease through blood products, to pharmaceutical companies, and named the disease AIDS.
Nov. 1982	CDC convened the emergency meeting at which 300 participants of human blood industry in the United States got together, and CDC recommended the prevention of the infection.
	T. Abe said that we had to consider the disease of donors in Europe and the United States., and that it was being found gradually that there was a serious illness.
	Alpha Therapeutic Corporation in Los Angeles reported its parent company, Green Cross, the risk of blood contamination of donors.
	The corporate lawyer of Cutter in the U.S. recommended the company that "AIDS-related warning message" should be printed on the blood product boxes, in order to prepare for the trial which would become inevitable. (Cutter memorandum)
Jan. 4, 1983	Defendant companies requested the MHW to approve the self-injection therapy.
Jan. 4, 1983	CDC held the emergency meeting of pharmaceutical companies, where the specialist in infectious disease, Don Francis, appealed the risk of unheated blood products.
Feb. 1983	MHW officially approved the self-injection therapy for hemophilic patients.
Mar. 1983	Travenol Co. in the U.S. developed heated blood product, which U.S. Food and Drug Administration (FDA) approved. They promoted it to MHW.
	Kazumi Mochinaga, Chief of Pharmaceutical Practice Bureau of MHW, was appointed the president of Green Cross Corporation.
May 1, 1983	Travenol Co. promoted unheated blood product to MHW.
May 23, 1983	MHW approved unheated blood product, Proplex, of Travenol.
May 27, 1983	MHW approved untreated blood products of Japan Organ "fiber immuno."
Jun. 1983	Travenol Co. voluntarily recalled Proplex (unheated blood product), after a donor of blood developed AIDS symptoms in the U.S.
	T. Abe said that, because there was the risk of infection by blood products that relied on imports, and was seriously alarmed, and that they wanted to take the way to inactivate the virus of imported blood, by the heating for 10 hours at 60 degrees.
May – Jul. 1983	Five defendant pharmaceutical companies, including Green Cross, donated a total of 43 million yen[1] as the fund of the "Organization for Diffusion of Comprehensive Hemophilia Treatments," which T. Abe had been preparing to establish. (Refer to another donations in Nov. 1984)
Jul. 1983	Alpha Therapeutic Corporation reported that they found an AIDS patient in the donors of blood, and the lot was "A4-2300." They requested their parent company, Green Cross to send it back. Green Cross, however, did ignore the request, and the bad product was not recovered.
Jul. 4, 1983	The assistant manager of the Section of Biologics of MHW described in the draft paper titled "Management of blood products related with AIDS" that: they instructed to rush the import approval application for heated formulation; they recommended the AIDS Investigating Team to use heated formulation; and instructed the pharmaceutical companies and hospitals not to use the unheated products of the blood derived from the United States.
Jul. 5, 1983	The patient of T. Abe developed AIDS and died in the Teikyo University Hospital. AIDS Investing Team in MHW took a pass on the identification of AIDS on this case.
Jul. 7, 1983	Haruko Shimizu, former staff in the Bureau of Pharmaceutical Practice of MHW, posted on the Mainichi newspaper the article that urged to ban the import of blood products to prevent entering AIDS into Japan.
Jul. 11, 1983	MHW completed the paper titled "Management of blood products related with AIDS," in which they said that they would not ban the import of blood products in a uniform way, and that heated formulation should be processed in the Pharmaceutical Council immediately. They changed to the policy that the extralegal approval of heated formulation was unfavorable.

Jul. 18, 1983	AIDS Investigating Team led by T. Abe concluded that the issue of blood products should be left as it was, so far.
Jul. 24, 1983	T. Abe said that it was not wise that you feared without reason, and worsened the bleeding without using blood products when needed.
Jul. 25, 1983	MHW concluded that in case Japanese Red Cross Society produced blood products from the donated blood, plasma that is wasted can be adapted to clotting factor productions.
Jul. 27, 1983	MHW approved the imported unheated blood products, "Hemophil-S" and "Hemophil-H" of U.S. Travenol.
Aug. 14, 1983	At the National Hemophilia Society Board Meeting, T. Abe said about one case out of 3,000 injections might cause development of AIDS, and that the doctor who said to stop import of unheated formulation must not understand hemophilia.
Aug. 19, 1983	MHW organized a committee to study the change to Clio formulation, in the AIDS Investing Team. Mutsumi Kazama, the professor of Teikyo University, was appointed to the leader.
Aug. 29, 1983	CDC Researcher, Dr. Thomas Spira, certified the case of Teikyo University as AIDS.
Oct. 14, 1983	At the 4th meeting of AIDS Investigating Team, Kazuo Okouchi, the professor of Kyusyu University, insisted to review domestic therapy and rely on Clio. T. Abe strongly objected it.
Oct. 18, 1983	T. Abe intimidated Kazama not to recommend Clio.
Nov. 1983	WHO agreed and published at the International AIDS Specialist Meeting that Causative agent of AIDS is present in body fluids or blood.
Feb. 1984	T. Abe posted on the magazine "Medical Technology" that it was necessary to not use blood products at risk of pathogen contamination, and that it was desirable to use the material donated blood in Japan as possible as we could, for the formulations of hemophilia. Travenol started the pharmaceutical test of heated formulation in Japan.
Mar. 1984	Cutter started the pharmaceutical test of heated formulation in Japan.
Mar. 24, 1984	T. Abe spoke at the patient meeting that: "It is necessary to make the blood formulation from safer blood gathered in Japan, to prevent infection. However, it is not attained yet. Heat-treated formulation is expected to apply to the MHW soon."
Mar. 29, 1984	AIDS Investigating Team adopted the report that approved continuation of import of unheated formulation. The Team dissolved.
May 1, 1984	Chemo-Sero-Therapeutic Research Institute started the pharmaceutical test of heated formulation in Japan.
Jun. 1984	T. Abe sent the serum of 48 human hemophilia patients to Dr. Gallo of the National Cancer Institute of the U.S. As a result, two people died were AIDS patients, and 21 people were found to be HIV-infected. Green Cross finally started the pharmaceutical test of heated formulation in Japan.
Sep. 1984	Virus that causes AIDS is officially reported at the International Society for Virology.
Nov. 1984	The second hemophilia patient died in Teikyo University Hospital. As the working capital of the 4th International Symposium on hemophilia treatment that T. Abe held, the pharmaceutical companies paid 25 million yen in total[2]. Together with the donations made in between May and Jul. 1983, the pharmaceutical companies had paid to T. Abe more than 100 million yen during the three years.
Mar. 1985	AIDS antibody test kit was approved in the U.S.
Mar. 22, 1985	AIDS research and examination committee of MHW certified the first AIDS patient in Japan to the homosexual man in Juntendo University.
Jul. 1, 1985	MHW approved the heated formulation of four pharmaceutical companies simultaneously, after the completion of the pharmaceutical test of Green Cross. It was 2 years and 4 months lagged than the U.S.
Dec. 9, 1985	MHW approved Cutter's heated formulation for hemophilia B.
Dec. 17, 1985	MHW approved Green Cross's heated formulation for hemophilia B.
Jun. 9, 1986	U.S. pharmaceutical companies voluntarily stopped to produce and export unheated formulation.
Dec. 17, 1986	MHW started AIDS Specialist Meeting with the head of Yuichi Shiokawa, the emeritus professor of Juntendo University.
Jan. 17, 1987	MHW established AIDS Surveillance Committee with the chairperson of Yuichi Shiokawa.

