CPCE Health Conference 2023

"Healthcare Professional Management"

# Keynote Presentation I

# “Strategic Management of Healthcare in an Ageing Society: Experience from Japan”

**Toshihiko Hasegawa MD MPH PhD**

**Future Health Research Institute**

**April 22 2023 Hong Kong**

# Introduction

# My C.V.



1975 **Graduation: Post-graduate education in Japan**

**Resident: General Surgery, St. Joseph Hospital (Milwaukee, US)**

1980

**Student: M.P.H Harvard School of Public Health (US)**

**Educator: Assistant Professor of Gastrointestinal Surgery: Shiga Univ. of Medical Science**

1985

**Bureaucrat**

**National Cancer Center: Director o Planning Office**

**Deputy director of the Elderly Care Div, MHLW**

1990

**Director of Health ODA, JICA**

**Vice President, Kyushu Region National Hospitals**

1995

**from Bureaucrat to Researcher**

**1998 First Dragon Net Meeting**

1995

**Researcher:**

2000

**Director of Health Policy**

**National Institute of Health Services Management**

**National Institute of Public Health**

2005

**Researcher & Educator:**

**Nippon Medical School**

**Retired**

**Future Health Research Institute**

**2023 Dragon Net Anniversary 25**

**Death**

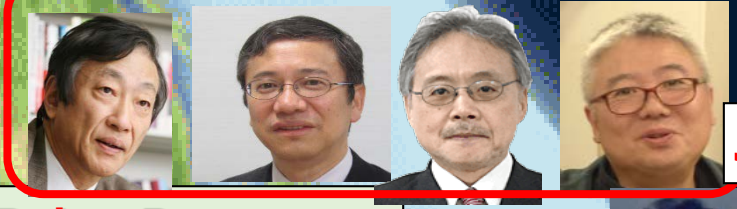
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# Health Policy Researchers Network of Asia



Big & Growing Dragon

China



Japan

Old & Dying Dragon



Korea



Taiwan

Japan



Hong Kong

Thailand

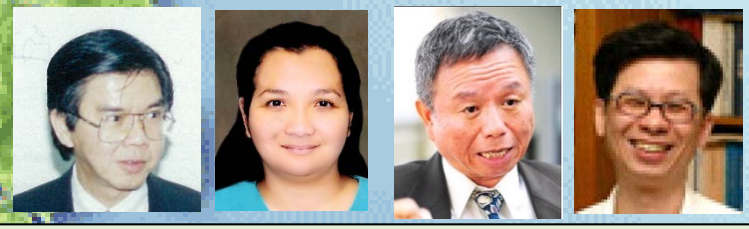
Hong Kong

Malaysia



Singapore

4 Dragons



Vietnam

Young& Baby Dragons

25th Aniverssary Dragon Net

Learning Network
Creating Network
&
Supporting Network

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# Health Care Policy in East Asia:

## A World Scientific Reference



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国家主席
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亚洲各福利国家
学习皇民经验

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日本
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About the Editor-in-Chief: **Teh-wei Hu** (U... of California, Berkeley, USA)



Teh-wei Hu received his PhD in ... from the University of Wisconsin, Madis... Professor Emer... Economics in University of Ca... erkeley, was Associate Dean and Department Chair in the Graduate School of Public... Professor in the Grad... UC Berkeley. He was the founding president of the North America Chines... Association. Profess... as of expertise are the application of econometrics to health care services research and tobacco control. In 20... as a recipient of the American Public Health Association's ... for h... toward mental health services research. In 2014, he was awarded a medal by the World Health Organization for this outstanding contribution to "raising tax in tobacco". He is the author/co-author of more than 200 p... health economics, economics of tobacco control, mental health, and health care reform. He has served as a consultant to the World Bank, the World Health Organization, US government, and those of China, Hong Kong, and Taiwan.

Reference Works available on WorldSciNet

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２３章　编辑　长谷川敏彦

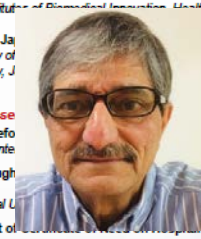
Health Care Policy in East Asia:
A World Scientific Reference

Volume 2: Health Ca... and Policy Research

Editors: Toshihiko Hasegawa (... Institute, Japan), Tomonori Ha... Japan), Tomohiro Hirao (Kag... Masahide Kondo (University of T... Sunil Mehra (NICHIKO, Japan)







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  - Health Transition and Historic... System in Japan
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    Tomohiro Hirao (Kagawa Univers...
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    Sumiko Ogawa (Meio University, Jap... xperience
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  - Development of Payment Method and Options for Financing Health Sector in Super Aged Society
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  - Healthcare Information Delivery With Information and Communication Technology
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    Sunil Mehra (NICHIKO, Japan)

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College of Health Sciences and Head of Healthy City
Research Center, Institute of Health and Welfare
Yonsei University

# Strategic Hospital Management
# 2002.4.1
# Translated in 5 Languages




南　銀祐教授

銭慶文教授
陽明大学
台湾

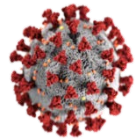
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# 3 Major Incidences




# Covid 19

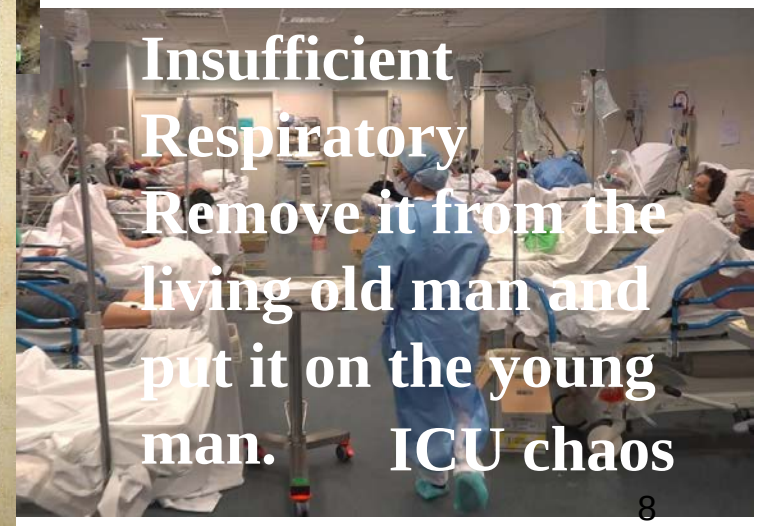











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NATO
冷戦終結前からの加盟国
冷戦終結後の新規加盟国
参加に意欲
中立
14 months since the beginning of the Ukraine War.
ロシア
ウクライナ
クリミア
C THasegawa
RIFH Japan

# Assassination of the ex-Primeminister?






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# Crimean War (1853-1856)

