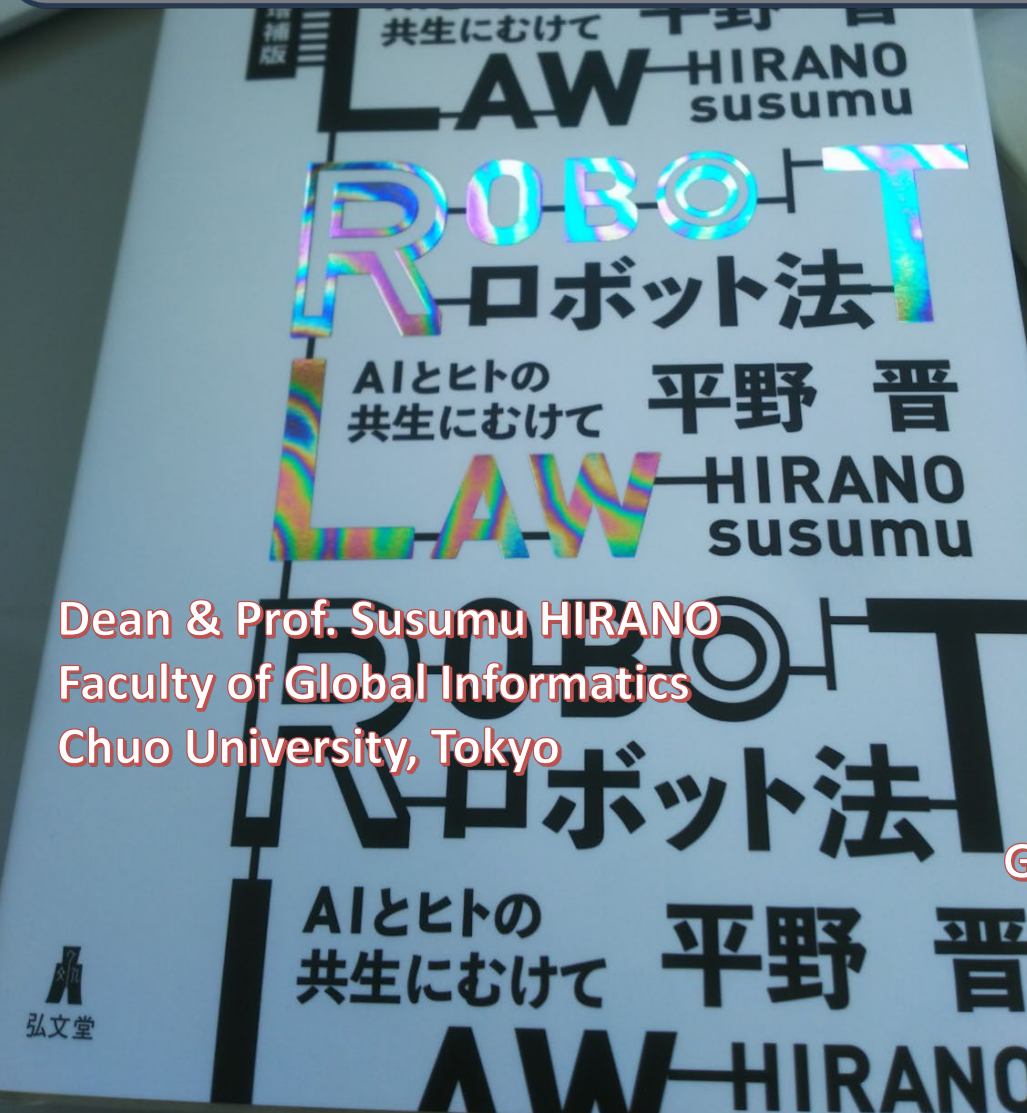


ETHICAL, LEGAL, AND SOCIAL IMPLICATIONS OF ARTIFICIAL INTELLIGENCE



Dean & Prof. Susumu HIRANO
Faculty of Global Informatics
Chuo University, Tokyo



A guidance robot
@ MIC's HQ
in Kasumigaseki, Tokyo
The picture taken by S. HIRANO

Lecture 2
Global Forum on AI Networking Society
Toward an AI-Ready Society, MIC
Mar. 1, 2021

1. Soft Law Centric and ELSI 清华大学



On Jan. 16-17, 2019 @ MIT (Boston) / AIGO: AI expert Group at OECD

AI's ELSI

No More Naked AI

- 「Human-centric AI」
- 「Trustworthy AI」



AI Principles / AI Guidelines:

Japan Took Initiative to Build Global Standards



G20 June 2019

- **G20 AI Principles** / Ministerial Meeting on Trade and Digital Economy

OECD Sept. 2018 to May 2019

- **OECD AI Principles** / Council Recommendation on AI (May 2019)
- **AIGO** Sep. 2018 to Feb. 2019



Cabinet Office Apr. 2018 to Mar. 2019

- **Council of Principles of Human-centric AI**



✓ **MIC: Ministry of Internal Affairs & Communications Jan. 2016 to Present**

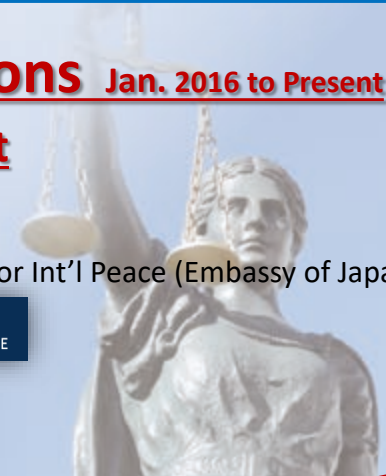
• **The Conference toward AI Network Society Oct. 2016 to Present**



- Conference on AI: Intelligent Machines, Smart Policies, Co-sponsored by MIC and OECD
- Forum toward AI Network Society (Int'l Symposium) in Tokyo, Sponsored by MIC.
- Conference on Artificial Intelligence and US-Japan Alliance Engagement, Carnegie Endowment for Int'l Peace (Embassy of Japan in the U.S.A. and MIC)
- Technology Foresight Forum 2016 on AI, OECD
- G7 ICT Ministers' Meeting in Takamatsu, Kagawa



• **Conference on Networking among AIs Jan. to June 2016**



Japan Contributed to the Global Standards

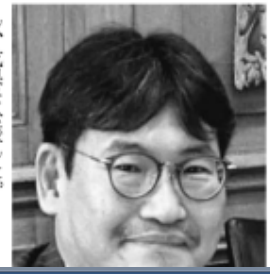
「日本経済新聞」2019年2月20日朝刊

経済教室

平野 晋 中央大学教授

ポイント

- AI利活用の諸原則作りでデータ握る米中がAI時代
- 自由な情報流通と人権のバ



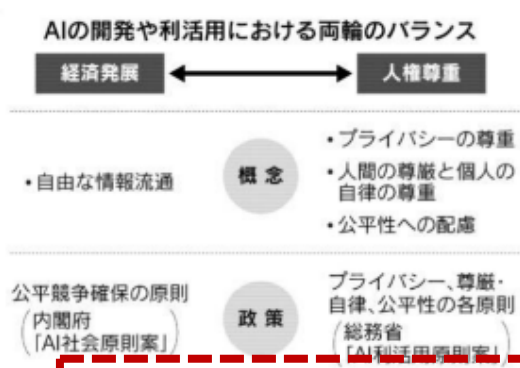
米ボストンのマサチューセッツ工科大学（MIT）で1月中旬、世界の人工知能（AI）の専門家が集まり、AIの適切な開発や利活用の諸原則（プリンシプル）を議論する「MIT AI政策会議」と「経済協力開発機構（OECD）AI専門家会合（第3回）」が開催された。日本代表として参加した東京大学の須藤修教授と筆者の席には、休み時間ごとに欧州の関係者が名刺交換に訪れた。

フランスの参加者は「自国でAIに関する国際会議を開催するので声を掛けてもよいかな」と言い、ポーランドの参加者は「日本とぜひ協力関係を築きたい」と話した。2018年11月にパリのOECD本部で開催された第2回のAI専門家会合でも、AIの諸原則作りでの日本の貢献に関係者が謝意を口にした。

世界標準や国際的なルール作りの場で日本が主導権をとる機会は、めったに見られなかった。いまなぜAIの諸原則作りで日本が注目を集めているのであろうか。

GAF A規制を考える ① AI利活用で独走許すな

トランスフォーマティブ（世界を変える）な技術として、大きな期待を集めている。他方、AIの制御不可能性や不透明性などの問題が明らかに、ヒトの仕事奪って大



データ開放他国

勢の失業者を生むとか、差別的な人事評価を下す恐れがあるなどと指摘されている。

AIが社会から信頼され受け入れられるように、負の側面を極小化させつつも開発を奨励させないための試みとして、日本の行政関係者らは16年ごろから世界に先駆けて「ソフト・ロー」と呼ばれる諸原則作りを始めた。ソフト・ローとは、強制力はないが自発的な順守が期待される緩やかな規範である。有識者を集めた政策立案会議で議論

これがOECDの日にとまり、今でOECDと日本の提案を参考にした諸原則作りを、世界の専門家を集めたAI専門家会合で行っている。最終的にはOECD理事會勧

Nikkei on Feb. 20, 2019

「日本経済新聞」2019年2月20日朝刊に掲載された記事のスクリーンショット。記事のタイトルは「GAF A規制を考える ① AI利活用で独走許すな」である。記事の本文は、AIの開発と利活用における経済発展と人権尊重のバランス、AIの利活用の諸原則の作り、そして日本の貢献について述べている。記事の下部には、平野 晋（Hei Hei）の顔写真と「中央大学教授」という肩書きが掲載されている。

AI expert Group at the OECD (AIGO:エイゴ/エイ・アイ・ゴー)