Feb. 1987	AIDS Surveillance Committee announced that they certified the first woman patient of AIDS in Japan.
Mar. 31, 1987	The draft of the "Law on the prevention of acquired immune deficiency syndrome" (AIDS prophylaxis law) was submitted to the National Diet, which imposed the obligation of reporting and prevention of infection on infected persons and the doctor.
Oct. 27, 1988	"AIDS prophylaxis law" passed the House of Representative.
Dec. 23, 1988	"AIDS prophylaxis law" passed the House of Councilors.
Feb. 17, 1989	"AIDS prophylaxis law" was put in force.
8-May-89	Two plaintiffs of hemophilia patients litigated for the first time, in Osaka.
Oct. 27, 1989	Another 14 plaintiffs of HIV litigated in Tokyo.
Oct. 1990	MHW abolished the Biologics Section of Pharmaceutical Affairs Bureau, and established Blood Business Response Office.
Jun. 10, 1991	Regard to HIV tainted blood in France, administrators and others were accused of "poisoning charge."
Oct. 23, 1992	Paris Misdemeanor Court sentenced the Director of the France National Blood Transfusion Center, the Chief of a Bureau of MHW[3], and others.
Apr. 1, 1993	The MHW decided that the source of the raw material of blood clotting factor was the blood donated to the Japanese Red Cross Society only.
	The government started to pay the victims 33,000 yen a month, as the survey and research project of HIV infections due to the blood formulation, with the aim of prevention of AIDS.
Apr. 4, 1994	A patient of hemophilia accused T. Abe in the Tokyo District Public Prosecutors Office for the attempted murder.
Jul. 24, 1995	Ryuhei Kawada and others formed the human chain surrounding the MHW.
Oct. 5, 1995	Tokyo and Osaka District Courts presented the first settlement offer of a lump sum payment of 45 million yen per plaintiff.
Nov. 11, 1996	Green Cross established a 100 % subsidiary company, Bipa Corporation.
Feb. 14 – 16, 1996	The plaintiffs in Osaka came up to the Diet Members' Building in Tokyo. The plaintiffs in Tokyo sat-in before the MHW office.
Feb. 16, 1996	Gathering the plaintiffs in a room of the MHW, Naoto Kan, the Minister of MHW, admitted the responsibility of the nation, and apologized.
Mar. 14, 1996	The plaintiffs visited defendant pharmaceutical corporations in Osaka, required to admit the responsibilities and to accept the settlement offer.
Mar. 29, 1996	The settlement was agreed among the plaintiffs and defendants.
Apr. 26, 1996	New civil lawsuits were filed in the District Court of Sendai, Nagoya, Fukuoka and Kumamoto.
Jun. 10, 1996	New civil lawsuit was filed in Sapporo.
Jul. 23, 1996	The sworn testimony was given at the House of Representatives Committee on Health and Welfare, for T. Abe, Atsuaki Gunji and Yuichi Shiokawa.
Aug. 9, 1996	Shareholder lawsuit against Green Cross was raised at Osaka District Court.
Aug. 21, 1996	Osaka District Public Prosecutors Office has raided the Green Cross.
Aug. 29, 1996	Tokyo District Public Prosecutors Office arrested T. Abe, and raided his home, Teikyo University Hospital, and MHW.
Sep. 19, 1996	Three former presidents of Green Cross were arrested, and later were prosecuted.
Sep. 1996	T. Abe was prosecuted for professional negligence and involuntary manslaughter by the Tokyo District Public Prosecutors Office.
Oct. 4, 1996	Tokyo District Public Prosecutors Office arrested Akihito Matsumura, former Biologics Section Manager of MHW, and later prosecuted.
Apr. 1, 1997	Based on the terms of settlement of HIV litigation, MHW opened the AIDS treatment, research and development center (AIDS Clinical Center: ACC).
Apr. 25, 1997	Based on the terms of settlement of HIV litigation, developments of local block hospitals were made.
Jul. 1997	Green Cross won the right to sell the anti-HIV drug "ZERIT," the nucleoside reverse transcriptase inhibitor, from the developer, Bristol-Myers Squibb.
Oct. 1, 1997	The opening ceremony of the AIDS Clinical Center (ACC) was performed, and Junichiro Koizumi, then Minister of Health and Wealth, attended.
Apr. 1, 1998	Green Cross made the merger with Yoshitomi Pharmaceutical Industries, and called itself "Yoshitomi Pharmaceutical Industries, Inc."

Jan. 19, 1998	MHW certified the HIV-infected persons as eligible for pension of disability and disabled people.
Apr. 1, 1999	"AIDS Prevention Act" was abolished, and new "Law of Infectious disease" was enacted in place.
Oct. 1, 1999	Yoshitomi Pharmaceutical Industries, Inc. (former Green Cross) returned the right to sell the anti-HIV drug "ZERIT," the nucleoside reverse transcriptase inhibitor, to the developer, Bristol-Myers Squibb.
Feb. 24, 2000	Three successive presidents of former Green Cross were sentenced for 2 years to one year and 4 months imprisonment[4], by the Osaka District Court. The defendants appealed.
Mar. 28, 2000	Tokyo District Court ruled part acquittal to the defendant, T. Abe. (Teikyo University route.)
May 1, 2000	Yoshitomi Pharmaceutical Industries, Inc. (ex-Green Cross) changed its name to "Welfide Corporation."
Sep. 2000	Welfide Corporation was found guilty of bribery to the former director of the Civilian Hospital of Hirakata City in Osaka, and the person in charge in Welfide and the former director of the Hospital were arrested.
Sep. 28, 2001	Tokyo District Court sentenced A. Matsumura for one year imprisonment with two year probation.
Oct. 1, 2001	Welfide Corporation merged with Mitsubishi-Tokyo Pharmaceuticals, Inc., and the name became Mitsubishi Pharma Corporation.
Oct. 1, 2001	Mitsubishi Pharma Corporation made the spin-off biologics manufacturing sector, and its name was Venesys Corporation.
Jul. 25, 2002	Law for ensuring a stable supply of safe blood products (new Blood Law) was enacted.
Oct. 21, 2002	Pharmaceutical disaster of hepatitis litigation occurred. Battle for blood products that hepatitis C virus is mixed, 13 victims in Tokyo and 3 in Osaka filed a lawsuit claiming damages against Mitsubishi Pharma, Nippon Pharmaceutical Co., Ltd., and the government.
Feb. 23, 2004	The trial for the defendant T. Abe was stopped because of insanity.
Dec. 9, 2004	MHW published the 7,036 names of medical institutions which fibrinogen had been delivered to since 1980.
Apr. 25, 2005	The defendant T. Abe died at age 88.
Oct. 1, 2005	Mitsubishi Pharma established a joint holding company with Mitsubishi Chemical Corporation, "Mitsubishi Chemical Holdings Corporation."
Oct. 1, 2007	Mitsubishi Pharma merged with Tanabe Seiyaku Co., Ltd., and established the "Mitsubishi Tanabe Pharmaceutical Co., Ltd."
Mar. 2008	The Supreme Court dismissed the appeal of defendant A. Matsumura, and conviction has become final and binding, one year imprisonment with two year probation.
Mar. 24, 2009	During the development process of the blood products "Medway," in Mitsubishi Tanabe Pharma (actually in its subsidiary, Bipha), the falsification of clinical trial test data was discovered, and they voluntarily recalled.
Apr. 13, 2010	In response to clinical trial data falsification incident above, MHW canceled the approval of the product, and issued a stop work order for 25 days to Mitsubishi Tanabe Pharma.
Apr. 21, 2010	Japan Pharmaceutical Manufacturers Association determined the disposition for Mitsubishi Tanabe Pharma, to dismiss the title of the Association Vice President, Executive Director, and the Director of the Association, which the president of Mitsubishi Tanabe Pharma had served.
Feb. 10, 2011	Japan Pharmaceutical Manufacturers Association accepted the Mitsubishi Tanabe Pharma's proposal of the voluntary withdrawal from the Association.