イギリス

フランス

オーストリア

ロシア帝国

サルディニア公国



Crimea



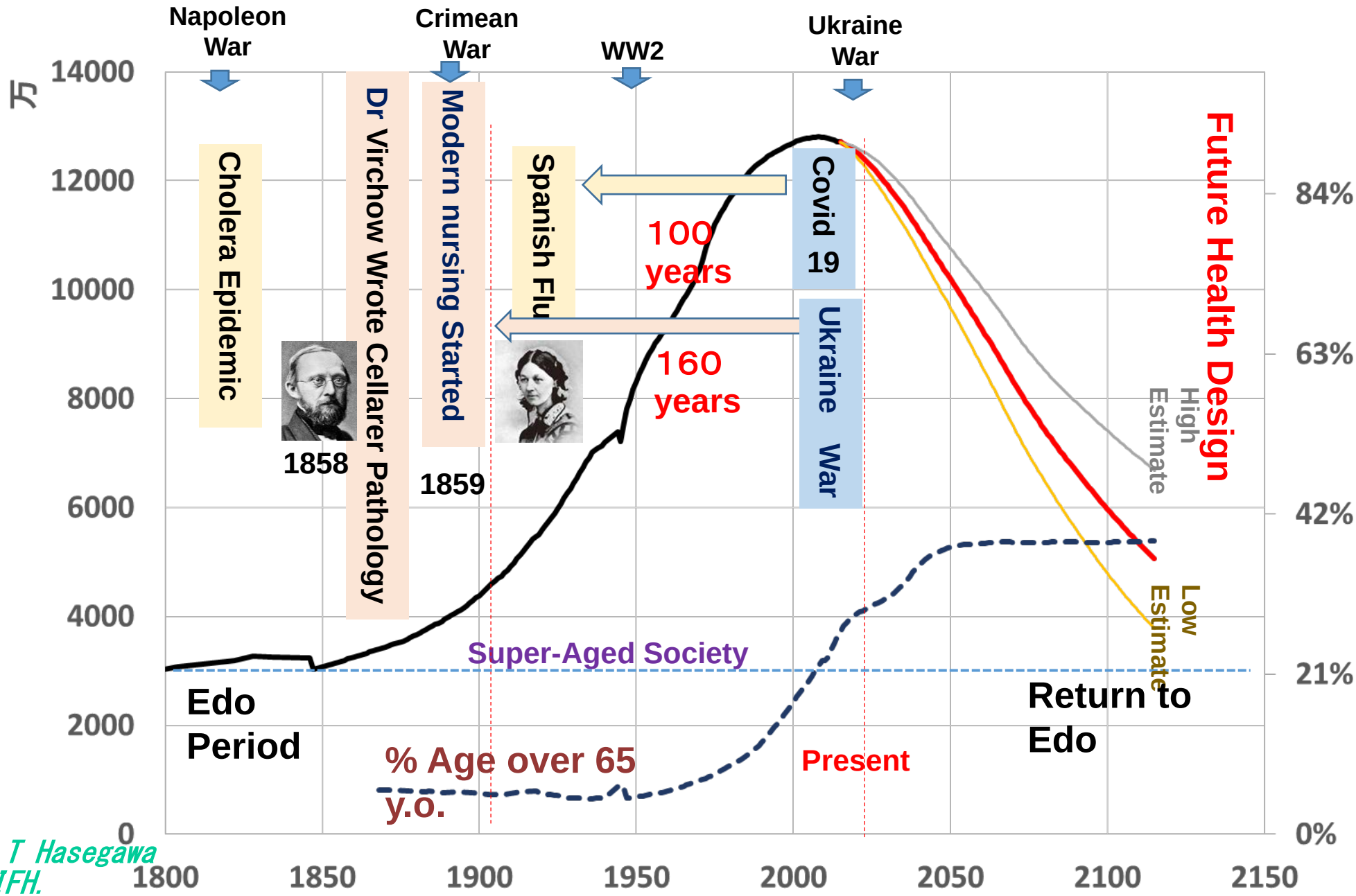
Scutari (member of India's military caste)



The French, Ottoman, and British allies, as well as Sardinia, fought against Russia, The area of fighting extended to the Danube River area, the Crimean Peninsula, and even the Kamchatka Peninsula,

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# Japanese Population Trend 1822-2140




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# Five Sets
# History Repeats Itself in 100 Years

**2020**
**Covid 19 Pandemic**



**2022**
**Ukrainian Wars**



**2022**
**Abe assassination**



**2030**
**NankaiTraff earthquake**




Pandemic — 102 years — War — 108 years — Assassination — 101 years — Earthquake — 107 years

**1914**
**World War Ⅰ**



**1918**
**Spanish Flu**



**1921**
**Hara assassination**



**1923**
**Great Kanto earthquake**



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# Turning Point of Human History

Future Geopolitics

Future Health Care

3 Major Incidences ?

Fundamental Questions

Family ?
Life ?
Work ?
Education ?

Future Society






The End of Modern Era




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# The books Shaped Modern Society.



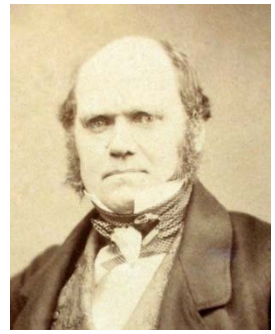
Pastorl



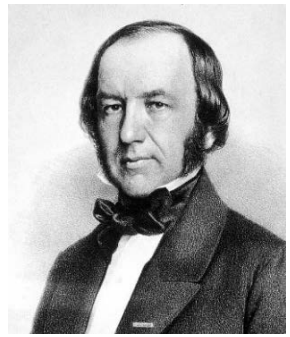
Virchow



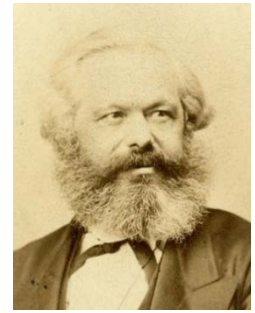
Nightingale



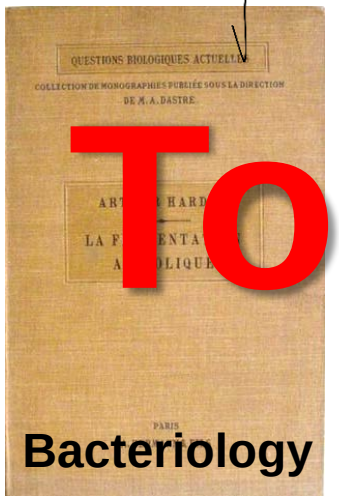
Darwin



Bernard.



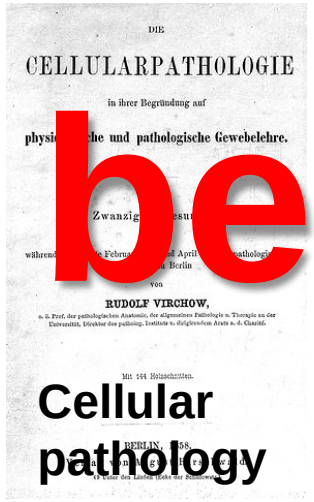
Marx




Bacteriology

1858

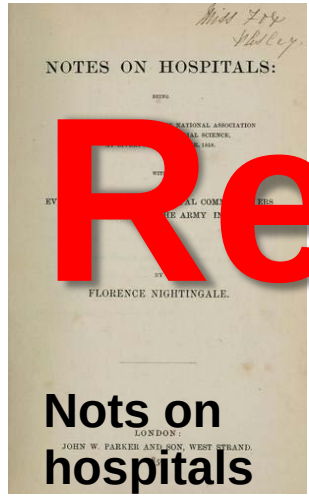
fermentation




Cellular pathology

1858

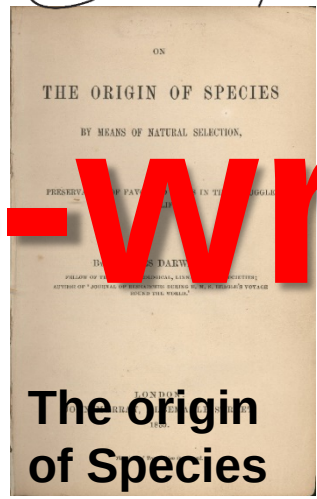
cell (biology)