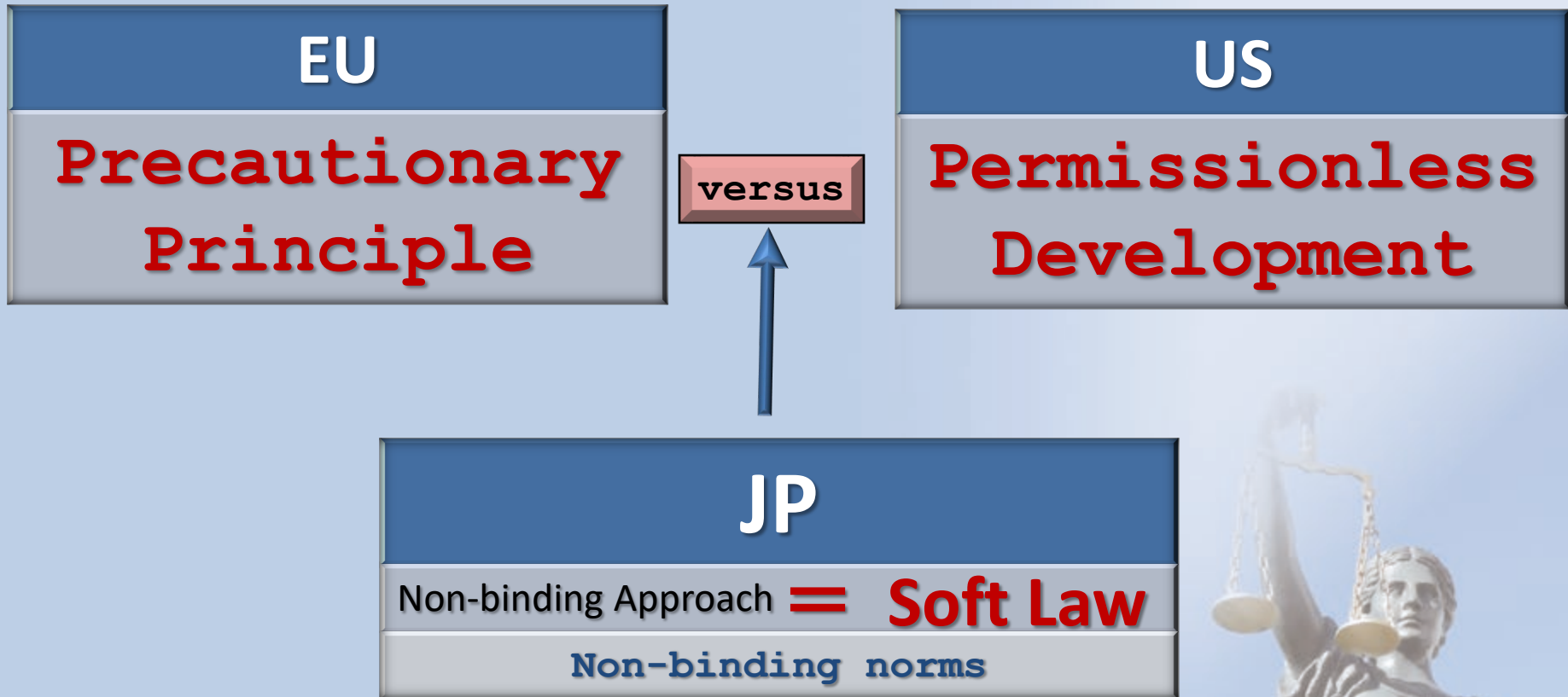
AIGO's 1st meeting at OECD in Paris, Sept. 24-25, 2018



AIGO's 2nd meeting at OECD in Paris, Nov. 12, 2018



Japan's Contribution toward Global Standards



See SUSUMU HIRANO, ROBOT LAW, 267-68 (*Kobundo* 2nd ed. 2019 in Japanese).

Features of AI Principles and Guidelines

- **Soft Law**
 - Non-regulatory and non-binding approach
 - xxx Principles and xxx Guidelines
- **Multi-Stakeholders' Participation**
 - Academia, Corporations, and Consumer Organizations
- **Efforts by Japanese Gov't to Contribute to Build Global Standards (Japan → G7 / OECD → G20)**
 - Governmental organizations such as Cabinet Office and MIC collaborated to contribute to OECD, G7, and G20.

“soft law”?

【特集】「道徳判断の自動化をめぐる問題：規範の選択と協力の進化」

ロボット法と倫理

Robot Law and Ethics

平野 晋
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Faculty of Policy Studies, Chuo U
mail URL 等連絡先を入れてください

Keywords: soft law, cyberlaw, the law of the

1. はじめに

この度は、昨年上梓した著者の書籍にて紹介した「ロボット法」についての寄稿をご依頼いただき、ありがとうございます。そもそも「ロボット法」とは、ロボットに法律であることは自明であろう。しかし現時点でいまだ日本に「ロボット法」という制定法は存在すなわちロボット法という制定法ではない、さらには法以外の判例法や慣習法でもない、ロボット法と、ロボットに関する法律学研究教育分野という^{*2}。

そのようなロボット法を紹介する本稿^{*3}の、においては、法と倫理の関係について説明する。ロボット法の必要性を紹介する。4章では、その影響を受けたロボット法の系譜について説明して5章では、ロボット法の対象であるロボットについて説明する。

2. 〈法〉と〈倫理〉の関係

AI開発関係者におかれては、「AIの倫理」や「AIと人間の関係」が非常に高まっている。は聞いている。そこで、まず、法学界の世界に於ける倫理と法の違いについて、以下で説明して

*1 平野 晋:「ロボット法:AIと人間の関係」(2018年12月24日現在)
*2 以下、2章参照
*3 なお、筆者はOECD(経済協力開発機構)の「AI事
の構成員、内閣府「人間中心のAI社会原則検討会議」
能者省「AIネットワーク社会推進会議」の幹事および
および同省「AIネットワーク化検討会議」の専任代理
の、または務めていたけれども、本稿中の意見の目
段の明示が限り筆者の個人的見解である。

ロボット法と倫理



図1 O.W.ホームズ、Jr. 裁判官の肖像画
出典：筆者撮影 (2017年1月10日)
所：合衆国最高裁判所

〈法の小道〉においてホームズは、法と倫理との混同を
明らかにし述べ、次のように述べている^{*4}。

悪人 [a bad man] も善人と同様に、公権力の厄介
になりたくない事実が明白です。そこそこ、倫理
と法律との間の重要な実質的違いがあるのです。悪
人ではない人々が信じて従っている倫理規範であ
っても、悪人は尊重しません。しかし倫理を無視する
悪人であっても、金銭の支払や、牢屋に投獄される
事態は、できれば避けたいと願うものなのです。

つまり倫理規範は悪人を縛る効果を有さないけれど
も、法律にはそのような効果があるという点こそが、法
と倫理との重要な違いである。とホームズは指摘して
いる。

このホームズの指摘を、AIの開発やAIを用いた事業
活動に当てはめれば、倫理規範だけでは悪人の行動
を規制できないということになる。善人ならば倫理規範
が行動を規制できるけれども、悪人の行動——それは多
くの場合、社会の多くの人々が容認できないほどに悪影
響のある行動——を規制する効果の有無が、倫理と法律
との最も大きな違いである。とホームズが指摘した点を
理解したうえで、AIの規律を考える必要がある。

法的

上のホームズの指摘は、〈法と経済学〉と呼ばれる学
問分野の知見を用いて分析すれば、以下のように整理す
ることができる。すなわち、人々の行動を望ましい方向
に導くためには、経済的なインセンティブ (誘因) を用
いなければならない。望ましくない行動をした場合には罰や金

*4 Oliver Wendell Holmes: The path of the law, 10 Harv. L.
Rev., pp. 457-458 (1897) (本文中引用は著者訳)。

銭的支払義務を課すことにすれば、
るヒトは、そのような損失を回避
ない行動を控えて、望ましい行動
と”。倫理は罰金や金銭支払義務
けれども、法律を用いればそのよ
ができる。したがって倫理より
免や利活用において人々や事業者
効果を有しているのだ。と。

このような主張は近年のAI・ロ
ボットにも見受けられる。例
の典拠としても表示されている「A
How roboticists can learn to stop
the law」(倫理的機械、または「
倫理法」)というエッセイ論考は^{*5}、倫理によ
る、望ましい行動へのインセン
ティブと説明している。さらに、上のエ
ッセイ「Wired」誌の記事「Lawye
solve the robo-car: Trolley proble
く法律家こそがロボット・カーの
決する」も^{*6}、同様な指摘をしてい

2-2 規範期のAIには緩やかな規
から始めるべき

上述したように、倫理の効果は、
るルール・規範として不十分であ

*6 例え、Cento Veljanovski: Econom
23-24, Cambridge Univ. Press (2007)
*7 例え、平野 晋「AIと法律」(法政
p.212, 中央大学出版部 (2006) を参
*8 Bryan Casey: Essay, amoral mal
can learn to stop worrying and love
L. Rev., p. 1347 (2017).

*9 Aarian Marshall: Lawyers, not
robo-car: Trolley problem, Wired, M
https://www.wired.com/2017/11
https://www.wired.com/2017/11
https://www.wired.com/2017/11

*10 「ソフトロー」(soft law)とは、拘
束に拘束力のある規範を「hard law」
例え、Richard L. Williamson: Is in
to arms control?: Hard law, soft law
lateral arms control: Some compliance hypotheses, 4 Chi. J.
Int'l L., pp. 59, 62-63 (2003) では、以下のように指摘している。

“Hard law” norms contained in treaties, which are binding
international law, nonbinding instruments commonly
referred to as “soft law”.
“As the terms is commonly used, soft law consists of
instruments that are not binding but are nevertheless
declaratory of aspirational norms of international
behavior.”

Documents creating soft law include instruments
subordinate to a treaty that are not per se binding but
that support the purposes of the treaty regime;……and
finally, understandings that in an earlier era were called
“gentlemen’s agreements”——treaty-like instruments
understood by the parties not to create legal obligations.
(下線追加)

*10 「ソフトロー」(soft law)とは、拘束力のない規範を意味し、
逆に拘束力のある規範を「hard law」という。

例えば、Richard L. Williamson: Is international law relevant
to arms control?: Hard law, soft law, and non-law in multi-
lateral arms control: Some compliance hypotheses, 4 Chi. J.
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finally, understandings that in an earlier era were called
“gentlemen’s agreements”——treaty-like instruments
understood by the parties not to create legal obligations.

(下線追加)

Susumu Hirano, Robot Law and Eathics, 34
JOURNAL OF THE JAPANESE SOCIETY FOR ARTIFICIAL
INTELLIGENCE 188, 189 (2019)(in Japanese).

STEM & ELSI

STEM

Science,
Technology,
Engineering, and
Mathematics

ELSI

Ethical,
Legal, and
Social
Implications



A diagram showing two boxes, 'STEM' and 'ELSI', with arrows pointing down to a red box labeled 'Socially Acceptable AI'. The 'STEM' box has a dashed red arrow, while the 'ELSI' box has a solid red arrow. In the background, there is a faint image of a statue of Lady Justice holding scales.

Socially Acceptable AI

However, some business people allege that . . .

- Artificial General Intelligence (AGI) should not be subject to soft-law principles or guidelines much less hard law.
- This is because AGI is only a hypothesis and too difficult to be realized as of now.