Sources: Masamori, 2006; Miyamoto, 2000; Sankei News Paper, Jul. 27, 2000; etc.

Notes

[1] The each donation amounts were as follows. Cutter: 10 million yen, Travenol: 10 million yen, Japan Organ: 10 million yen, Chemo-Sero-Therapeutic Research Institute: 3 million yen, and Green Cross: 10 million yen.

[2] The each donation amounts were as follows. Cutter: 3.5 million yen, Travenol: 3.5 million yen, Japan Organ: 3.5 million yen, Chemo-Sero-Therapeutic Research Institute: 5 million yen, Green Cross: 4 million yen, Nippon Pharmaceutical Co., Ltd.: 1 million yen; Japanese Red Cross Society: 1 million yen; and Hoechst: 4.05 million yen.

[3] National Blood Transfusion Center, Gullet: 4 years in prison for the sin of misrepresentation of the quality of the product, and 500,000 franc fine. National Blood Transfusion Center Research, Director of Research, Alan: 4 years of imprisonment with 2 year probation, and 100,000 franc fine. Health Directorate General Director, Lou: 4 years of imprisonment with 4 year probation for the "crime that he did not rescue those who are on the verge of danger." National Health Institutes Director, Nette: innocence. However, he was sentenced one year imprisonment with one year probation at the court of appeal.

[4] The judgment was that the former president, Renzo Matsushita: 2 years imprisonment, former vice president,

Tadakazu Suyama: one year and six months imprisonment, and the former executive managing director, Takehiko Kawano: one year and four months imprisonment.

Table 12. Chronicle of pharmaceutical disaster of hepatitis

Date	Event
1963	MHW organized the "Serum hepatitis research team."
Mar. 1964	A schizophrenia patient stabbed U.S. Ambassador Edwin O. Reischauer[1] with a knife, in front of the American Embassy. The ambassador was infected with hepatitis by blood transfusion.
Jun. 1964	MHW approved the manufacturing "Fibrinogen-B. Bank" of Japan Blood Bank.
Aug. 1964	In the Cabinet meeting, promotion of blood donation to stock blood for blood transfusion was determined. Japan Blood Bank changed its name to Green Cross Corporation.
Oct. 1964	Green Cross changed the name of "Fibrinogen-B. Bank" to "Fibrinogen-Midori."
1968	The U.S. Medical Association Technical Committee recommended banning the use of "pooled plasma."
Dec. 1971	MHW started the first re-evaluation of all the medicinal products that had been approved in Sep. 1967 or before.
Apr. 1972	MHW approved the manufacturing Factor IX formulation of Nippon Pharmaceutical, "PPSB-Nichiyaku."
Jun. 1972	MHW established "Refractory Hepatitis Research Group."
May-73	MHW established Blood Studies Association.
1974	Alfred Prince, a virus researcher, suggested the presence of hepatitis non-A, non-B type. He called it "Hepatitis type C" in his paper. Japan achieved the plan to cover all the stored blood with the blood donated.
Feb. 1975	Tokyo District Court ruled that the doctor who had not measured blood transfusion at the hemostasis of the relaxation shock bleeding case, should have administered fibrinogen preparation for mass bleeding case. Ordered the damages to the doctor who had not done.
Apr. 1975	Blood Studies Group made the opinion for the Minister of MHW, to ensure that the blood donation in principle covers the all medical blood. But, MHW decided to import raw material plasma.
1976	MHW established the "Non-A, Non-B Hepatitis Subcommittee" in the Refractory Hepatitis Research Group.
Dec. 1976	MHW approved the production concentrated unheated factor IX preparation "Christmassin" (U.S. saled blood use). Then after, the great amount of imports of blood products or plasma which were produced from the raw material of sold blood in the U.S. started.
Dec. 1977	The U.S. FDA canceled the approval of Fibrinogen, because of the risk of Hepatitis B infection, the doubtfulness in clinical efficacy, and the presence of alternative treatments.
1978	A number of experimental success stories of non-A, non-B hepatitis-infected chimpanzees were reported in abroad.
Jan. 1978	Green Cross circulated the article that FDA had cancelled Fibrinogen preparation in the U.S., in the company. MHW approved the import unheated concentrated factor IX preparation of Cutter, "Konain."
Mar. 1978	The Director of MHW Pharmaceutical Affairs, Renzo Matsushita was appointed vice president of Green Cross.
Aug. 1978	MHW approved all at once the manufacture and import of 6 unheated concentrated Factor VIII (Konko-eight, Confact 8, profirate, Koeito, Kurioburin, Hemofiru S) made from raw materials of sold blood in the U.S.
Oct. 1978	MHW excluded Fibrinogen from the first final designated re-evaluation.
1979	Junichi Yasuda who was the blood products manager in the "National Institute of Health" (current "National Institute of Infectious Diseases"), mentioned in his book about the cancelation of Fibrinogen approval by the U.S. FDA. Pharmaceutical Affairs Law was revised.
1981	Pasteurized Factor VIII was approved by the Federal Republic of Germany, and delivered.
May-83	Council of Europe was held in Lisbon. In the context of AIDS, it was resolved to avoid the import of blood clotting factor and plasma. U.S. FDA instructed the heating of the blood products to the manufacturers.
Jun. 1983	MHW launched the "Study group on the actual situation of AIDS."