Nots on hospitals

1859

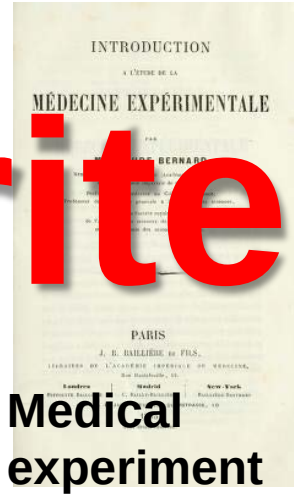
hospital




The origin of Species

1859

evolution




Medical experiment

1865

experiment




Das Kapital

1866

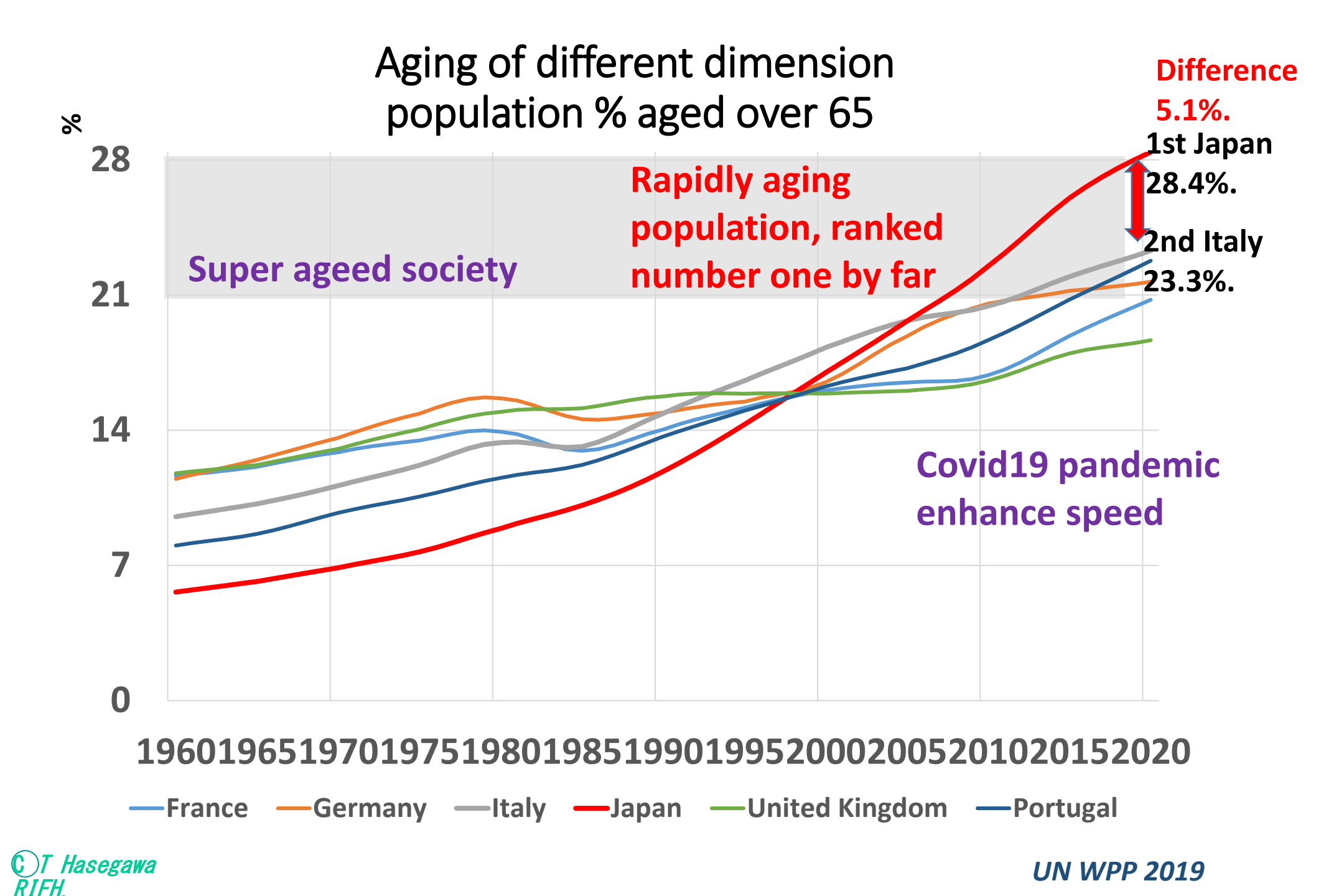
economy

**To be Re-writen!**

**Foundations of the modern nation-state, all around 1860**

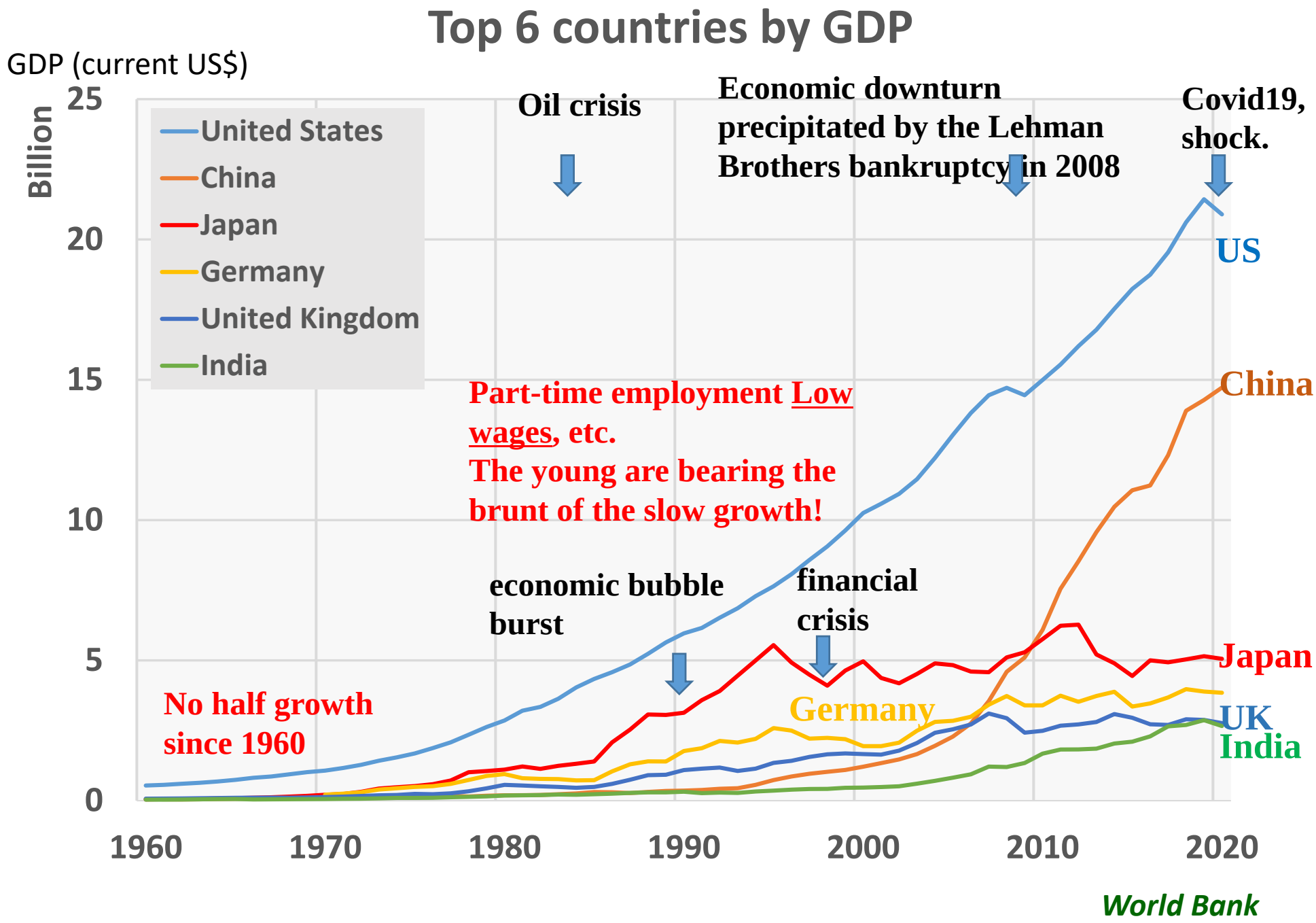
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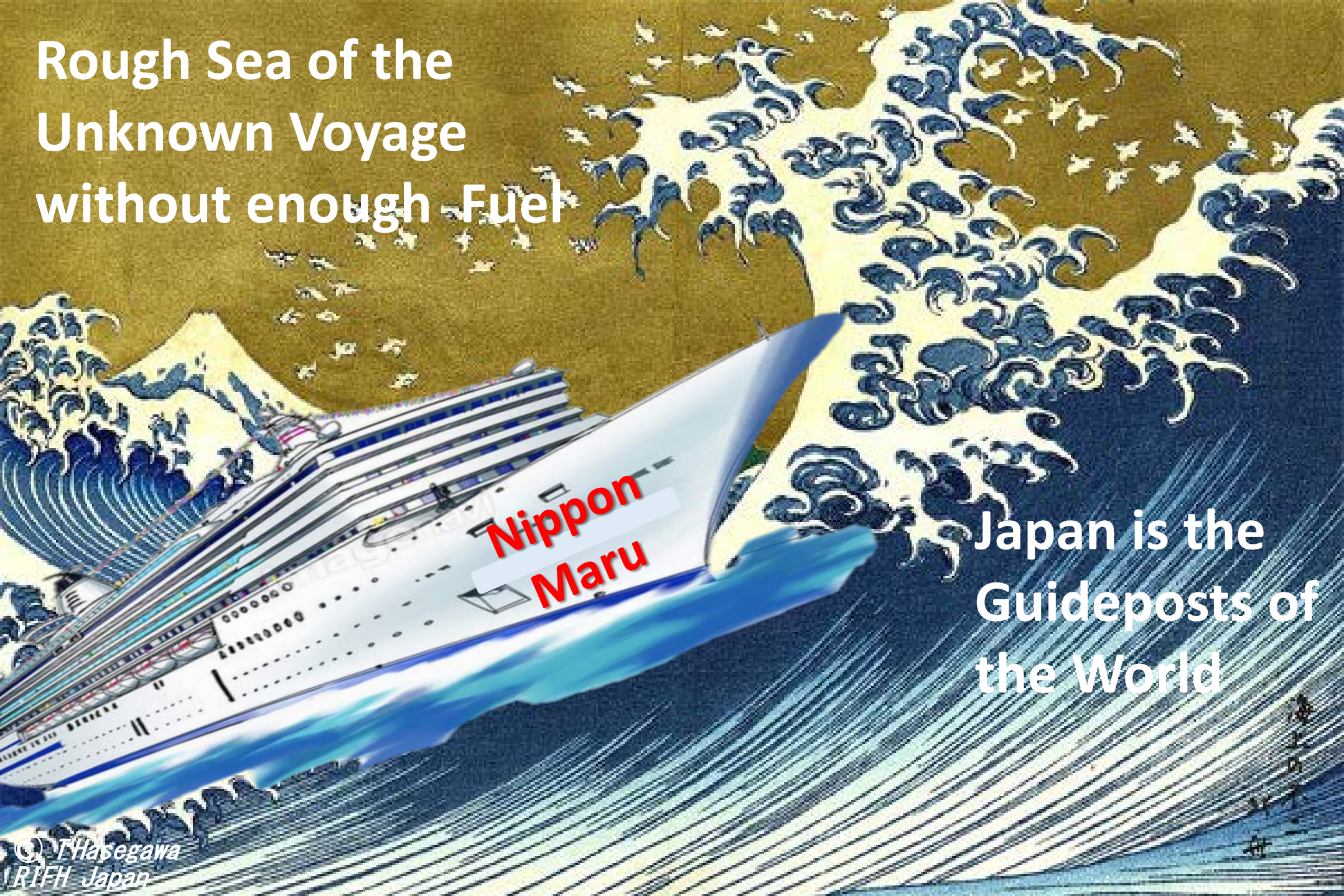
# Strategic Plan