See, e.g., Preferred Network (Hiroshi MARUYAMA & Yusuke DOI), Opinion on “The Council for Social Principles of Human-centric AI,” May 7, 2018, <https://www8.cao.go.jp/cstp/tyousakai/humanai/1kai/sanko2.pdf> (last visited Jan. 30, 2021)(in Japanese); and *Keidanren* (Japan Business Federation), AI Utilization Strategy: Toward Realization of AI-Ready Society, Feb. 19, 2019, at 4 https://www.keidanren.or.jp/policy/2019/013_honbun.pdf (last visited Jan. 30, 2021)(in Japanese).

But a leading legal scholar argues that...

[T]he inability to predict future outcomes does not imply that scientific advances always should go unchecked. Scientists conducting research and creating technology may not be as aware . . . of the potential problems posed by their discoveries. **Richard Posner has noted that “[s]cientists want to advance scientific knowledge rather than to protect society from science; the policy maker's ordering of values is the reverse. Not that scientists are indifferent to public safety; but it is not their business and sometimes it is in competition with their business.”**[] In short, scientists want what is best for science, not necessarily what is best for society. Consequently, Posner encourages lawyers and lawmakers to think in terms of prevention.[]

Jessica L. Roberts, *Preempting Discrimination: Lessons from the Genetic Information Nondiscrimination Act*, 63 VAND. L. REV. 439, 481-82 (2010)(emphasis added)(citing RICHARD A. POSNER, CATASTROPHE: RISK AND RESPONSE 99 (2004)).

Conflict of the First Priorities

Scientists

S·T·E·M

1st Priority of Value:
Advancement of
Scientific Knowledge

versus

Policymakers

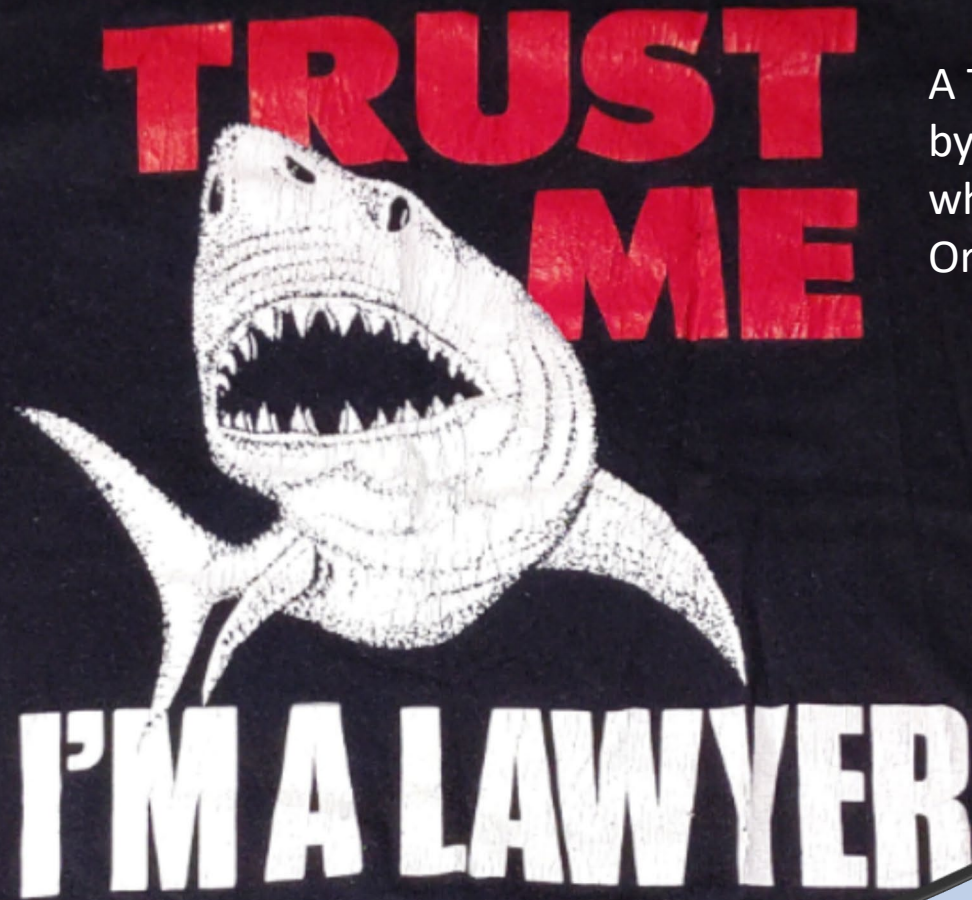
E·L·S·I

1st Priority of Value:
Public safety

Conflict of Priorities

The advancement of scientific knowledge and public safety sometimes conflict each other when scientists and policymakers consider the implications of artificial general intelligence (AGI) or artificial super-intelligence (ASI).

I concur with Richard Posner
because . . .



A T-shirt owned
by S. HIRANO
who bought it in
Orland, Florida.

2. “E” for ELSI

~Importance of Humanities, Social Science, and Interdisciplinary Approaches~



Unfortunately, some business people allege also that...

- People should not discuss on AI using as examples Artificial General Intelligence (AGI), strong AI, Singularities, fiction such as novels or films, especially science fiction (and especially **The Terminator?!).**
- This is because they are only a hypotheses; as of now these are too difficult to be realized.

See, e.g., Hiroshi MARUYAMA & Yusuke DOI, Opinion on "The Council for Social Principles of Human-centric AI," May 7, 2018, <https://www.8.cao.go.jp/cstp/tyousakai/humanai/1kai/sanko2.pdf> (last visited Jan. 30, 2021)(in Japanese); and Keidanren (Japan Business Federation), AI Utilization Strategy: Toward Realization of AI-Ready Society, Feb. 19, 2019, at 4 https://www.keidanren.or.jp/policy/2019/013_honbun.pdf (last visited Jan. 30, 2021)(in Japanese).

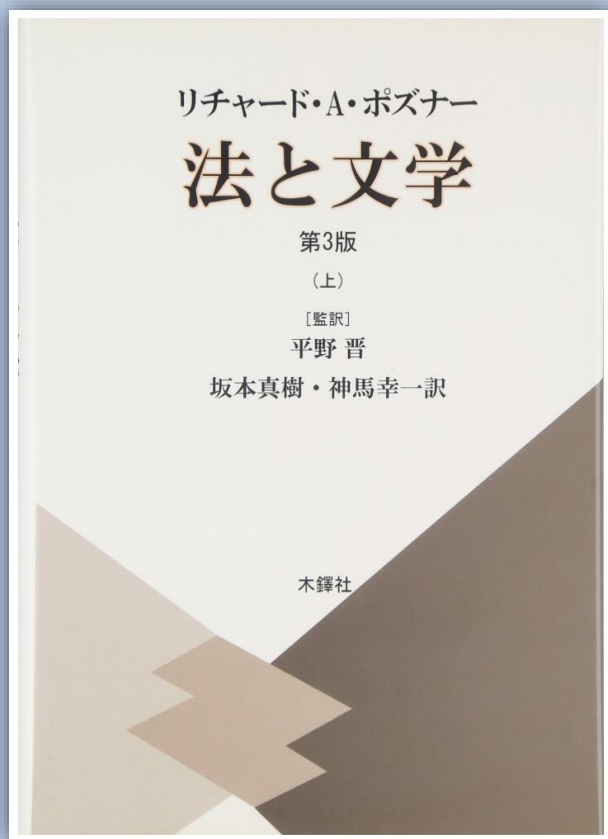
However, the Second Principle of The Social Principles of Human-centric AI, Council thereof, Cabinet Office of Japan (Mar. 29, 2019), says that . . .

(2) The Principle of Education/Literacy

In a society premised on AI, we do not desire to create disparities or divisions between people or create those who are socially disadvantaged. Therefore, policy makers and managers of businesses involved in AI must have an accurate understanding of AI, knowledge and ethics permitting appropriate use of AI in society. They should take into account the complexity of AI and appreciate the possibility that AI could be intentional misused. AI users should have a general understanding of AI and should acquire sufficient education to use it properly, given that AI platforms are much more complicated than already developed conventional tools. Regarding developers of AI, meanwhile, it is of course necessary for them to master the basics of AI technology. Additionally, from the viewpoint of developing AI that is useful to society, it is important for developers to learn business models for how AI can be used in society, as well as to master a wide range of liberal arts such as social sciences and ethics including normative consciousness.

(emphasis added)

And in legal studies, for example, novels and fictions deserve to be considered . . .



〈law and Literature〉

RICHARD A. POSNER,
LAW AND LITERATURE
(3rd. ed. 2009).

The picture is the Japanese translation supervised by S. HIRANO.



And hypotheticals and fictional cases have been traditionally and for a long, long time used in legal education at law schools. 中央大学

- **hypotheticals or hypo.**

- Stories have been used to deepen students' understanding on legal principles and to cultivate their abilities to “think like a lawyer” which is called “case studies” or “case method.”

- In jurisdictions where **a case-law approach** rather than statutory-law one is inherited:

- Deductive reasoning through analysis of many cases (*i.e.*, stories!) is very important.
 - This kind of legal training usually starts from a sentence like “Suppose . . . ,” which means that law teachers use fictions.
 - Therefore, fictions are very important for lawyers.
 - This style of legal education is said to be invented in 1870(!) by Dean Christopher Columbus Langdell and used first in his contract course.(*)

- **〈Socratic Method and Case Method〉**

- Even in popular culture, people can see examples of the case method along with Socratic method. For example, see *Paper Chase* (20th Century Fox 1973) and *SCOTT TUROW, ONE L* (1977).

(+) See E. ALLAN FARNSWORTH, AN INTRODUCTION TO THE LEGAL SYSTEM IN THE UNITED STATES 85 (3d. Ed. 1996) cited in SUSUMU HIRANO, AMERICAN CONTRACTS (2nd ed. 2019)(in

Famous **Three Laws of Robotics** are also found in the fictional pieces written by **Isaac Asimov**, but . . .



- In the field of robot ethics, machine ethics, or robot law, the Three Laws of Robotics or pieces of Isaac Asimov such as “Runaround” or “Liar!” are very often cited. But they are all fictions!
- In the field of privacy law, **Big Brother** or GEORGE OWELL’s **1984** (1949) is very often cited. But they are also fictions!!
- **HAL 9000** is also cited often in various academic pieces including legal ones. But it is also a fiction in a film, **2001 Space Odyssey** (Metro-Goldwyn-Mayer 1968)!!!
- Therefore, it is nonsense to disregard or look down fictions!!!!