Feb. 1984	In the U.S., heated formulations of Alpha Company, Cutter, and Armour, Inc. were approved.
Sep. 1984	Green Cross submitted the re-evaluation basic data of Fibrinogen to MHW, including the material which indicated the cancelation of approval by FDA.
Jul. 1985	MHW collectively approved the applications of manufacturing heated Factor VIII from domestic and overseas companies.
Aug. 1985	Green Cross changed the process to handle the virus inactivation method from the BPL process to the "Anti-HBs globulin addition method," without submission of the application to MHW and getting its approval.
	MHW did not issue any instruction to recover the unheated blood products, or circular ban on sales.
Oct. 1985	MHW made the second re-evaluation of Fibrinogen.
	MHW has established the Business Office of blood measures.
Dec. 1985	MHW approved the import and sale of the heated preparation of Factor IX "Christmassin-HT."
	Green Cross delivered the last lot of unheated formulation of Factor IX, "Konko-eight."
Feb. – Nov. 1986	MHW approved the heated Factor IX preparation of domestic and overseas companies.
Jul. 1986	MHW developed the guideline to optimize the use of blood products.
Dec. 1986	Green Cross delivered the last lot of unheated formulation of Factor IX, "Christmassin."
Jan. 1987	MHW recognized the onset of hepatitis caused by Fibrinogen preparation.
Mar. 1987	MHW launched the investigation of the outbreaks occurred due to the unheated Fibrinogen in an obstetrics and gynecology clinic in Misawa City, Aomori Prefecture.
1987	MHW established a "New Blood Business Promotion Committee".
Apr. 1987	Green Cross voluntarily recalled the unheated fibrinogen preparation, "Fibrinogen-Midori."
	MHW approved the manufacturing of heated fibrinogen preparation, "Fibrinogen HT-Midori" of Green Cross.
Jun. 1987	"Central Pharmaceutical Affairs Council blood products re-evaluation committee" proposed to limit the adaptation of unheated fibrinogen to congenital disease.
Sep. 1987	Green Cross reported a hepatitis infection case by fibrinogen HT-Midori, to MHW.
Nov. 1987	It was approved by the Committee on Social and Labor Affairs of the House of Councilors and the House of Representatives "to establish, as soon as possible, a system to promote national self-sufficiency in blood products, which can be supplied entirely by donated blood and blood clotting factor."
Jun. 1988	According to the instruction of MHW, Green Cross distributed "Emergency safety information" of "Fibrinogen HT-Midori," and requested to return it. Since then, the sales volume decreased sharply.
1988	The manufacturer of the vaccine in the U.S., "Chiron Group" partially succeeded in cloning of hepatitis C virus genome.
Sep. 1989	In the first report of the "New Blood Business Promotion Committee," they determined the basic policy that "they should provide blood clotting factor to be supplied by preparation manufactured from domestic blood donated by 1991."
1990	The "New Blood Business Promotion Committee," in its second report, amended the standard of blood collection, and the blood sales traders withdrew completely.
Nov. 1990	MHW made the re-evaluation of heated Fibrinogen.
1993	Pharmaceutical companies started to import the blood clotting factor products of genetic modification from the U.S.
	Green Cross switched from the raw material of plasma heated formulation to blood donation.
Dec. 1994	Green Cross started to sell the heated formulation with an additional "SD" Processing, "Fibrinogen HT-Midori," which had been approved in Aug. 1994.
Feb. 1997	Green Cross abandoned clinical trials on the usefulness of the fibrinogen preparation for acquired hypofibrinogenaemia.
Mar. 1998	MHW limited the adaptation of unheated fibrinogen to congenital disease.
May-02	Tsutomu Sakaguchi, the then Minister of MHW answered at the Diet that "everyone could predict hepatitis was generated from fibrinogen."
Aug. 2002	Ministry of Health, Labor and Welfare (MHLW) submitted the "Survey report on HCV infection by fibrinogen preparation," in which they did not admit their responsibility.
Oct. 2002	In Tokyo and Osaka, the victims filed the pharmaceutical disaster of hepatitis to the respective District Court.
Apr. – Jun. 2003	The victims also filed the disaster to Fukuoka, Sendai and Nagoya, respectively.
Jun. 2006	The Osaka District Court, for the first time in Japan, judgment of hepatitis litigation was sentenced. (Total 256 million yen) for 9 patients in the primary plaintiff. Osaka lawsuit judgment condemned that the government should have the severe responsibility for regulatory administration, and to take immediate effective remedy for hepatitis C[2].
Aug. 2006	The Fukuoka District Court judged as follows. "Respect to fibrinogen, this ruling admitted the responsibility for the defendants with Nov. 1980 at the latest. Respect to the cancelation of the approval by the U.S. FDA to deny the utility of fibrinogen in 1977, no measure was taken in Japan, which was illegal." It clearly rejected the sophistry that the defendants had been orchestrated to be acquitted.

Mar. 2007	The Tokyo District Court judged as follows. For the disaster of fibrinogen, the judge admitted the liability of the government and the companies, and condemned as the third time. In addition, as for the Factor IX preparation also, admitted liability of the pharmaceutical companies for the first time.
Jul. 2007	The Nagoya District Court judged as follows. This ruling was a landmark ruling that regardless of the type and timing of the dosage form, the judge admitted the legal responsibility of the perpetrators and the government. In other words, it condemned the responsibility of the government for the first time about the Factor IX preparation. In addition, this decision admitted that the responsibility went back to the 1970s.
Oct. 2007	The problem of “418 patients list” being left was discovered.
Jan. 2008	Yoichi Masuzoe, the then Minister of MHLW, and the plaintiffs’ lawyers signed “The pharmaceutical disaster of hepatitis litigation settlement basic agreement.” Pharmaceutical Disaster of Hepatitis Victims Relief Special Measures Law enacted and came into force.

Source: Pharmaceutical Disaster of Hepatitis National Defense Team, 2013.

Notes

[1] Edwin Oldfather Reischauer (1910 – 1990) was an American educator and professor at Harvard University. He was a leading scholar of the history and culture of Japan and East Asia. From 1961 to 1966, he served as the United States Ambassador to Japan.

[2] Osaka District Court, 2006.

Table 13. The blood products that caused the infection of hepatitis C

(a) Fibrinogen preparation	Fibrinogen is the blood product that was extracted and purified fibrinogen that is a blood coagulation Factor I. In Japan, the ex-Green Cross Corporation manufactured and sold from 1964. Pharmaceutical disaster of hepatitis C was caused by both the “Fibrinogen-Midori” (1964-1987) which was unheated fibrinogen preparation, and “Fibrinogen HT-Midori” (1987-1994) which was the preparation for which dry heating process was made as a countermeasure to lose infectivity of the virus. These Fibrinogen preparations were produced from the domestic blood sold or mixed blood of domestic and imported. The Fibrinogen preparation sold today is made from blood donated and the surfactant treatment and the dry heating treatment are given. Therefore, they do not cause hepatitis C. Further, Fibrinogen preparation manufactured prior to 1985, was given BPL process, and validation experiments indicated that HCV was inactivated.
(b) Factor VIII preparation	Factor VIII formulation is the blood product that is extracted and purified the blood coagulation factor VIII. It has been developed for the treatment of hemophilia type A.
(c) Factor IX preparation	Factor IX formulation is the blood products extracted and purified blood coagulation Factor IX. Originally, it was developed for the treatment of hemophilia type B. For neonatal bleeding (e.g. melena neonatorum), it was used in the field of pediatric care, which was not originally intended.
(d) Factor IX complex	Factor IX complex includes not only Factor IX, but also Factor II, Factor VII and Factor X, sometimes it is referred to as the Factor IX complex preparation.

Source: Investigation report relating hepatitis C virus infection by Fibrinogen, Aug. 29, 2002. Ministry of Health, Labour and Welfare. Consulted on Nov. 15, 2013, in <http://www.mhlw.go.jp/houdou/2002/08/h0829-3a.html>.

Table 14. A few drugs with side-effects not predicted by animal tests

Drug Name	Promoted as	Results
Clioquinol	anti-diarrhoea	2,000+ deaths...30,000+ blinded, paralyzed
Isoproterenol	anti-asthma	3,500+ deaths
Thalidomide	sleeping pill, anti-nausea	10,000+ birth defects...3,000+ stillbirths
DES	anti-miscarriage	cancer, birth defects
Cigarettes	social drug	420,000 deaths/year[3]
Poenvibutazone	anti-inflammatory	10,000+ deaths
Chloramphenicol	antibiotic	aplastic anemia, 42+ deaths
Opren	anti-arthritis	liver damage, 61+ deaths
Fialuridine	anti-hepatitis	liver damage, 5+ deaths
Clofibrate	anti-cholesterol	fatal heart attacks up 37%
Eraldin	cardiotonic	blindness, 23+ deaths
Parlodel	stops breast, milk production	heart attacks, seizures, 13 deaths (as of 1993)

Source: Levin, 1996.