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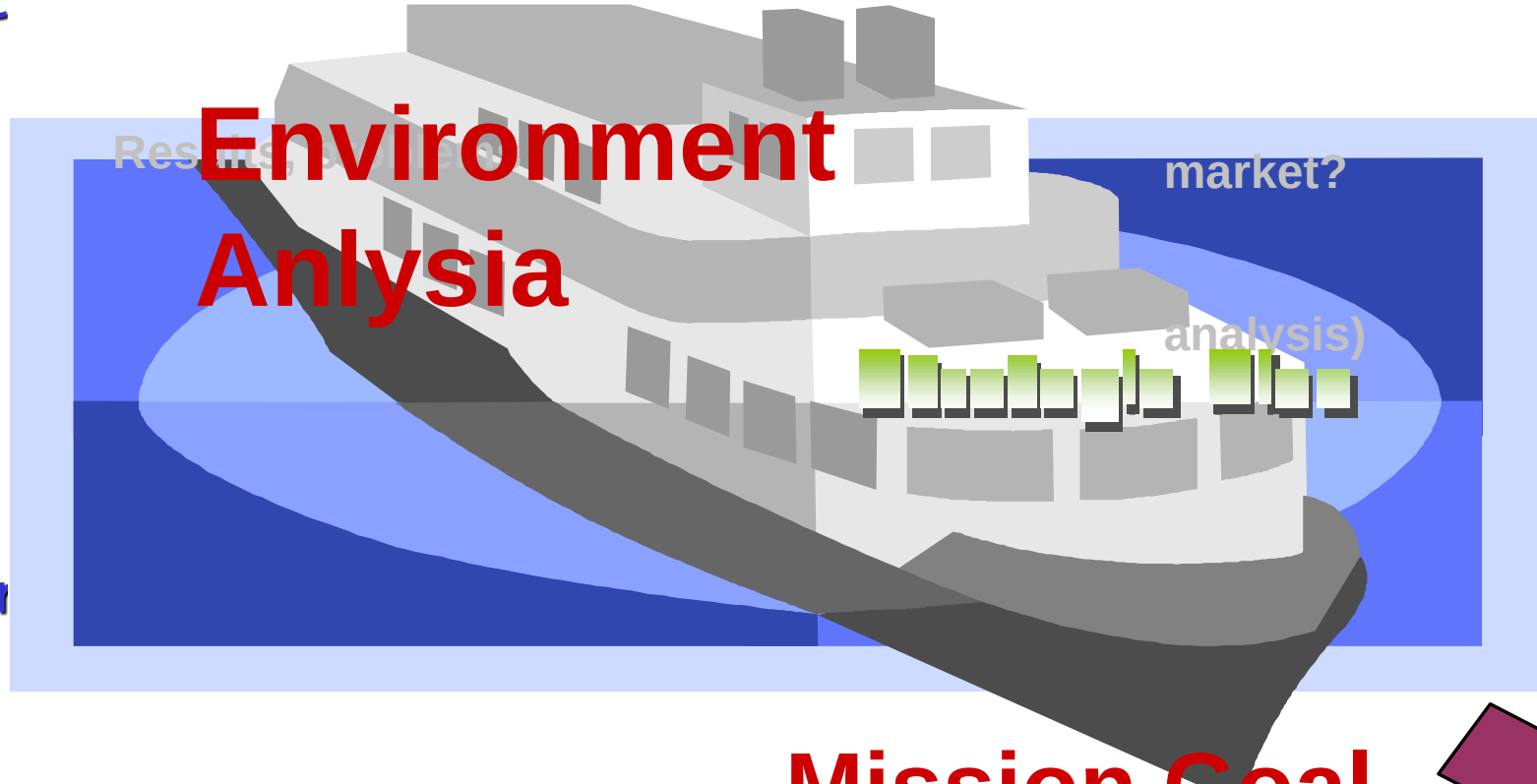

Top 6 countries by GDP
GDP (current US$)
Billion
25
20
15
10
5
0
1960
1970
1980
1990
2000
2010
2020
United States
China
Japan
Germany
United Kingdom
India
Oil crisis
Economic downturn precipitated by the Lehman Brothers bankruptcy in 2008
Covid19, shock.
Part-time employment Low wages, etc.
The young are bearing the brunt of the slow growth!
economic bubble burst
financial crisis
No half growth since 1960
US
China
Japan
Germany
UK
India
World Bank


Rough Sea of the
Unknown Voyage
without enough Fuel
Nippon
Maru
Japan is the
Guideposts of
the World
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# Strategic Planning For Digital Super Aged Society

## Strategic Management

St




Environment
Anlysia

Str

Str

Mission Goal
Analysis

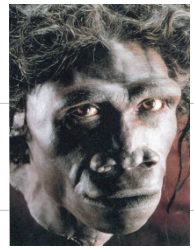
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# External Environment Analysis