_____.

General principles

U. whereas Asimov's Laws⁽²⁾ must be regarded as being directed at the designers, producers and operators of robots, including robots assigned with built-in autonomy and self-learning, since those laws cannot be converted into machine code;

(2) (1) A robot may not injure a human being or, through inaction, allow a human being to come to harm. (2) A robot must obey the orders given it by human beings except where such orders would conflict with the First Law. (3) A robot must protect its own existence as long as such protection does not conflict with the First or Second Laws (See: Asimov, Runaround, 1943) and (0) A robot may not harm humanity, or, by inaction, allow humanity to come to harm.

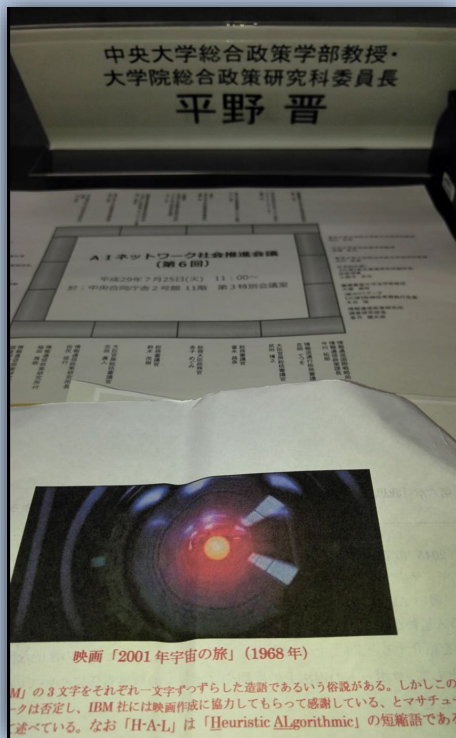
European Parliament, Civil Law Rules on Robotics, 2015/2103 (INL), Jan. 12, 2017,
<https://www.europarl.europa.eu/doceo/document/A-8-2017-0005_EN.html?redirect> (last visited Dec. 12, 2020).

2001 Space Odyssey or HAL 9000 is definitely a fiction, but ...

HAL'S LEGACY : 2001's COMPUTER AS DREAM AND REALITY (David G. Stork ed. MIT Press 1997)

<https://mitpress.mit.edu/books/hals-legacy>

(last visited Dec. 22, 2020)



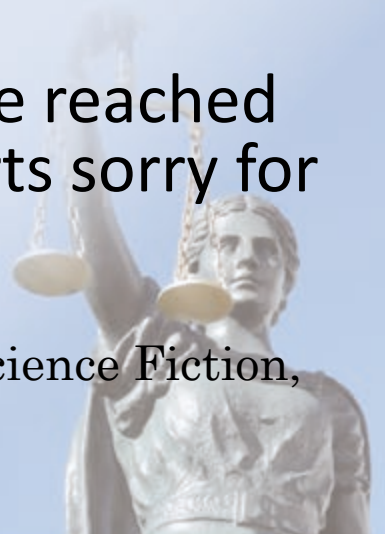
Picture: Author's nameplate @ the Conference toward AI Network Society in *Kasumigaseki*, Tokyo on July 25, 2017.



GODZILLA was not just a monster film, but it conveyed an important message which was . . .

- Godzilla (Tōhō 1954)
- It was the time when Japan's people hesitated to say openly what they really thought which was against the U.S. such as Hiroshima and Nagasaki
- Thus, the film-maker conveyed a message, through Godzilla, which was against nuclear bombs or nuclear experiments.
- And Discovery Channel said that the message reached American people who felt in their inner hearts sorry for having dropped the bombs. (*)

(*) Source: Episode 3, Monsters, James Cameron's Story of Science Fiction, aired at 23:00-24:00 on Dec. 11, 2020 in Japan.



From Godzilla to Dr. Strangelove, Terminator, and Nausicaä: a long tradition of message against nuclear weapons or nuclear war

- **Godzilla** (Tōhō 1954), *supra*.
- **Dr. Strangelove** or: How I Learned to Stop Worrying and Love the Bomb (Columbia Pictures 1964).
- **The Terminator** (Orion Pictures 1984).
 - See, especially, Terminator 3: Rise of the Machines (Warner Bros. Pictures 2003).
- **Nausicaä of the Valley of the Wind** (Tōei Company 1984)(The “Seven Days of Fire” and the “Giant Warrior” seem to be metaphors of nuclear war/weapons.)



「ロボット法と学際法学： 〈物語〉が伝達する不都合なメッセージ」 (Robot Law and Storytelling)

in『情報通信学会誌』35巻4号109頁, 109頁 (2018).

JSICR [THE JAPAN SOCIETY OF INFORMATION AND
COMMUNICATION RESEARCH] JOURNAL, Vol. 35, No. 4,
at 109 (2018).

平野 晋

Susumu HIRANO

中央大学総合政策学部教授
同大学院総合政策研究科委員長



平野「ロボット法と学際法学」*supra*, at 110頁.

3 新技術の危険性を理解する際に有用な〈物語〉

ロボットやAIのように、急速に発達しながらも未だその具体的な社会的影響が不明な新技術の将来を予測

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映画「ザ・フライ」や¹⁴、古典的SF小説でH.G.ウェルズ著の『モロー博士の島』のような物語が¹⁵、新技術の危険性の理解に於いて有用という分析を簡潔に紹介してみよう。その論者によれば¹⁶、SF作品のアプローチを参照することにより、法律学は新技術が将来実現された場合の諸問題に備えることが出来る¹⁷。例えばヒトと動物の遺伝子を組み合わせる研究開発は、上記三作品が警告したような新しい生物を生み出すお

それがある。大衆はそのような、ヒトであるか否かも不明な新生物に不安を抱くであろうし¹⁸、更に法律や社会がその新生物に対して如何に対処すべきかも不

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ことが

- H. G. WELLS, THE ISLAND OF DR. MOREAU (1896!!)
- It was written when DNA was not discovered by human beings.
- But now it seems to warn us of the danger of gene manipulations.
- “[T]oday’s science is creeping towards yesterday’s science fiction.” Haskell A. Holloman, *Fourth Amendment Time Machines (And What They Might Say about Body Cameras)*, 18 U. PENN. J. CONST. L. 933, 936 (2016).

以上の分析は、生物学的な新技術に対する物語の役割を論じているけれども、同じ分析はロボットやAIという新技術にも当てはまる、と筆者には思われる。例



David Caudill, *Law-and-Literature, Literature-and-Science, and Enhancing the Discourse of Law/Science Relations*, 27 J. LEGAL PROF. 1, 5 (2002/2003).

Scientists, too, need to "face up to the warning" in the persistent folklore of "Dr. Faustus, Dr. Frankenstein, Dr. Moreau, . . . , [and] Dr. Strangelove

In these images of our popular culture resides a legitimate public fear of the scientist's stripped-down depersonalized conception of knowledge—a fear that our scientists, well-intentioned and decent men and women all, will go on being titans who create monsters.[]

In contemporary literature and film, public fear of science, and the implied warning to scientists to be more careful and responsible with respect to both their false confidence and their actual capabilities, continues to be expressed.

平野「ロボット法と学際法学」*supra*, at 111頁.

例えば新生物に対して社会や法が如何に対処すべきかも不明であるという分析は、将来、もし〈強いAI〉や感情や自我等々を持つロボットが創られた場合の問題にも当てはまる指摘であろう。

ところで前述の論者は、続けて概ね次のような分析も示している²²。すなわちSF作品は、その設定を現実世界から距離を置くことによって、現実社会への批判を行うことが出来る。同時にSF作品は、現実世界の懸念や疑念や思想に基づくことによって、それら諸問題をより際立たせることに成る。SF作品は、新技術が社会に課す新しい挑戦を検討する際の、議論の出発点や論点を提示してくれる。SF作品は現実社会の投影であり、かつ現実社会の解説でもある。現実社会に潜在する諸問題を理解する手段として、仮想的な物語を用いるのである。例えば映画「スピーシーズ」には、科学者達の研究開発の「行き過ぎ—go too far—」に対して大衆が抱く懸念が表れている、と。

この分析は、映画「ブレードランナー」を題材に拙書が紹介した分析や、ロボット兵器に対して抱く大衆の懸念にも共通していよう。例えば拙書は「ブレードランナー」が現実社会を土台にしながら未来の社会像を描く社会学的な研究であるという学説を紹介したが²³、その学説と上の指摘は共通している。更には、映画「スピーシーズ」が科学者達による研究開発の行き過ぎに対する大衆の懸念を表しているとの分析は、映画「ターミネーター」に登場するネットワーク型AIの「スカイネット」のような、研究開発の行き過ぎによって、人類が危機に瀕するかもしれないというシンギュラリティ／2045年問題への大衆の懸念を象徴しているという分析にも繋がるのではあるまいか。

後注)22

Mitchell Travis, *Making Space: Law and Science Fiction*, 23 L. & LIT. 241 (2011).

平野「ロボット法と学際法学」*supra*, at 111-12頁.

(1) 〈物語〉の問題

〈物語〉を用いる手法については、問題点も指摘されている。例えば党派的過ぎて情に訴える余りに客観性に欠けるような欠点を指摘する向きもあることは、真摯に受け止める必要がある。以下は²⁵、死刑反対論者に対する少し痛烈な批判であるが、高名な〈法と経済学〉研究者のポズナー判事による〈物語論者—ナラトロジスト—〉への批判である。

ナラトロジストは死刑を嫌う。死刑囚の痛みをナラティヴに語らせて、死刑執行を減らすべきと主張する。しかし、もし慈悲を求める主張の機会を被告人に与えるならば、あの世に逝った被害者にも正義を求める主張の機会を付与すべきではないか。あたかもハムレットの父親のように。

ご承知の通りデンマーク王子の父親は、亡霊となって息子の前に現れて、犯人である弟（ハムレットの叔父）

への復讐を訴える。死刑廃止論議に於いて、加害者の主張だけを情をもって表現するばかりではなく、被害者にも同様な主張の機会を付与せねば不公平であろうという、ポズナー判事からのナラトロジスト批判である。

後注)25

25 RICHARD A. POSNER, LAW AND LITERATURE 348-49 (Revised and enlarged ed. 1998)(拙訳).



引用『映画で考える生命環境倫理学』1/2

仮想的状況と思考実験—あなたはどうか考えるだろうか

いかにもありそうではあるが、現実には生じていないこと—S F 映画は典型的にこうした世界を描いている。本書の論考の大多数がS F 映画を題材にしているが、その理由には、S F が「思考実験」という倫理学に特有な方法に向いている、という事情がある。