Notes

- [1] Death is by no means the only problem. More often, temporary or permanent damage of varying degrees occurs. This, too, is often under-reported, as it may take months or years to develop, and may be the result of the patient taking several prescribed drugs whose interactions in humans are not yet catalogued.
- [2] Death rates followed by a "+" include deaths from first world nations only. Pharmaceuticals are often sold in second-and third-world nations after being banned in their nations of origin. Having poorer record-keeping and haphazard distribution of pharmaceuticals - many being sold over-the-counter, the deaths and other problems often go unrecorded in those nations. Moreover, as physicians are often reluctant to admit that a drug they prescribed harmed a patient, such deaths are less likely to be reported, even in first-world nations.
- [3] Estimated yearly death rate, U.S.A. only. The New York Times, Dec. 6, 1993, quoted sworn court testimony of William Campbell, President and CEO of cigarette manufacturer Phillip Morris U.S.A.

Table 15. Chronicle of Accidents of MMC and Mitsubishi Fuso Truck and Bus

Date	Event
Jun. 1990	Damage accident in the clutch system in large vehicles first occurred.
Jun. 1992	Hub damage accident first occurred in the large vehicles.
May 1996	The meeting for the recall measures was held about the clutch system. Recognized the defect, but the recall was not announced and continued to repair secretly[1] over year 2000.
Jun. 1999	The hub of the bus damaged and the wheels fell off in Hiroshima Pref.
Jul. – Aug. 1999	The meeting for the individual measures on the wheels fell off the bus. It was decided to report as the “poor maintenance” to the Ministry of Transport.
Jul. 2000	Hidden recall incident was discovered, and the President, Kawazoe resigned to take the responsibility. Because they decided to survey the accidents for only two previous years at that time, and the problems earlier than that were not surveyed.
Nov. 2000	As the successor of Kawazoe, Takashi Sonobe was appointed. He was the Chairman of the boards, from Jun. 2002 to his death, Oct. 2003.
Feb. 2001	In Feb. 2001, the Metropolitan Police Department sent papers to prosecutors for the 9 people including the former vice president, with the charges of the Road Transport Vehicle Act violations (false report). Tokyo Summary Court issued an order of 400,000 yen fine to the company, and 200,000 yen fine to each of four people, including two vice presidents at the time.
Jan. 2002	Mother and a child were killed due to the hub damage of a truck occurred, in Yokohama. MMC claimed that the abnormality of the track was caused by the poor maintenance of the driver.
Jan. – Feb. 2002	Related to maternal and child fatalities, “task force meeting,” decided to exchange criteria of the hub without any technical basis.

2002	MMC made a false report about the hub to the Ministry of Land, Infrastructure, Transport and Tourism (MLIT).
Oct. 2002	At Kumage town, Yamaguchi Prefecture, the brake of a refrigerator car did not work due to the damage of the clutch system, and the car became out of control. The driver died. MMC claimed that the abnormality of the track had been caused by the poor maintenance of the driver.
	Clutch system of a tractor broke in Yokohama. MMC reported to the MLIT, that the accident was caused by the poor maintenance, and the repetition would not be expected.
Jan. 2003	The truck and bus sector and a part of the industrial engine sector made a spin-off, as Mitsubishi Fuso Truck and Bus Corporation from MMC. The shareholders composition ratios were Daimler Chrysler (currently Daimler): 43 %, MMC: 42 %, and other Mitsubishi Group companies: 15 % ^[2] .
Oct. 2003	Related to maternal and child fatalities, Kanagawa Prefectural Police raided MMC headquarters for professional negligence charges. They made the re-investigation in Jan. 2004.
Mar. 2004	The second time recall hidden by Mitsubishi Fuso was discovered.
May-04	Kanagawa Prefectural Police arrested five people including former Chairman of Mitsubishi Fuso, Takashi Usami.
May-04	Yokohama District Public Prosecutors Office, Yokohama District Public Prosecutors Office indicted the above five people, on the charges of Road Transport Vehicle Act violations (false report).
Jun. 2004	MMC announced that there had been "secret repairs" in passenger cars, as the result of the voluntary survey since 1979, which had mobilized over 4,000 employees in total. The Mitsubishi Fuso also announced the disposal of 29 people for the defects of large vehicles. The total number of secret repairs found by MMC and Mitsubishi Fuso was about 500.
Jun. 2004	Yokohama District Public Prosecutors Office arrested Katsuhiko Kawazoe, former President of MMC.
Jun. 2004	MMC announced the 43 recalls newly. In response to the defect information leakage to the MLIT, they announced a week later. 24 accidents caused by this defect were personal injuries, and 101 were fire accidents.
Feb. 2005	MMC got the first time information that there was a problem for engine parts of mini vehicles.
Mar. 2005	MMC filed a civil suit, as a corporation, for the former executives at that time of hidden recall incidents.
Apr. 2005	MMC announced a re-recall notification for the recall made in Sep. 2004. Because, the former recall was carried out while they did not fully understand the cause, and 4 fire accidents occurred in the cars of the measures already implemented. Additionally, due to the lack of thorough work procedures in the emergency inspections prior to the re-recall, two fire accidents were revealed.
Jan. 2008	MMC determined that the "recall was not required" for the problem of the engine parts of mini vehicles at the in-house meeting, because any accident had not occurred.
Oct. & Nov. 2009	As the result of an independent verification, the MLIT instructed MMC twice to conduct a recall of the engine parts of mini vehicles.
Oct. 2010	MMC first time recalled for the mini vehicles. There was an internal reporting that the range of recall was insufficient.
Jan. & Mar. 2012	In response to the instructions of the MLIT, they repeated another recalls to expand the range of the target mini vehicles. Since an insider report said it was again insufficient, they set up an internal Investigation Advisory Committee organized by lawyers.
Jan. 2013	MMC went to recall of mini vehicles, as the fourth time. They reported the recalls of 1.76 million mini vehicles in total of four times, which was the largest number of recall in Japan.

Source: Business Journal, 2013. MMC Recall 1.76 million vehicles: The lesson of the crisis does not live, hiding constitution. Jan. 3, 2013. Consulted on Sep. 2013, in http://biz-journal.jp/2013/01/post_1256.html.
Notes.

[1] The secret repair means that the action of repairing vehicles by the manufacturer, which is done secretly without

informing to the MLIT.

[2] As of Jan. 2011, the shareholders composition ratios were Daimler AG: 89.29%, and Mitsubishi Group companies: 10.71 %.