# Demographic Transition

# Longevity Trend in Human History









Standing

Stone Tool

Fire

Language

Agriculture

Global Trade

Industry

LE0

90

80

70

60

50

40

30

20

10

0

Longevity for Industrial Society

Agricultural Society

Hunter-Gatherer Society

High Estimate

Low Estimate

Reproductive Productive Window

10000000

1000000

100000

10000

1000

100

10

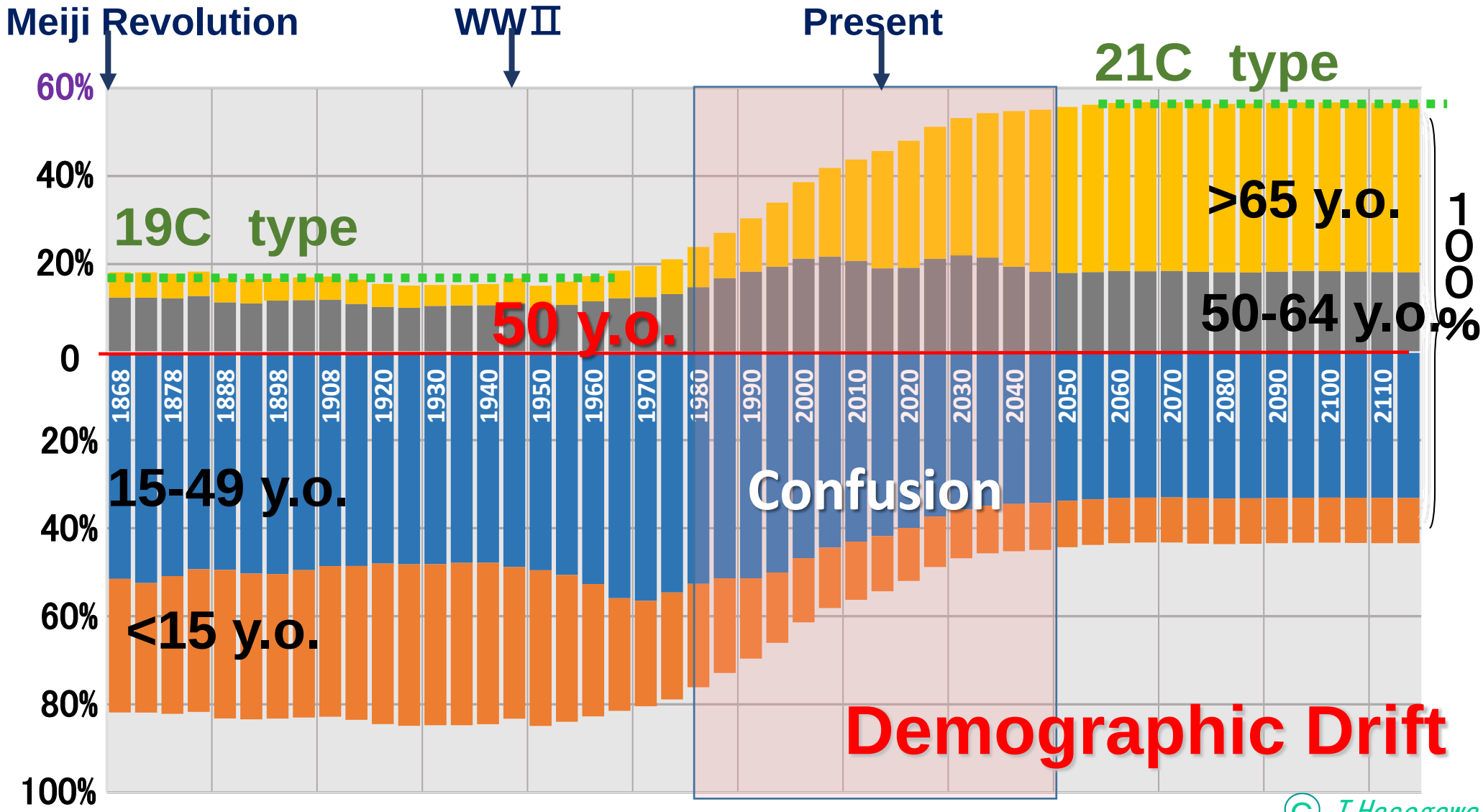
Year from Present

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# Demographic Drift

# Japan 1868-2115

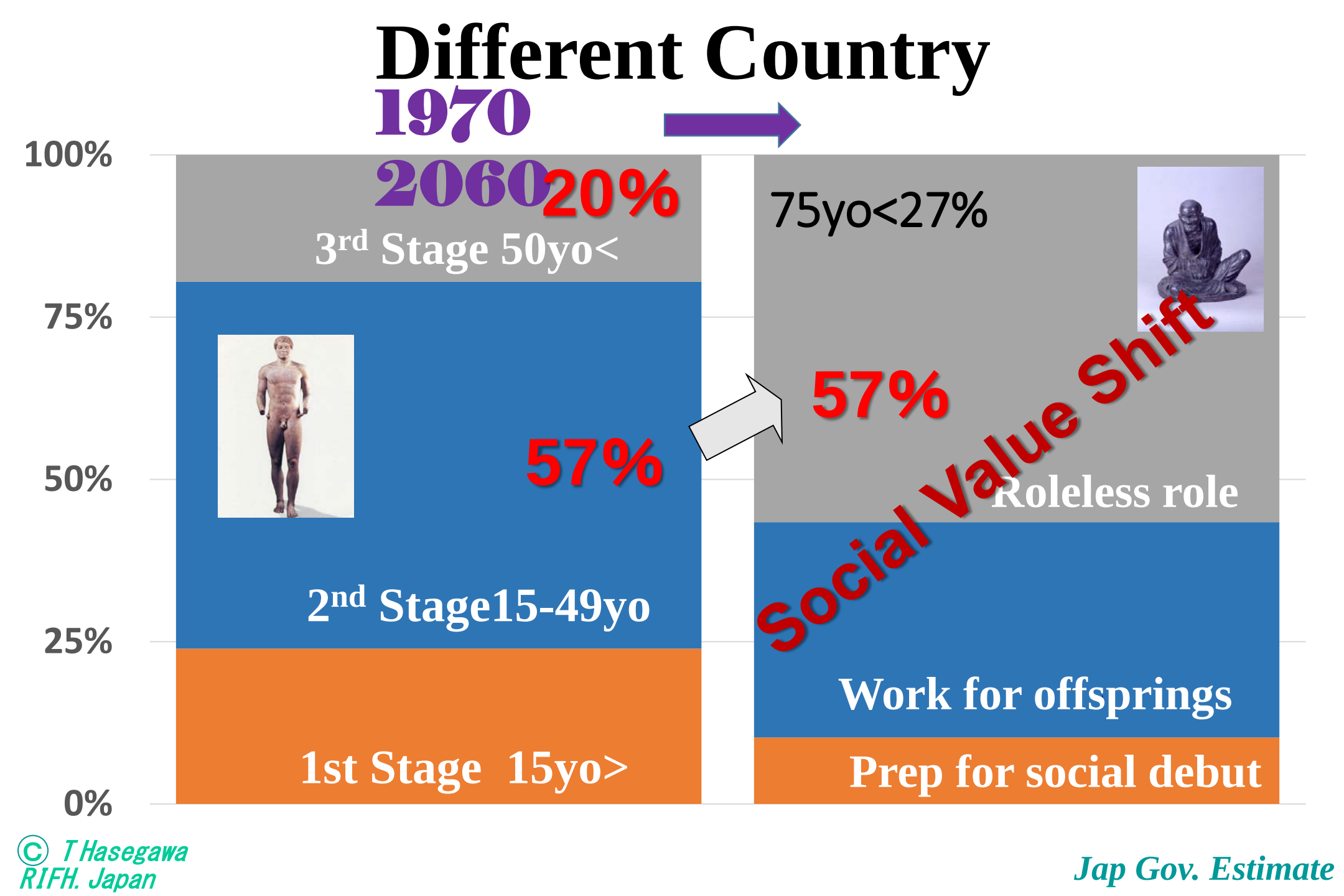
## Age Structural Transformation in Last 240 years




*Okazaki Estimate Census Gov. Estimate 2017*

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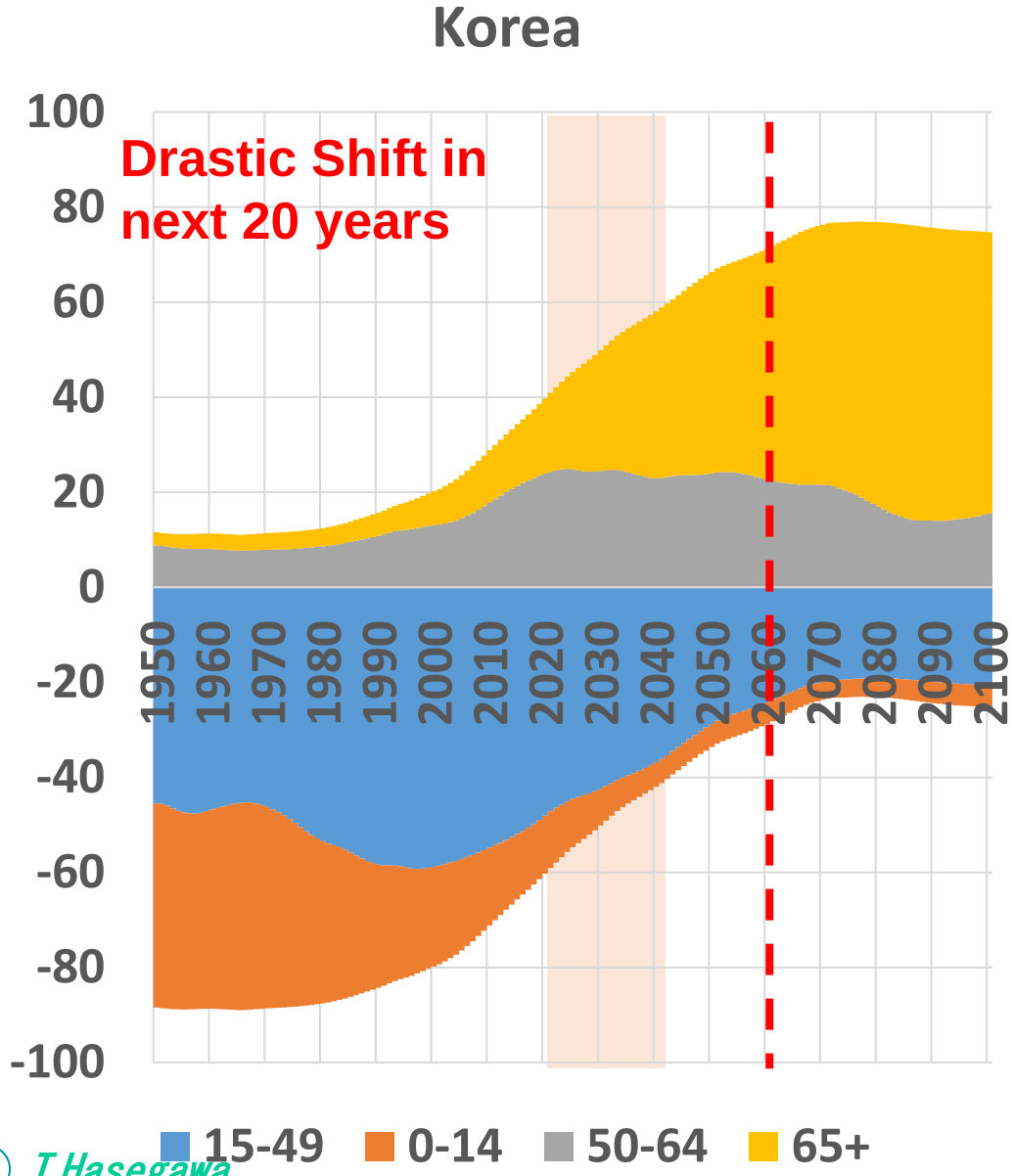
# Different Country