「思考実験」においては、「もし～だったら」という倫理学に特有な状況設定のもとで、その場合に、あなたはどうか思うだろうか、どうすべきだろうか、などを考えるように求められる。

...。思考実験は、極端で非現実な状況を想定させることで、かえって、私たちがどういう風に物事を見ているのか、の直観を明らかにする。例えば、...。『わたしを離さないで』[KAZUO ISHIGURO, NEVER LET ME GO (2005)]を取り上げた第三章においても、思考実験の方法が活用されていた。そこでは、クローン人間たちが将来臓器提供するために寄宿制の施設で育てられているというS F 的状況...で、クローン人間を、移植用臓器を得るための手段として利用し尽くして良いのか、が問われた。それによって、現実には私たちが面している臓器移植をめぐる道德的問題をありありと考えるきっかけが、提供されたのである。

...。「もし～であれば」の「～」の部分自体を私たちに解釈させることにより、S F は、私たちに、今、あるいは今後、何がシリアスな問題になりうるのかを示唆する。あるいは、何を今考えるべきなのか、あるいは何を今後考えていくべきなのか、そういう問い自体を強いる。

吉川孝, 他編著『映画で考える生命環境倫理学』 頁(勁草社, 2019年)(強調付加)

引用『映画で考える生命環境倫理学』2/2

典型的に、S Fは「近未来」を描くものであり、また、その近未来は「科学技術」が実現する世界の相貌で、特に、現在の世界からの重大な（特に破壊的な）変化を通じてイメージされる。未来という未知の時空は、科学技術の行方という特定の観点から解釈されている。それゆえに、その—いかにもありあそうだが、まだ現実ではない—仮想的状況の設定自体には、私たちが、現在の世界をどのように捉えているのか、近い将来に世界は技術の力でどう変わっていくと予感しているのか、などが反映されている。

それゆえ、現在とはずいぶんと様子の違い未来の風景から、しかしその未来へと向かう現在を生きる私たちの世界や生活スタイルがはっきりと照らしだされることがある。第八章では、〈絶対戦争〉の後で汚染物質に肌をさらしながらなおも生きている（『風の谷のナウシカ』）という状況が現に想定されうる現在について、たとえば、... 核軍拡を進め、〈絶対戦争〉の可能性を現に含んでいる現代世界のあり方を問いただした。『アバター』を取り上げた第二章では、地球の資源開発会社が宇宙の島パンドラで展開する、... 戦闘行為、科学的研究などの描写に焦点をあてた。その描写のなかに、「原生自然」の保護についての現在の先進国の人々... の言説は無垢でも中立でもなく、現地住民に対する無関心や権威の行使といった道徳的に由々しい問題を含んでいることが示唆されていた。

同上(強調付加).

3. “L” in ELSI? !

~Enlarged Zone of Products Liability~

Aspen Casebook Series

PRODUCTS LIABILITY

Problems and Process
Seventh Edition

James A. Henderson, Jr.
Frank B. Ingersoll Professor of Law
Cornell Law School

Aaron D. Twerski
Irwin and Jill Cohen Professor of Law
Brooklyn Law School

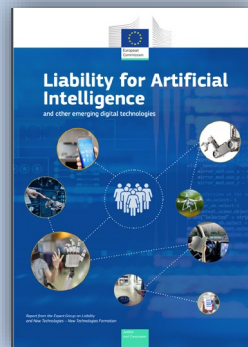
9/26/11
To Susumu Hirano
An esteemed legal scholar
and a good friend
Jim Henderson

Report with Recommendations to the Commission on a Civil Liability Regime for Artificial Intelligent

- European Parliament's resolution in Oct. 2020.
- Strict liability applied to high-risk AI operators
- Reversal of the burden of proof for fault-based liability



See also the Expert Group on Liability and New Technologies—New Technologies Formation (NTF), European Commission, Liability for Artificial Intelligence and Other Emerging Digital Technologies (2019), <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=36608> (last visited Feb. 3, 2021).

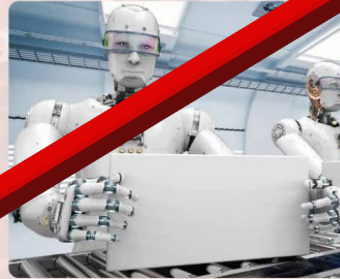


そして今、AIの発達とモノのネットワーク化によって、人間の生活の全てが便利になろうとしている。
しかし...



自動運転車が事故を
起こしたら
誰の責任なのか？

自動運転車が、搭載されたAIの開発者でさえ予見できないような行動をとって事故を起こした場合には、開発者の責任を立証することが難しくなり、誰が責任を負うべきかが不明になってしまう「責任の空白」が生じると指摘されています。



労働者の仕事がな
報酬を得る手段
なくなったらどう

AIの開発・普及が進めば単純事務労働が搭載ロボットの開発・普及が進めば肉体的労働が奪われるといわれています。そこで生まれる問題を、社会はどのように解決すべきか。無条件でお金を与える「ベーシックインカム」で、人々が幸せになれるのでしょうか。

EU

中央大学

Necessity of Reconstructing Civil Liability Regime;

- π 's difficulty of proving *prima facie* case due to:
 - over-the-air update, opacity/black-box, data dependency, and autonomy.
- Clear rules are desirable.
- Deterrent effects on high-risk AI are expected.
- Results of the review of Product Liability Directive (1985)(CPS).

See Committee on Legal Affairs, Report with Recommendations to the Commission on a Civil Liability Regime for Artificial Intelligence (2020/2014 (INL)), Oct. 5, 2020 <[REPORT with recommendations to the Commission on a civil liability regime for artificial intelligence \(europa.eu\)](#)> (last visited Dec. 23, 2020). *Prima facie* case

中央大学

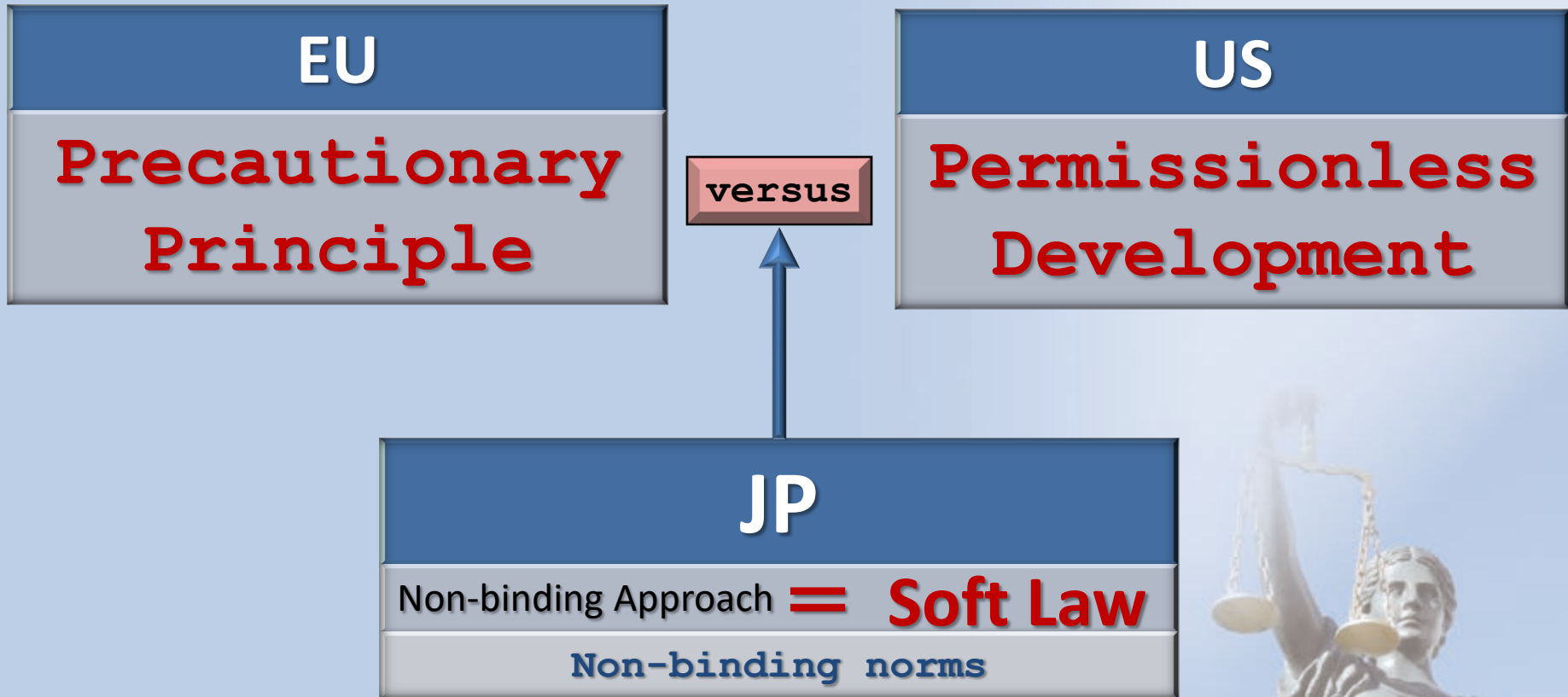
国際情報学部 (iTL = integrated IT + Law)

2021年度ガイドブック4頁 <[https://www.chuo-](https://www.chuo-u.ac.jp/uploads/2020/06/academics_faculties_itl_guide_itl_01.pdf?1608473693858)

[u.ac.jp/uploads/2020/06/academics_faculties_itl_guide_itl_01.pdf?1608473693858](https://www.chuo-u.ac.jp/uploads/2020/06/academics_faculties_itl_guide_itl_01.pdf?1608473693858)> (last visited Dec. 21, 2020).