Table 16. Examples of disguising the origin of foods

Year	Disguised company	Details
2001	Snow Brand Food Co., Ltd.	They sold beef from Australia falsely as domestic. There were some other cases that they sold beef from Hokkaido under false pretenses, as from Nara Pref. or Kumamoto Pref.
2003	Many companies	The balloon fish which was landed in Mie Pref. and was transported to Shimonoseki was sold as Shimonoseki Balloon Fish. However, after that, they started to sell the balloon fish in Mie Pref. under the Shimonoseki brand of "Anori-Fugu," which was registered in 2003.[1]
2004	Zen-Noh Chicken Foods, a subsidiary of JA Zen-Noh [2]	They sold chicken of about 7 tons from Thailand and China, as the "Chemical-free breeding chicken from Kagoshima Pref." They received the business improvement order from the Ministry of Agriculture, Forestry and Fisheries (MAFF), and 4 officers including Hiroshi Oike, then Chairman, resigned.
2002	Headquarters in Fukuoka Pref. of JA Zen-Noh	They sold 3 items of the Yamecha tea with a blend up to 30 % of the tea leaves other than those grown in Yamecha area, Kumamoto and Miyazaki Pref. The Headquarters had been aware of this fact in the internal investigation in Mar. 2002. MAFF issued the order to stop the work for 5 days to JA Zen-Noh.
2004	Fujichiku and Hannan	They disposed foreign beef intentionally, and defrauded the subsidy which could originally be received from the government only when they disposed domestic beef as the measure of BSE problem. The defrauded amount is said 1.38 billion yen. In Mar. 2006, the Nagoya District Court handed down 8 years in prison, 300 million yen fine to the defendant, former president Fujimura Yoshiharu (the prosecution was 13 years imprisonment, 500 million yen fine) (Yomiuri Newspaper, Mar. 28, 2006).
2004	Many companies	The rice yield of real Koshihikari [3] produced in Uonuma region is 83,400 ton, in 2009 (in 15,700 ha acreage), to be approximately 1 % of the national harvest (8.8 million ton). It is said that about one third of Koshihikari of Uonuma is a mixed with the rice produced in other area (The Sanyo Shimbun Newspaper, 2012).
2004	JA Kagawa Pref.	They sold the wheat noodle that was specified as "made of 100 % wheat in Kagawa Pref.," even though they used the flour in Kagawa Pref. 20 % and the flour from Australia 80 % (Shikoku Shimbun Newspaper, 2004; Asahi Shimbun Newspaper, 2004).
2012-13	Hita-shoten	They sold the false labeling as Aichi Prefecture clams, for those from Korean and China. To the clam distributor Hida shops, Aichi Prefecture instructed to prevent recurrence and fair presentation based on the JAS Law. (Jiji dot com, Mar. 19, 2013)
2006	Japan Rice	They sold cheap waste rice as the counterfeit rice of the original brand rice. Masami Ishiza, then president, was arrested for the disguising the origin of rice. Food director of Niigata Agricultural Policy Office, Hokuriku Agricultural Administration Bureau, had received the entertainments of foods from the suspect, Ishiza, for about 15 times. He was responsible for the production management and guidance to sellers of rice as the former manager of Osaka Food Agency Office (now the Bureau of Agriculture Kinki Osaka Agricultural Administration Office). (Kyodo News, 2007)
2007	Meat Hope Inc. [4]	They sold falsely the ground beef, despite foreign objects were entered in the ground beef. In 2002, the food fraud incident was published in the local newspaper by the accusation of the superintendent of the plant, but the name of the company was not reported. Yoshiroku Akabane, former managing director of Meat Hope, tried to improve by administrative instruction, health center and public office, by police, and by mas media. However, they refused. The situation changed in 2007. Results of DNA examination of beef by Asahi Newspaper demonstrated the impersonation. Tanaka, then president of Meat Hope, acknowledged the involvement of himself. The company filed for bankruptcy on Jul. 18, 2007. The president was arrested and prosecuted on Mar. 19, 2008, on charges of fraud, and the Unfair Competition Prevention Act violations (misrepresentation), and sentenced four years in prison. He did not appeal, and the ruling was determined (MAFF, 2007).

2007	Ryukyu Glass Crafts Cooperative Union	They sold falsely the crafts as if they were made in Okinawa as "Ryukyu glass," though they were produced in their subsidiary factories in Vietnam. Japan Fair Trade Commission (FTC) conducted the investigation and the fact of a violation of the provisions of Act against Unjustifiable Premiums and Misleading Representations (misrepresentation of the country of origin) was recognized. On Jun. 18, 2007, in accordance with the provisions of the Act, the exclusion order was issued for the companies (Japan FTC, 2007).
2007	Hinai-chicken Inc.	They sold the chicken which no longer laid an egg, in the likeness of local Hinai-chicken. The former president Seiichi Fujiwara defrauded a total of about 63 million yen. Akita Prefectural Police raided the company. In the judgment of the defendant Fujiwara who had been accused of Unfair Competition Prevention Act violations and fraud, Akita District Court handed down four years in prison (the prosecution had claimed 7 years in prison) on Dec. 24, 2008 (Kyodo News, 2008).
2007	Senbakiicho head office	They served "sukiyaki" falsely Tajima cattle or Mita cattle, despite the fact was Saga cattle. The restaurant also made the expiry date falsification of the foods provided, and received a raid by the Osaka Prefectural Police. Another case was discovered that they re-used sashimi dish, which the previous customer did not put the chopsticks, falsely assumed to be made new. As the result, Senbakiicho was forced to go out of business.
2007 -	Many companies	A lot of incidents related eel [5] production area impersonation occurred. In 2007, the two eel suppliers in Miyazaki Pref. in Kyusyu disguised the eel of Taiwanese as of Miyazaki at the stage of processing via the trader, and sold in grilled. In 2008, Issiki Eel fishery Cooperatives Union in Issiki (currently Nishio City), Aichi, imported eel from Taiwan, grilled and shipped it with regional brands that are registered by the Patent Office in Nov. 2007. (Tokushima Shimbun, 2008). In 2008, "Uohide" and "Shinko-Gyorui" shipped the 2 million Chinese eels (256 ton), which was used malachite green, disguised as "produced by Mikawa Issiki, Aichi Pref.," in the name of fictitious company, "Issiki-Food." In 2008, Sunrise Foods in Ehime Prefecture made the impersonation of the production area, of grilled eel. On Aug. 29, they received the order for improvement based on the JAS Act from MAFF. They had committed several disguises of eel. (MAFF, 2008)
2008	Etsuhiro	Toshikazu Mori, president of marine products processing and wholesale company sold balloon fishes produced in China with a false labeling as were of Kumamoto Pref. He went out of business in recognition that "it was performed at the direction of his own." He explained eventually that "to sell balloon fish with the label of "made in China" was difficult in the then circumstances," (History of impersonation, 2007).
2008	Mine Orchid	They sold the mixture of the sea grapes in the Philippines and that in Okinawa, with displaying "made in Okinawa." Fisheries Division of Okinawa Pref. reprimanded as the quality labeling standards violation of JAS Law. (Ryukyushimpo, 2008)
2008	Maruaki	The president was selling the likeness of Hida beef, which was actually horse meat and non-standard beef. He received the administrative guidance from Gifu Pref. However, even after that, he was providing similar meat to the dealers. In Mar. 2009, he was convicted of one year and six months in prison, four years of probation in the Gifu District Court (Gifu Shimbun Newspaper, 2009).
2008	Mikasa Foods Co., Ltd.	MAFF sold the accident rice [6] to Mikasa Foods, not for food but for industrial use (Vietnamese non-glutinous rice, Chinese glutinous rice, etc.). In Sep. 2008, the accident rice resale fraud was discovered. The accident rice from China was disguised to the products of America, Kumamoto, domestic, etc. through multiple vendors, as the foods. On Oct. 16, 2009, judgments were made for Mikasa Foods in Osaka District Court, as 8 million yen fine, and for the president at that time two years in prison and 4 million yen fine. (Cabinet Office, 2008).
2009	Foodys	They received the exclusion order from the FTC, because in its own website they indicated that they used Tajima cattle only, while used Tajima cattle 20 % only (Newsplus, 2009).
2010	Marunaga Fisheries	They sold disguised seaweed products using seaweed from China as "Made in Naruto." Tokushima Prefectural Police arrested the president of the company on suspicion of Unfair Competition Prevention Act violations (Tokushima Shimbun Newspaper, 2008b).
2010	Supermarket Koyo of Aeon group	They carried out the sale of the turban shell in the 40 stores in four prefectures. At that time, on the leaflet in a paper, the origin was described as "Shimane Prefecture and other area domestic," but it actually was Korean. On Nov. 30, 2010, Consumer Agency issued a desist order seeking to prevent a recurrence to the company (Nikkei Shimbun Newspaper, 2010a).
2010	Himi Fishing Cooperative Union	They shipped yellowtail as "Himi-production," however, there was a suspicion of origin disguised,