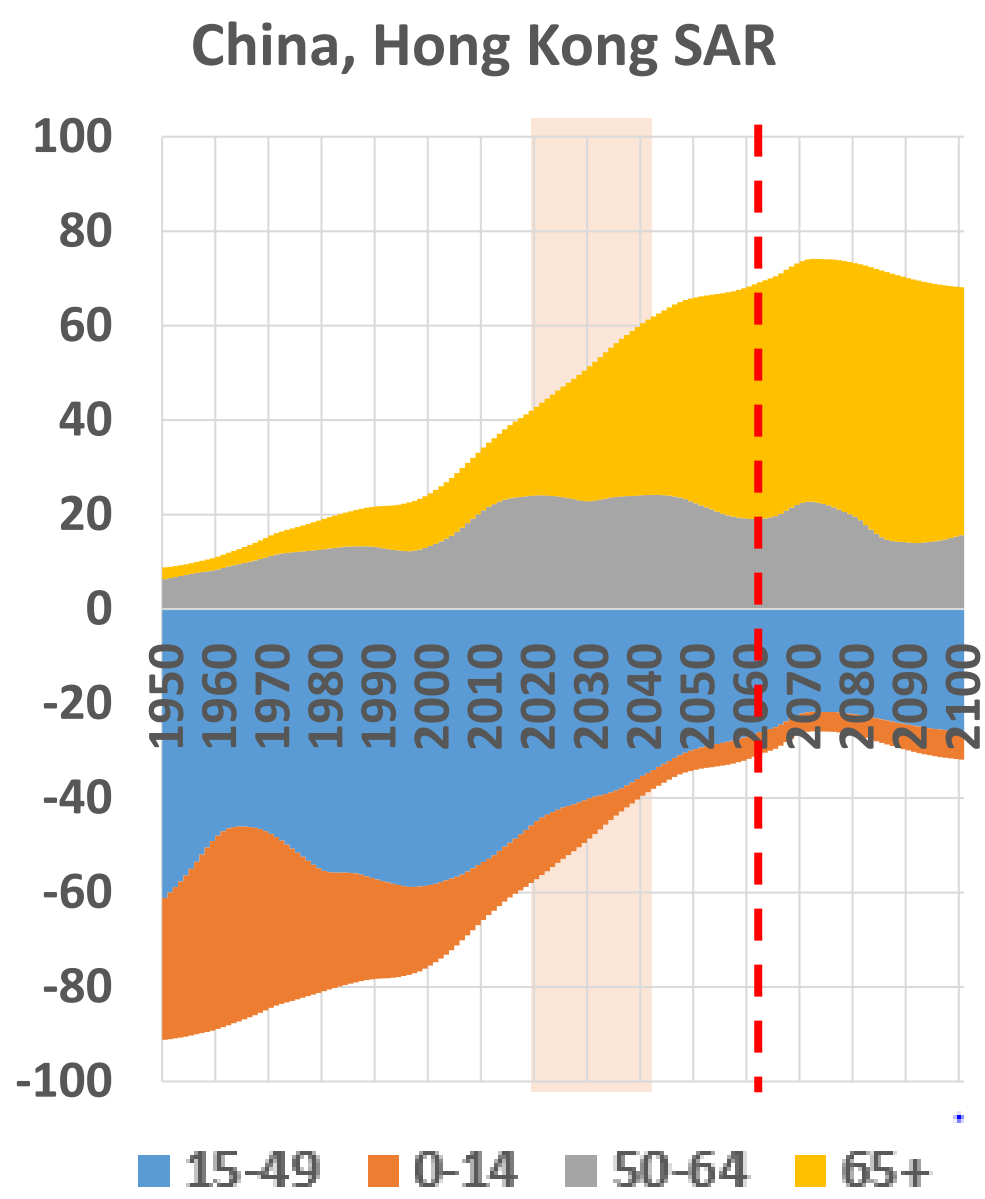



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*Jap Gov. Estimate*

# Demographic Drift

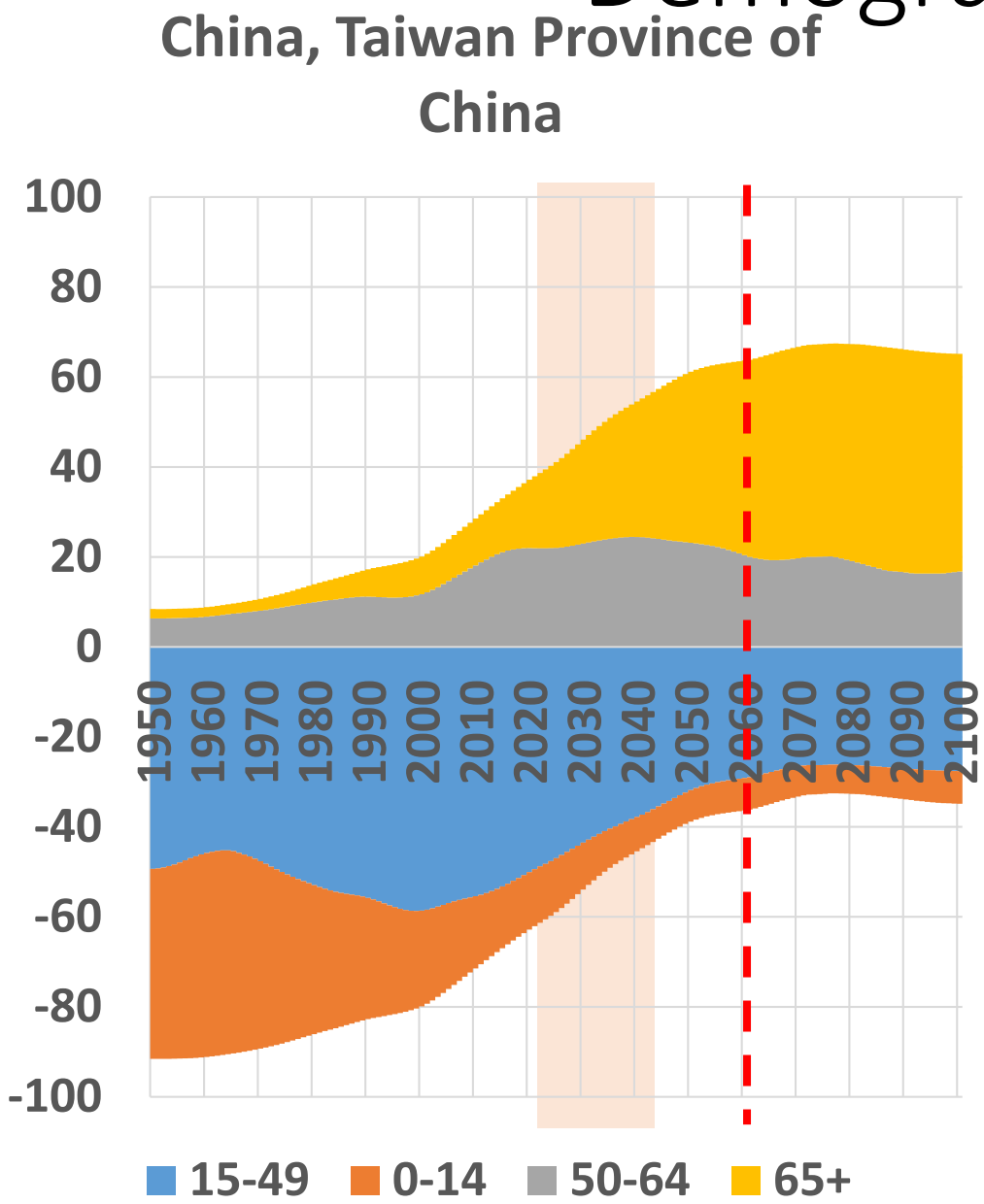