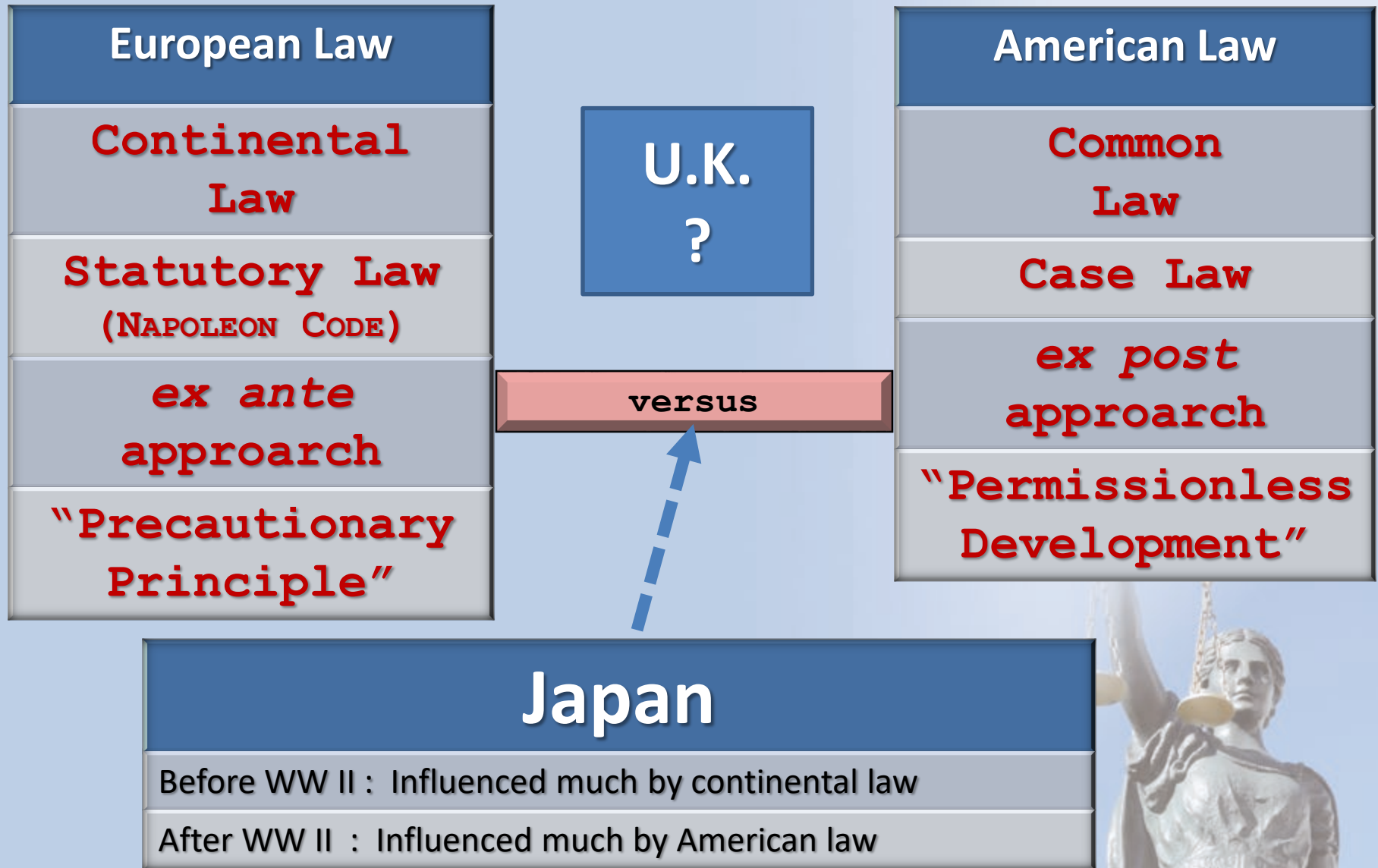
AI's ELSI

Balance of Governance



See SUSUMU HIRANO, ROBOT LAW, 267-68 (*Kobundo* 2nd ed. 2019 in Japanese).

European Law v. American Law



SUSUMU HIRANO, AMERICAN TORTS 41-42 (Chuo Univ. Press 2006)(in Japases).

ところで安全を促進するためには、行政規制を徹底させるのが良いけれども、何故に規制せずに自由な領域を残すのかについて付言しておく。たとえば、多くの食品は、高カロリーで成分に偏りがあり、摂取し過ぎると健康に害を及ぼすけれども、販売が禁じられていない。政府が一定の食事だけを国民に摂取するように強要していないのである。そのような政策が正当化される理由としては、個人の嗜好を尊重しつつ、規制は必要最小限度の情報提供等に抑えるという思想があると指摘されている⁴³⁾。個人の自律や自治権、自決権等を重んじ

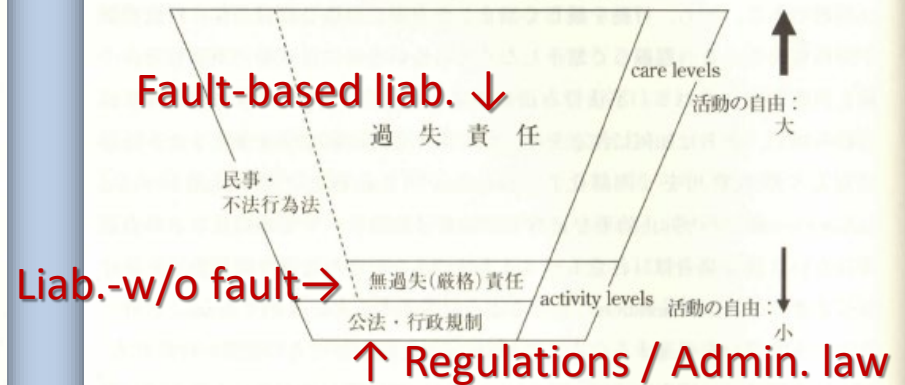
については、see, e.g., Victor E. Schwartz, Mark A. Behrens & Leavy Mathews III, *Federalism and Federal Liability Reform: The United States Constitution Support Reform*, 36 HARV. J. ON LEGIS. 269, 271 (1999) (州において改革法案が成立すると ATLA 等が違憲訴訟を提起する等を通じて妨害活動を行うと指摘)；Victor E. Schwartz, Mark A. Behrens & Monica G. Parham, *Fostering Mutual Respect and Cooperation between State Courts and State Legislatures: A Sound Alternative to a Tort Tug of War*, 103 W. VA. L. REV. 1, 5 (2000) (同旨)。

41) 本文中の本段落の以上の部分の記述については、e.g., Mark Geistfeld, *Economics, Moral Philosophy, and the Positive Analysis of Tort Law*, in PHILOSOPHY AND THE LAW OF TORTS 250, 256 (Gerald J. Postema ed. 2001)。

42) 「内部化」(internalization)や「activity levels」(活動レベル)、「care levels」(注意レベル)については、see *infra* 第二部、第1章「第一節 概説」内の「10.『内部化』と事故の抑止」および「第二節『コースの定理』」内の「8.『注意レベル』と『活動レベル』における抑止効果」の項。

43) See W. KIP VISCUSI, *RATIONAL RISK POLICY* 25 (1998)。なお本文が紹介する自治・自

図表#2 各種の行為規制の関係



る立場である。(もっとも論者によっては自由に介入して保護主義的に規制を強化すべきという立場もあり得る。)詳しくは、後掲 第二部、第II章「第四節『パターンリズム』と『自己責任』」対「パターンリズム」

不法行為法におけるように、賠償を主に理由から望ましくないについては、本節の後掲賠償制度、ニュージャージー

アメリカ不法行為法

主要概念と学際法理

AMERICAN TORTS: MULTI-DISCIPLINARY THEORIES

平野 晋 著
Susumu Hirano

決権という要素以外 (nonreciprocal risks) 無過失賠償責任を課す。危険から罪のない被害者。Fletcher, *Fairness and* のような厳格 (無過

既に述べた非効率等の制度に効率事故賠償

互酬的危険ではなく、有用な危険。George P. (1972). その at 547-48.

中央大学出版部

high-risk AI operatorの嚴格責任

Article 4

Strict liability for high-risk AI-systems

1. The operator of a high-risk AI-system shall be strictly liable for any harm or damage that was caused by a physical or virtual activity, device or process driven by that AI-system.

2. All high-risk AI-systems and all critical sectors where they are used shall be listed in the Annex to this Regulation. The Commission is empowered to adopt delegated acts in accordance with Article 13, to amend that exhaustive list, by:

- (a) including new types of high-risk AI-systems and critical sectors in which they are deployed;
- (b) deleting types of AI-systems that can no longer be considered to pose a high risk; and/or
- (c) changing the critical sectors for existing high-risk AI-systems.

Any delegated act amending the Annex shall come into force six months after its adoption. When determining new high-risk AI-systems and/or critical sectors to be inserted by means of delegated acts in the Annex, the Commission shall take full account of the criteria set out in this Regulation, in particular those referred to in Article 3(c).

3. Operators of high-risk AI-systems shall not be able to exonerate themselves from liability by arguing that they acted with due diligence or that the harm or damage was caused by an autonomous activity, device or process driven by their AI-system. Operators shall not be held liable if the harm or damage was caused by force majeure.

4. The frontend operator of a high-risk AI-system shall ensure that operations of that AI-system are covered by liability insurance that is adequate in relation to the amounts and extent of compensation provided for in Articles 5 and 6 of this Regulation. The backend operator shall ensure that its services are covered by business liability or product liability insurance that is adequate in relation to the amounts and extent of compensation provided for in Article 5 and 6 of this Regulation. If compulsory insurance regimes of the frontend or backend operator already in force pursuant to other Union or national law or existing voluntary corporate insurance funds are considered to cover the operation of the AI-system or the provided service, the obligation to take out insurance for the AI-system or the provided service pursuant to this Regulation shall be deemed fulfilled, as long as the relevant existing compulsory insurance or the voluntary corporate insurance funds cover the amounts and the extent of compensation provided for in Articles 5 and 6 of this Regulation.

5. This Regulation shall prevail over national liability regimes in the event of conflicting strict liability classification of AI-systems.

Civil Liability Regime for Artificial Intelligence, *supra*.

high-risk AI以外の operatorの責任

Article 8

Fault-based liability for other AI-systems

1. The operator of an AI-system that does not constitute a high-risk AI-system as laid down in Articles 3(c) and 4(2) and, as a result is not listed in the Annex to this Regulation, shall be subject to fault-based liability for any harm or damage that was caused by a physical or virtual activity, device or process driven by the AI-system.

2. The operator shall not be liable if he or she can prove that the harm or damage was caused without his or her fault, relying on either of the following grounds':

- (a) the AI-system was activated without his or her knowledge while all reasonable and necessary measures to avoid such activation outside of the operator's control were taken, or
- (b) due diligence was observed by performing all the following actions: selecting a suitable AI-system for the right task and skills, putting the AI-system duly into operation, monitoring the activities and maintaining the operational reliability by regularly installing all available updates.

The operator shall not be able to escape liability by arguing that the harm or damage was caused by an autonomous activity, device or process driven by his or her AI-system. The operator shall not be liable if the harm or damage was caused by force majeure.

3. Where the harm or damage was caused by a third party that interfered with the AI-system by modifying its functioning or its effects, the operator shall nonetheless be liable for the payment of compensation if such third party is untraceable or impecunious.

4. At the request of the operator or the affected person, the producer of an AI-system shall have the duty of cooperating with, and providing information to, them to the extent warranted by the significance of the claim, in order to allow for the identification of the liabilities.