2009-2010	Hokuto Hosya	They displayed “Hokkaido,” for the honey produced in New Zealand and Canada and sold about 330 kg under the name of the “domestic clover honey.” The president and the chairman were arrested of the Unfair Competition Prevention Act violations, by the Kanagawa Prefectural Police (Kanagawa Shimbun, 2011).
2008-2010	Juno	The health food sales company of Osaka sold disguised as “Tahiti,” the juice with the noni of Indonesia and Tonga production. May 26, 2011, Osaka Prefectural Police arrested the president of the company for the Unfair Competition Prevention Act violation (Sankei Shimbun Newspaper, 2011b).
2012	Hyogo Rokko Agricultural Cooperatives (JA Hyogo Rokko)	They sold 1,028 bags with the name of “Kobe original rice,” which was blended with only 10 % Hyogo Pref. rice and the 90 % of the rest was the rice produced in Iwate Pref. The notification to the consumers in the shop was insufficient. Hyogo Pref. investigated and issued the improvement instruction based on the JAS Act (Social News, 2012).
2011-2012	Kansai vegetable	They sold Awaji onions which had been imported from China. Hyogo Pref. Police arrested the substantial management of the company, Hidefumi Mori, for the Unfair Competition Prevention Act violations. On Jul. 5, 2013, Kobe District Court ruled the defendant 5 years in prison (prosecution 7 years), and for the company 10 million yen fine (Sankei Shimbun Newspaper, 2013a).

Notes.

[1] The balloon fish is one of the most precious and expensive fishes in Japan. Shimonoseki is a famous place where balloon fish is most delicious.

[2] According to their website, JA Zen-Noh’s mission is to constantly provide consumers with domestically produced farm products that are safe and reliable; and to fulfill this mission, Zen-Noh carries out a highly diversified range of business activities at every step, from production through sales. Their registered name is “National Federation of Agricultural Cooperative Association.” (<http://www.zennoh.or.jp/about/english/index.html#2>).

[3] Koshihikari is one of the best brands of rice in Japan, and Koshihikari produced in Uonuma area is the best among other Koshihikaris.

[4] Minoru Tanaka founded the Meat Hope in 1976. Sale and processing of meat were the cores of their businesses at that time. In its heyday, they were No. 1 in the food processing wholesale industry within the province of Hokkaido. In Jan. 2006, they had approximately 100 employees and 500 in the group companies as a whole.

[5] Although eel is known as freshwater fish in general, it makes the egg laying and hatching in the ocean, and come back to the freshwater. Eel is for food, and the cooking method, such as grilled eel bowl, was designed in Japan. It is a fish that has a deep connection to food culture since ancient times in Japan.

[6] Accident rice is the rice containing acetamiprid or methamidophos pesticide remained, or the aflatoxin B1 of poison.

Table 17. Incidents of unqualified medical doctors

Date	Unqualified doctor	Details
Oct. 9, 2002	R. Nakamura (52) and M. Koide (52), who worked in the Medical Corporation Enju-kai “Naka-Itabashi South Clinic,” in Tokyo.	R. Nakamura was arrested for the suspect to have made medical interventions, such as blood tests, even though she was not a qualified doctor, in 11 patients from Dec. 1999 to Jul. 2002 (Takenaka, 2002). M. Koide, the director of the same clinic, was also arrested for the suspect of the same.
Mar. 6, 2006	Hideki Yamashiro (33) in Mizue Neurosurgery Clinic, Tokyo, and many other hospitals	He was arrested for the medical practice to work at a hospital for 8 years, without medical license, on suspicion of the Medical Practitioners’ Act violation. He counterfeited the medical license with a real female doctor registration number, and had been working in the medical institutions of 20 or more locations. He had conducted many medical practices, including the suture surgery, and the patients’ reputations were good. On Mar. 13, 2006, the Metropolitan Police Department re-arrested him, for the fraud of about 35 million yen salary as a doctor, on suspicion of fraud and uttering of counterfeit official document (Nikkansports, 2006).
Dec. 2009	Y. Okamura (27) who was deputy director in the “Maple Acupuncture Osteopathic Clinic” in Osaka	He was brought an involuntary manslaughter charge against a female patient who died immediately after receiving the acupuncture practitioner, in Dec. 2009. On Dec. 7, 2010, Osaka District Court sentenced conviction of three years in prison, five year probation, and 500,000 yen fine (prosecution was three years imprisonment and 500,000 yen fine). The punishment is light, and with probation. It was the ruling that cannot be convincing for bereaved family (Nikkei Shimbun Newspaper, 2010b).

2012	S. Takahashi, a qualified doctor (74)	He administered un-approved immune anti-cancer drug, "Calchion," developed by himself to cancer patients. Metropolitan Police Department raided a pharmaceutical manufacturing and marketing company in Tokyo for the violation of the Pharmaceutical Affairs Act and Medical Practitioners' Act. According to the coverage of the Mainichi Shimbun Newspaper, he revealed to have struck injections to dozens of people. (Kuroda, 2013)
Jun. 14, 2013	A. Kinoshiro (45), the former management of the Medical Corporation Association, "Shinmei-kai Takao Clinic" in Tokyo	He was arrested in violation of the Medical Practitioners' Act charges (unqualified medical practice). In the work of once a week, the suspect received a medical fee of about 24 million yen from 1,349 patients in two years from Dec. 2010. It is reported that between Jan. 2011 and Dec. 2012, the unlicensed suspect had practiced a total of 66 times medical procedures such as surgery of the wound nails and anesthetic injection for 13 patients of 26 - 85 years of age, at the same clinic. (Sankei Shimbun Newspaper, 2013b)
Jun. 13, 2013	M. Tsukamoto (47), a radiological technologist	He was arrested for the suspect of pretending to be a doctor, in violation of the Medical Practitioners Act. During Nov. 2012 and Jan. 2013, the suspect conducted examinations and medications 15 times, without a medical license, for the cancer patient 40 years of age. He received about 2.7 million yen as the price of two types of anti-cancer drugs. (Sankei Shimbun Newspaper, 2013c).
Sep. 24, 2012	Miyabi Kuroki (43) in Takashimadaira Central General Hospital in Tokyo and four other prefectures.	He was arrested on the charges of fraud and violation of the Medical Practitioners Act. There was a possibility that the suspect conducted as many medical examinations as 18,000 people. On Jul. 16, 2013, judgment of the defendant, Kuroki, who was accused of fraud and violation of the Medical Practitioners' Act was rendered at the Tokyo District Court, that 4 years in prison, two million yen fine (5 years in prison prosecution, 2 million yen fine), (Nishio, 2013; Wall Street Journal, 2013b).
Aug. 19, 2011	Y. Yoneta (42) as a volunteer personal physician in Ishinomaki City of Miyagi Pref.	He was arrested on suspicion of a violation of the Medical Practitioners' Act. Between Apr. and Jul. 2011, he carried out medical practices, such as administration of medication and interview of two older men and a one year boy, without the license of medical doctor. On Jun. 8, 2012, Sendai District Court handed down the defendant 3 years in prison (prosecution was 3 years and 6 months imprisonment). (Asahi Shimbun Newspaper, 2011).
Nov. 27, 2011	K. Kudo (65), the director of "Hamanasu Clinic" in Ishikari City, T. Kanai (60), the biomedical equipment technician, and H. Yamamoto (47), licensed vocational nurse.	They were arrested on the suspicion of violation of the Medical Practitioners' Act, even though two of them had no medical license, as they carried out surgery for dialysis patients. Kanai and Yamamoto, both without a medical license, alleged surgery to expand the blood vessel by inserting a balloon catheter into the blood vessel that was narrowed, for three dialysis patients of 30 to 80 years of ages in Sapporo, from Apr. 2009 to Apr. 2011. According to the Police, there were about 150 records of the same type of surgery that Kanai had involved. (Nikkei Shimbun Newspaper, 2011). On Dec. 16, 2011, Kudo and Kanai received a summary order of 1 million yen fine each from Sapporo Summary Court. Yamamoto was decided as the suspension of prosecution. (Ameba, 2011)
Mar. 8 and Jul. 7, 2010	A non-qualified dentist	He was accused in suspicion of violation of the Medical Practitioners' Act by the hospital staff, as he gave a patient a general anesthesia in the Seirei Mikatahara General Hospital in Shizuoka Pref. However, Shizuoka District Public Prosecutors' Office, Hamamatsu branch decided not to prosecute due to insufficient suspicion. In this issue, Committee for the Inquest of Prosecution of Hamamatsu voted as "non-prosecution was unfair," on Jun. 18, 2013. (Shizuoka Shimbun Newspaper, 2013).
Sep. 2, 2009	K. Umezu (44), the licensed practical nurse	He was arrested on suspicion of the violation of the Medical Practitioners' Act (unqualified medical practice), as repeated interventions, without a medical license. He worked in the medical clinic, and the patients' reputation had been so good that "his skill was good in a polite examination." he had worked at this Clinic for about four years until Mar. 2009, and he had earned 300,000-400,000 yen monthly salary (Kyodo News, 2009).