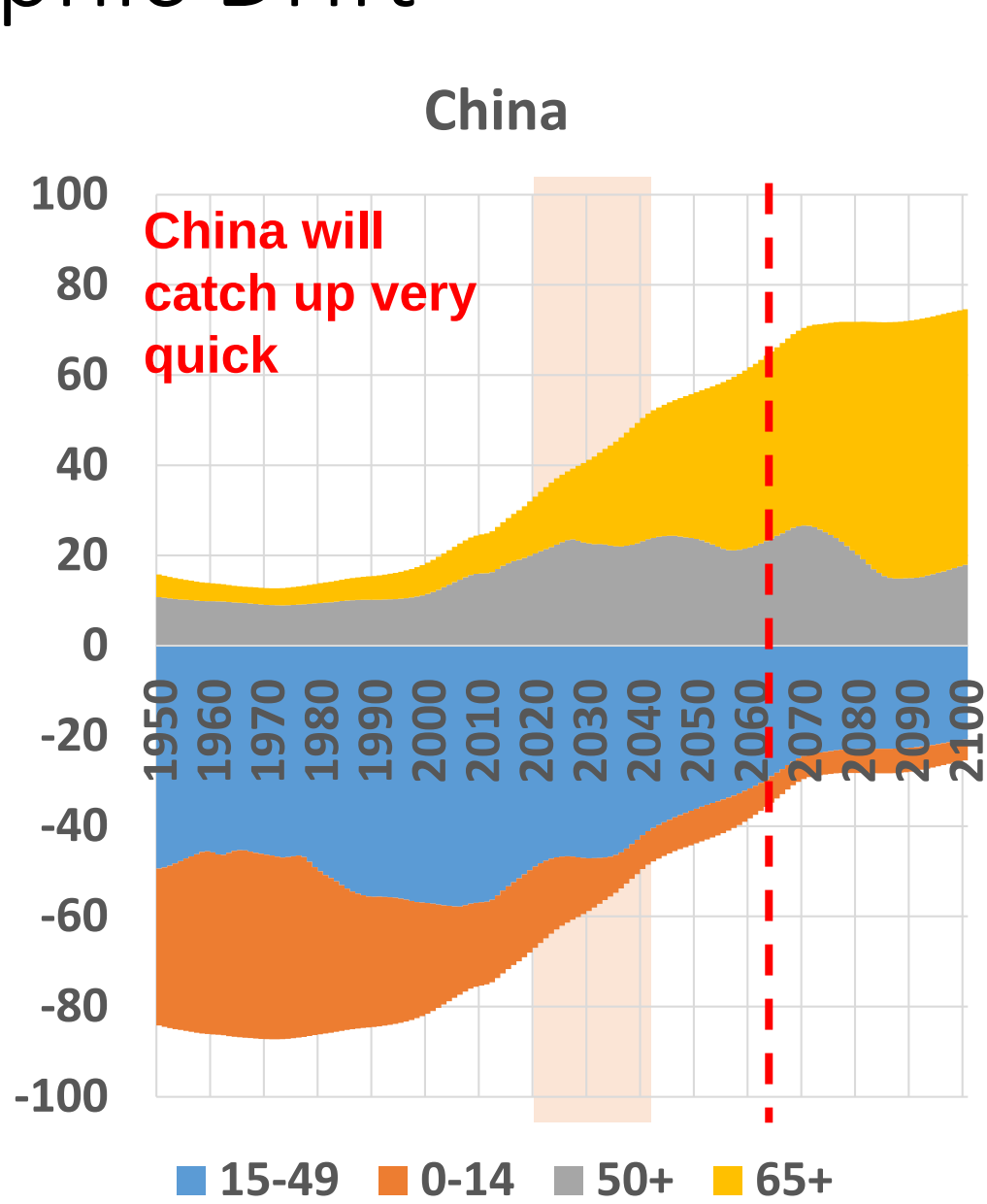




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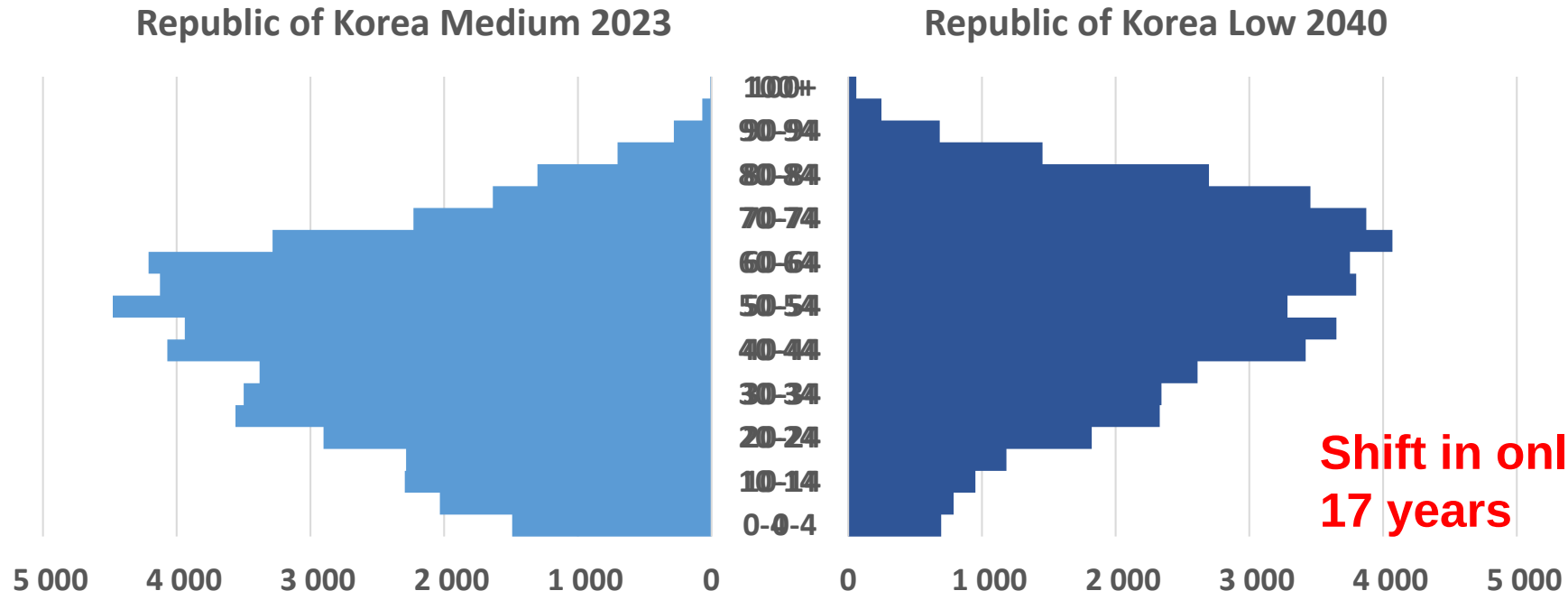
# Demographic Drift