Id.

立証責任転換検討の要請 中央大学

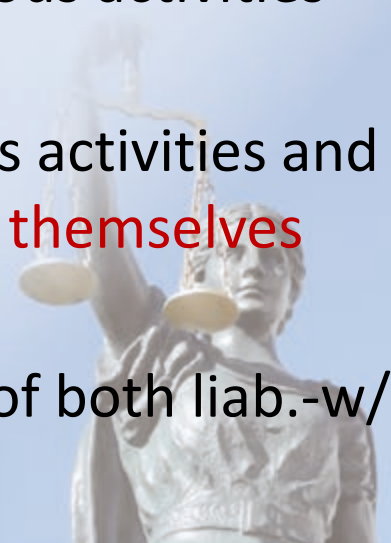
Reversal of the Burden of Proof (*res ipsa loquitur*)

15. Calls on the Commission to consider reversing the rules governing the burden of proof for harm caused by emerging digital technologies in clearly defined cases and after a proper assessment, in order to empower consumers who have suffered harm or whose property has been damaged to defend their rights while preventing abuse and providing legal certainty for businesses, as well as to ensure fairness and to mitigate the informational asymmetries impairing the situation of injured parties;



It does not seem to be similar to **products liability**; it seems to be similar to **abnormally dangerous activities**

- High-risk AI operator's liability seems to be **similar to abnormally dangerous activities rather than products Liability**. Because:
- Prod. liab. requires "defect," while high-risk AI operator's liability does NOT require it;
- Neither the liability based upon abnormally dangerous activities requires "defect;"
- Both the liability based upon abnormally dangerous activities and high-risk AI operator's liability **discourage activities themselves rather than encourage precautions**; and
- Prod. liab. is not purely strict liability; it is a hybrid of both liab.-w/o fault and fault-based liab.



Abnormally Dangerous Activities

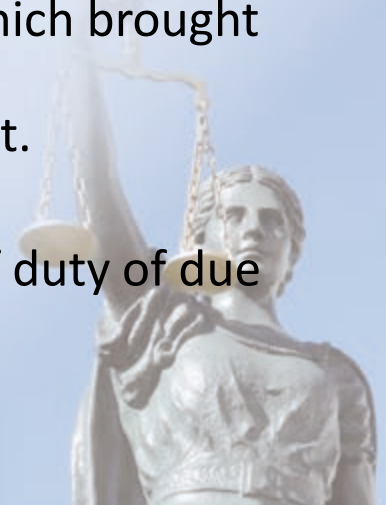
§ 20 Abnormally Dangerous Activities

- (a) An actor who carries on an abnormally dangerous activity is subject to strict liability for physical harm resulting from the activity.
- (b) An activity is abnormally dangerous if:
 - (1) the activity creates a foreseeable and highly significant risk of physical harm **even when reasonable care is exercised** by all actors; **and**
 - (2) **the activity is not one of common usage.**

RESTATEMENT (THIRD) OF TORTS: PHYSICAL AND EMOTIONAL HARMS § 20 (2010)
(emphasis added).

Products Liability is a hybrid of Liability-w/o Fault and Fault-based Liability

- Manufacturing Defect
 - deviation-from-the-norm test (consumer expectation test) = liability-w/o fault
 - Escola v. Coca-Cola (concurring, Traynor, J.)
 - typical uni-lateral risks/pre-cautions
- Design Defect
 - RAD + CBA \doteq fault-based liability *i.e.*, \triangle unreasonably failed to adopt a reasonable alternative design \doteq breach of duty of due care
 - *E.g.*, think about an allegation that coffee is too hot which brought about third degree burns.
 - Categorical liability is determined by the risk-utility test.
- Failure to Warn
 - “Failure” means breach of duty to warn (*i.e.*, breach of duty of due care), which means fault-based liability!



Quasi-Liability-w/o Fault in Products Liability



Res ipsa inference of defect

The Malfunction Doctrine

“[Failure] to perform its [a product’s] manifestly intended function”

Proving defect (and proximate cause) by circumstantial evidence

Reversal of the burden of proof

A derivative from *res ipsa loquitur*



Foreign Objects in Food

Katsurakawa v. McDonalds, HANJI, No, 1682, at 106 (Nagoya D. Ct. June 30, 1999).

Japan’s first case reported to which THE PROD. LIAB. STATUTE (Law No. 85, 1994) applied

Orange juice with a foreign object

Typical breach of consumer expectations/deviation from the norm $\hat{=}$ manufacturing defect



製造物責任法の三極比

【OLD】

1965年

US) RESTATEMENT (SECOND) OF TORTS § 402A

• Almost only Manufacturing Defect; therefore, Liab.-w/o Fault

1985年

【OLD】

EU) PRODUCT LIABILITY DIRECTIVE (EC指令)

1994年

【OLD】

JP) 製造物責任法 (PL法)

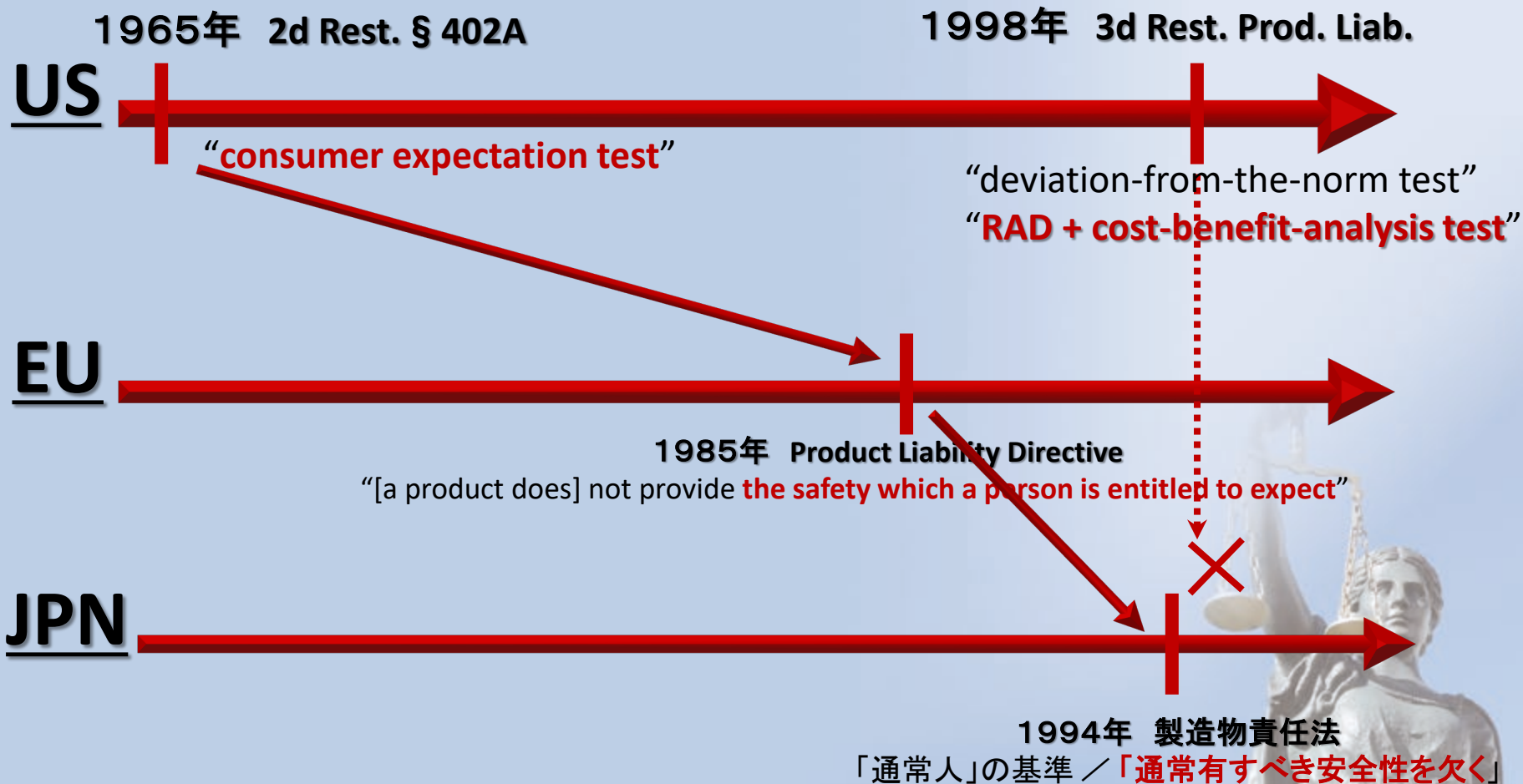
1998年

【NEW】

米国) RESTATEMENT (THIRD) OF TORTS: PROD. LIAB.

• Hybrid of Liability-w/o Fault and Fault-based Liability

製造物責任法の三極比



AIのガバナンスの在り方は？ 中央大学

双方的危険 / 予防 (*1)

Bilateral Risks

Bilateral Precautions

E.g., 熱いコーヒーをこぼして拭き取らない為に生じた
大火傷 (*2)

過失責任

Fault-based Liability

注意を喚起

encouraging precautions

一方的危険 / 予防

Unilateral Risks

Unilateral Precautions

E.g., 住宅地に於けるダイナマイトを使用した
建物解体 (*3)

厳格責任

Liability-w/o Fault

活動自体を抑制

discouraging activities themselves

(*1) best risk minimizer (cheapest cost avoider)に注意を喚起することにより、抑止機能を働かせることが重要。平野『アメリカ不法行為法』(2006年)前掲 at 248-49頁。

(*2) See *McMahon v. Bunn-O-Matic*, 150 F.3d 651 (7th Cir. 1998)(Easterbrook, J.).
See also 平野晋「イースターブルック判事の法廷意見と“法と行動科学(認知心理学)” —ホットドリンク火傷訴訟“Liebeck”事件に於いて高額評決が付与されたのは何故か—」in『小島武司古稀祝賀・民事司法の法理と政策(下)』213頁(商事法務 2008年)。

(*3) RESTATEMENT (THIRD) OF TORTS: PHYS. & EMOT. HARM § 20 (2010) (**abnormally dangerous activities**).