Table 18. Decision-making patterns

Corporation	Incident	Culpable person	Source
Pattern A			
TEPCO	The Fukushima #1 nuclear power plant impersonation	Power generation manager	METI, 2002
Japan Foods in Nippon Ham Group	Beef impersonation	Sales managers	Nikkei Shimbun Newspaper, 2003c
Snow Brand Food Co., Ltd.	Beef disguised	Meat sales manager of Derikaham Meat Division, sales manager of Meat Procurement Dep., and the head of Meat Kansai Center	Asahi Shimbun Newspaper, 2002
Marubeni Animal Husbandry	False labeling	Tohoku sales manager, and two sales directors	Nikkei Shimbun Newspaper, 2003b
Kimmon Manufacturing Co., Ltd., etc. [1]	Water meter bid-rigging	Five managers including operating deputy general manager and business manager	Nikkei Shimbun Newspaper, 2003d
Prima Meat Packers, Ltd.	Allergy chemical hide incidents	Operating quality assurance manager	Nikkei Shimbun Newspaper, 2003f
Pattern B			
Nippon Shokuhin	Beef disguised	Former president and two others	Nikkei Shimbun Newspaper, Jun. 28, 2002
Duskin Co., Ltd.	Fraudulent loan	Former chairperson	Nikkei Shimbun Newspaper, Jun. 9, 2007
G.O. Group	Consumer fraud	Chairperson	Nikkei Shimbun Newspaper, Sep. 5, 2003d
Hachiyo Group	Organized crime	Honorary chairperson	Nikkei Shimbun Newspaper, Jan. 15, 2003a

Note:

[1] Kimmon Manufacturing Co., Ltd. has renamed as Azbil Kimmon Co., Ltd. On Apr. 1, 2012.

Other companies indicted together were Aichi Tokei Denki Co, Ltd., Toyo Keiki Co., Ltd., Ricoh Elemex Corporation, etc.

Table 19. The actual track records of public prosecutions offices in 2010

Categories of cases handled (Total 1,568,299 suspects)	(i) Causing death or injury through negligence while driving	44.8%
	(ii) Violation of the Road Traffic Law	28.9%
	(iii) General offenses under the Penal Code	19.6%
Breakdown of general offenses under the Penal Code (Total 307,520 suspects)	(i) Theft	50.7%
	(ii) Embezzlement and breach of trust	12.1%
	(iii) Assault and injury	9.6%
	(iv) Fraud and extortion	7.2%
Type of dispositions (Total 1,577,369 suspects)	(i) Non-prosecution	57.9%
	(ii) Prosecution	32.9%
	(iii) Referral to the family courts	9.2%
Judgments (Total 473,226 suspects)	(i) Fine	84.8%
	(ii) Imprisonment with work	13.7%
	(iii) Imprisonment without work	0.7%

Source: Guide to the Public Prosecutors Office. Consulted on Jan. 16, 2014, in http://www.kensatsu.go.jp/gyoumu/Guide_to_the_Public_Prosecutors_Office.pdf

Note:

Of the 68,265 persons sentenced to imprisonment with or without work, 27,820 persons (40.75 %) were required to serve their sentence while 40,445 persons (59.25 %) were granted suspension of execution of the sentence.

Table 20. Some examples of the endemic diseases in Public Prosecutors Offices

Evidence tampering incident by the chief prosecutor of Osaka District Public Prosecutors Office	On Sep. 21, 2010, T. Maeda, Chief prosecutor of special investigation department, was arrested, for the charges of destruction of evidence, as the floppy disk of material evidence was tampered, related to the postal system abuse case. On Oct. 1, H. Otsubo, ex-director, who was the boss at the time, and M. Saga, ex-deputy director, were arrested on the charges of hiding the criminal knowingly of tampering with the evidence. It was highly unusual, because the incumbent prosecutor, and his bosses, were arrested in connection with the performance of duties in charge at the time of the incident [1].
Disabilities postal system abuse incident	In 2009, Osaka District Public Prosecutors Office special investigation department seized MHLW, direct mail issuers, disability organizations, etc. for the charges of unauthorized use of the discount system for the postage of disability organizations. Of the people who have been named as defendants in this case, ex-director of MHLW, A. Muraki, et al., who had been arrested and charged with aggressive interrogation were acquitted.
Incident of Rikuzankai [2] in the Tokyo District Public Prosecutors Office	In 2009, the political organization of I. Ozawa was accused of Political Funds Control Law violations, related to the land purchase in Tokyo, by a civil society organization. In 2010, three secretaries were indicted, and I. Ozawa was also indicted by the resolution of the Inquest Board of Prosecutors Activities in 2011. During the court proceedings, it was revealed that the investigation report that the public prosecutor had created was completely different from what the secretary had testified. Further, it was recognized that "there was peddling of non-prosecution of Ozawa and psychological pressure that should be called intimidation," in the interrogation stage of the investigation of the two ex-secretaries, and 12 confession statements of the investigation stage among 38 which the prosecutor had claimed as evidences, were rejected.
Tama Mitsui incident in the Osaka High Public Prosecutors Office	In Apr. 2002, an apartment in Kobe was awarded under the auction, but the registration and license tax were reduced without an actual condition of residence, and Tama Mitsui, the head of the public security department of the Osaka High Public Prosecutors Office was arrested and charged on suspicion of fraud. From the fact that at the time, Mitsui was trying to denounce the slush fund issue of prosecution, he insisted on false charges to be a silence on prosecution. Also, it was a peccadillo, and the bribery was a remarkably small amount. The slush fund issue of the prosecution was certified in the second trial.

[1] H. Obayashi, the Attorney General at that time, resigned to take the responsibility of this incident. Later, the above three suspects' guilt has been established at the court.

[2] The Rikuzankai is a fund-management organization of the politician Ichiro Ozawa.

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