AIのガバナンスの在り方は？

中央大学

248 第二部 不法行為法の学際的原理

6. 「コースの定理」のハイポと人身損害 (personal injury)

平野『アメリカ不法行為法』
前掲 at 248-49頁
(2006年)

7. コースの分析と「双方的危険」(bilateral risk)・「一方的危険」(unilateral risk)

R. Posner は、自動車と歩行者が衝突する場合のように、殆どの不法行為では二つの行動の衝突から事件が生じると指摘した上で、衝突を回避する上ではカガイシャが常にヒガイシャよりもより良い立場にいるとは断定できないと分析している¹¹⁰⁾。確かに、自動車が注意義務を守って車道を走っているときに、歩行者が不注意にも車道を歩くような場合の事故は、ヒガイシャにこそ非がある。そのような場合は、厳格（無過失）責任によってカガイシャに損失負担させるよりも、カガイシャを無責（no liability）としてヒガイシャに損失負担させることにより望ましくない行動への抑止機能を果たさせた方が望ましい。（倫理哲学的にも非のある者にこそ損失を負担させておくべきであろう。）つまり、危険をカガイシャが一方的に惹き起こす「一方的な危険」(unilateral risk)ではなく、双方的に惹き起こされる「双方的危険」(bilateral risk)の場合（即ち多くの不法

110) POSNER, ECONOMIC ANALYSIS OF LAW, *supra* note 2, at 180.

なお、平野が2006年に日本に紹介した「双方的危険→注意喚起」や「一方的危険→行動抑制」の考え方は、今年になってからも以下の書籍にて紹介されているので、ご参考まで:

穴戸常寿, 大屋雄裕, 他編著『AIと社会と法: パラダイムシフトは起きるか?』161, 172, 頁(有斐閣2020年)

第I章 「法と経済学」的な「抑止」等 249

行為において)は、厳格（無過失）責任よりも過失責任が望ましいとして、
仮想事例
Posner は以下のようなハイポ (hypo.: hypothetical, 仮想事例) を挙げている¹¹¹⁾。

Questions

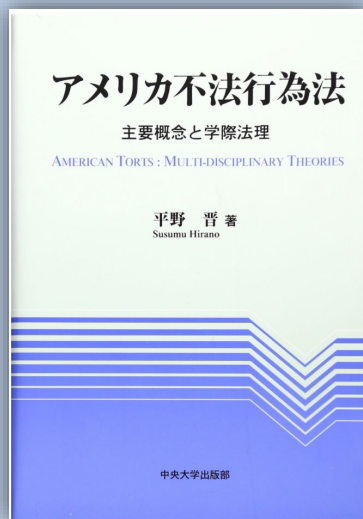
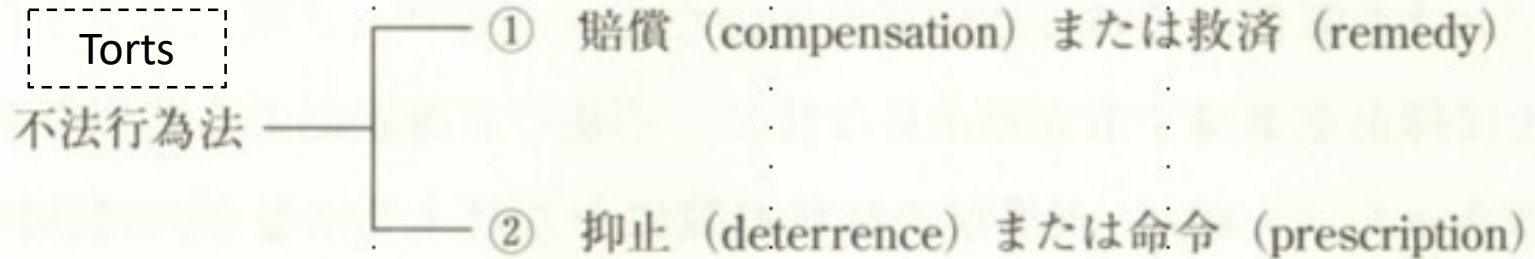
- It might be better to take a scheme like **New Zealand's Accident Compensation Corporation** rather than a regime based on civil liability lawsuit. Because:
 - The latter's t/a costs are high; and
 - The latter might unfairly labels a blame on a wrong guy.
- Then, a **legal entity** w/ enough capital in a vehicle might be better?!
- Hard-law approach is taken.
 - Are there no **chilling effects**?
- Is the **multi-stakeholder** approach taken?
 - Do industries or corporations concur?
- Do various European constituents reach a consensus?
 - Approximately a dozen nations do not seem to concur with the Report
- The report is **not based on real AI cases**, but just based on hypotheses.



AIのガバナンスの在り方は？

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図表#1 不法行為法の目的 Objectives of Torts



SUSUMU HIRANO, AMERICAN
TORTS 38-39 (Chuo Univ.
Press 2006)(in Japanese).



その他

Others / Miscellaneous



免責の契約は無効

Article 2 Scope

2. Any agreement between an operator of an AI-system and a natural or legal person who suffers harm or damage because of the AI-system, which circumvents or limits the rights and obligations set out in this Regulation, concluded before or after the harm or damage occurred, shall be deemed null and void as regards the rights and obligations laid down in this Regulation.

Civil Liability Regime for Artificial Intelligence, *supra*.

Id.



定義 (1/2)

Article 3

Definitions

For the purposes of this Regulation, the following definitions apply:

- (a) 'AI-system' means a system that is either software-based or embedded in hardware devices, and that displays behaviour simulating intelligence by, inter alia, collecting and processing data, analysing and interpreting its environment, and by taking action, with some degree of autonomy, to achieve specific goals;
- (b) 'autonomous' means an AI-system that operates by interpreting certain input and by using a set of pre-determined instructions, without being limited to such instructions, despite the system's behaviour being constrained by, and targeted at, fulfilling the goal it was given and other relevant design choices made by its developer;
- (c) 'high risk' means a significant potential in an autonomously operating AI-system to cause harm or damage to one or more persons in a manner that is random and goes beyond what can reasonably be expected; the significance of the potential depends on the interplay between the severity of possible harm or damage, the degree of autonomy of decision-making, the likelihood that the risk materializes and the manner and the context in which the AI-system is being used;

Id.

cont'd

定義 (2/2)

(d) 'operator' means both the frontend and the backend operator as long as the latter's liability is not already covered by Directive 85/374/EEC;

(e) 'frontend operator' means any natural or legal person who exercises a degree of control over a risk connected with the operation and functioning of the AI-system and benefits from its operation;

(f) 'backend operator' means any natural or legal person who, on a continuous basis, defines the features of the technology and provides data and an essential backend support service and therefore also exercises a degree of control over the risk connected with the operation and functioning of the AI-system;

(g) 'control' means any action of an operator that influences the operation of an AI-system and thus the extent to which the operator exposes third parties to the potential risks associated with the operation and functioning of the AI-system; such actions can impact the operation at any stage by determining the input, output or results, or can change specific functions or processes within the AI-system; the degree to which those aspects of the operation of the AI-system are determined by the action depends on the level of influence the operator has over the risk connected with the operation and functioning of the AI-system;

(h) 'affected person' means any person who suffers harm or damage caused by a physical or virtual activity, device or process driven by an AI-system, and who is not its operator;

(i) 'harm or damage' means an adverse impact affecting the life, health, physical integrity of a natural person, the property of a natural or legal person or causing significant immaterial harm that results in a verifiable economic loss;

(j) 'producer' means the producer as defined in Article 3 of Council Directive 85/374/EEC^[22].

Id.

上限額

Article 5

Amount of compensation

1. An operator of a high-risk AI-system that has been held liable for harm or damage under this Regulation shall compensate:

- (a) up to a maximum amount of EUR two million in the event of the death of, or in the event of harm caused to the health or physical integrity of, an affected person, resulting from an operation of a high-risk AI-system;
- (b) up to a maximum amount of EUR one million in the event of significant immaterial harm that results in a verifiable economic loss or of damage caused to property, including when several items of property of an affected person were damaged as a result of a single operation of a single high-risk AI-system; where the affected person also holds a contractual liability claim against the operator, no compensation shall be paid under this Regulation, if the total amount of the damage to property or the significant immaterial harm is of a value that falls below [EUR 500].

2. Where the combined compensation to be paid to several persons who suffer harm or damage caused by the same operation of the same high-risk AI-system exceeds the maximum total amounts provided for in paragraph 1, the amounts to be paid to each person shall be reduced pro-rata so that the combined compensation does not exceed the maximum amounts set out in paragraph 1.

Id.

期間制限

Article 7

Limitation period

1. Civil liability claims, brought in accordance with Article 4(1), concerning harm to life, health or physical integrity, shall be subject to a special limitation period of 30 years from the date on which the harm occurred.
2. Civil liability claims, brought in accordance with Article 4(1), concerning damage to property or significant immaterial harm that results in a verifiable economic loss shall be subject to special limitation period of:
 - (a) 10 years from the date when the property damage occurred or the verifiable economic loss resulting from the significant immaterial harm, respectively, occurred, or
 - (b) 30 years from the date on which the operation of the high-risk AI-system that subsequently caused the property damage or the immaterial harm took place.

Of the periods referred to in the first subparagraph, the period that ends first shall be applicable.

3. This Article shall be without prejudice to national law regulating the suspension or interruption of limitation periods.

Id.

連帶責任

Article 11

Joint and several liability

If there is more than one operator of an AI-system, they shall be jointly and severally liable. If a frontend operator is also the producer of the AI-system, this Regulation shall prevail over the Product Liability Directive. If the backend operator also qualifies as a producer as defined in Article 3 of the Product Liability Directive, that Directive should apply to him or her. If there is only one operator and that operator is also the producer of the AI-system, this Regulation should prevail over the Product Liability Directive.

Id.



寄与過失

Apportionment of liability

Article 10

Contributory negligence

1. If the harm or damage is caused both by a physical or virtual activity, device or process driven by an AI-system and by the actions of an affected person or of any person for whom the affected person is responsible, the extent of liability of the operator under this Regulation shall be reduced accordingly. The operator shall not be liable if the affected person or the person for whom he or she is responsible is solely to blame for the harm or damage caused.
2. An operator held liable may use the data generated by the AI-system to prove contributory negligence on the part of the affected person, in accordance with Regulation (EU) 2016/679 and other relevant data protection laws. The affected person may also use such data as a means of proof or clarification in the liability claim.

Id.

日本の自動車損害賠償保障法

（自動車損害賠償責任）

第三条 自己のために自動車を運行の用に供する者は、その運行によつて他人の生命又は身体を害したときは、これによつて生じた損害を賠償する責に任ずる。ただし、自己及び運転者が自動車の運行に関し注意を怠らなかつたこと、被害者又は運転者以外の第三者に故意又は過失があつたこと並びに自動車に構造上の欠陥又は機能の障害がなかつたことを証明したときは、この限りでない。



Thank you !!! ;-)



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