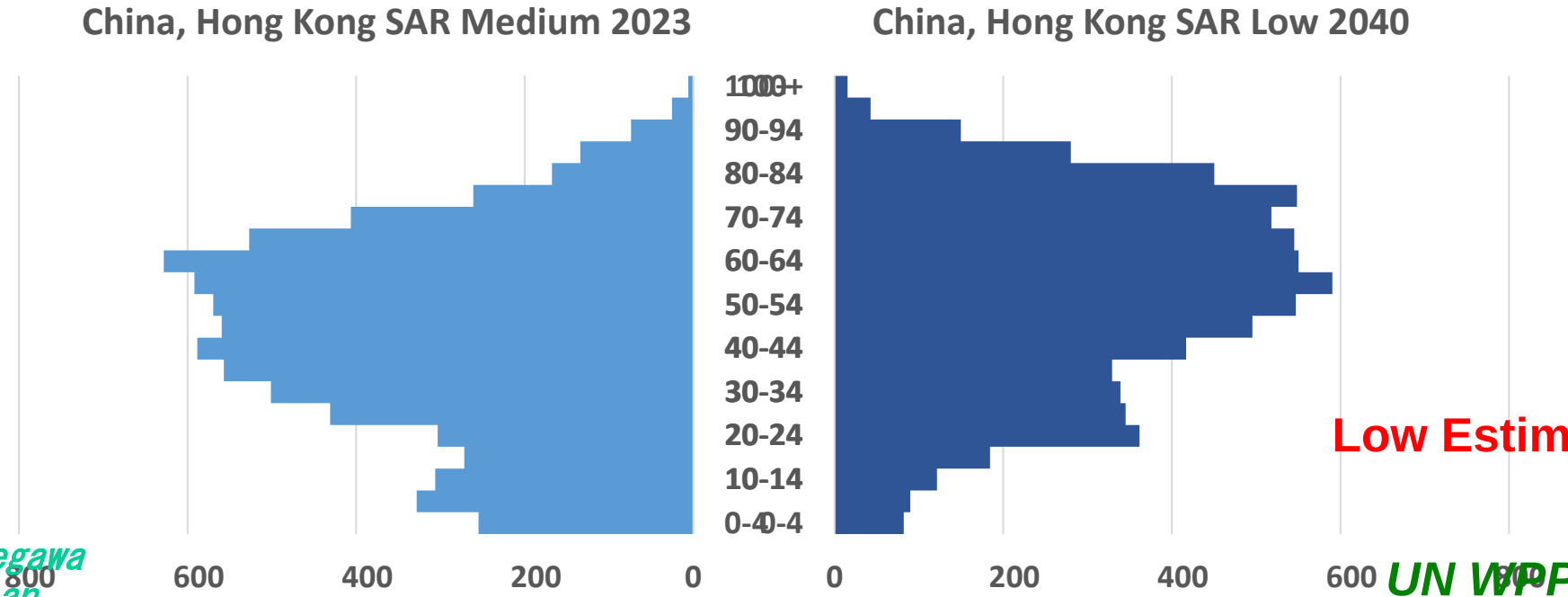



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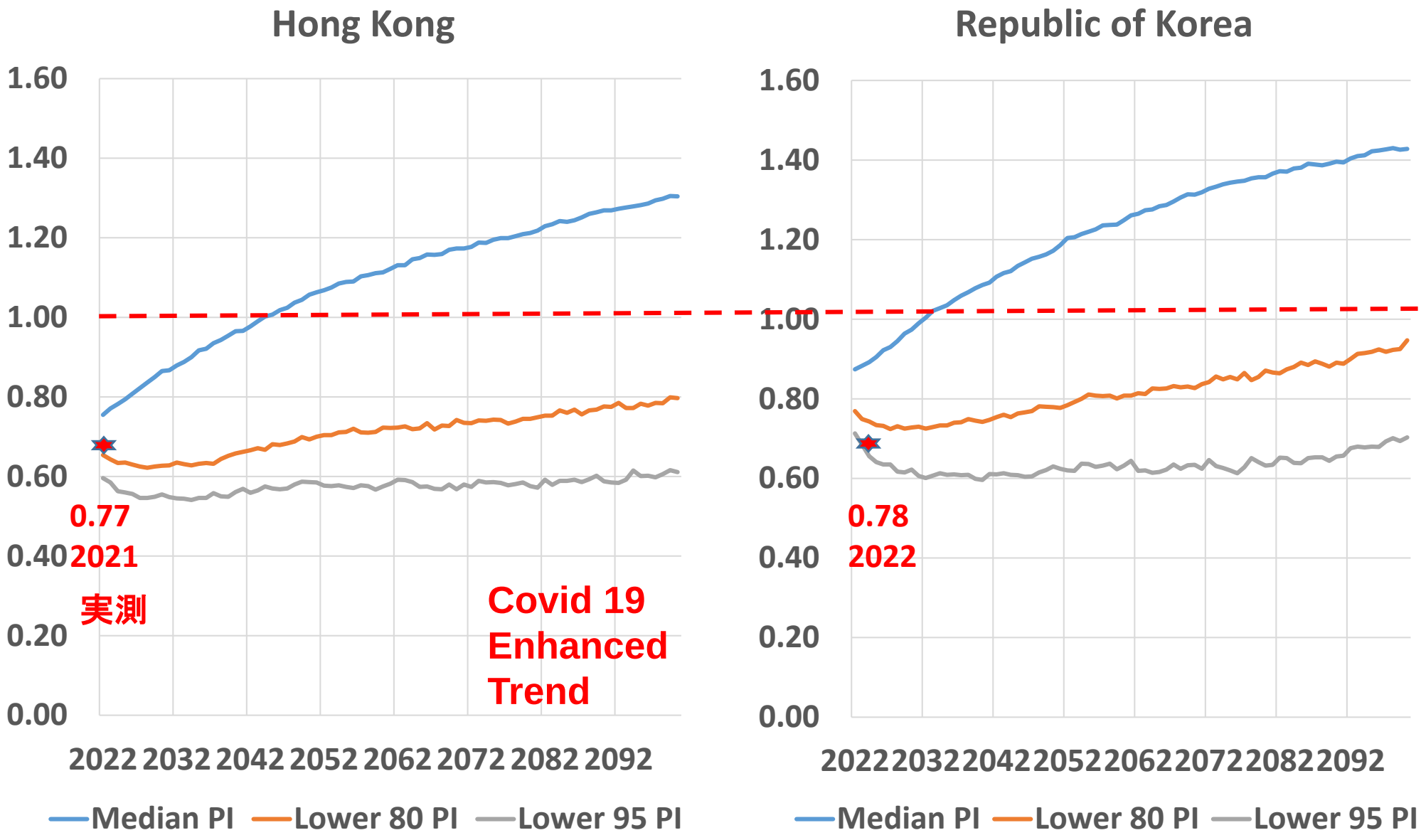
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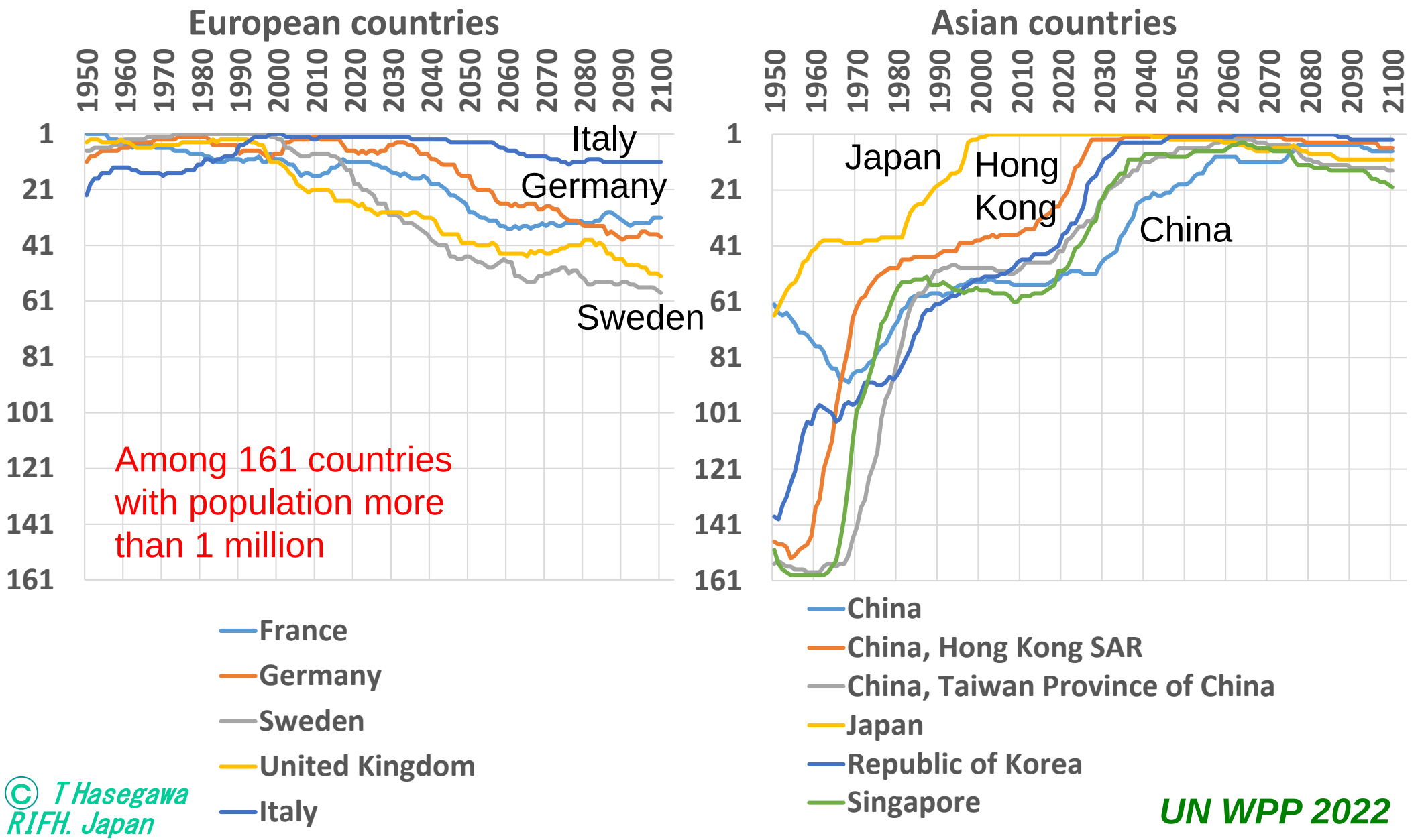



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# Leading Edge

# World Rank of Rate Age over 65 1950-2100




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# Hottest Spot of Ageing in the World
# Economical Hot Spot as Well



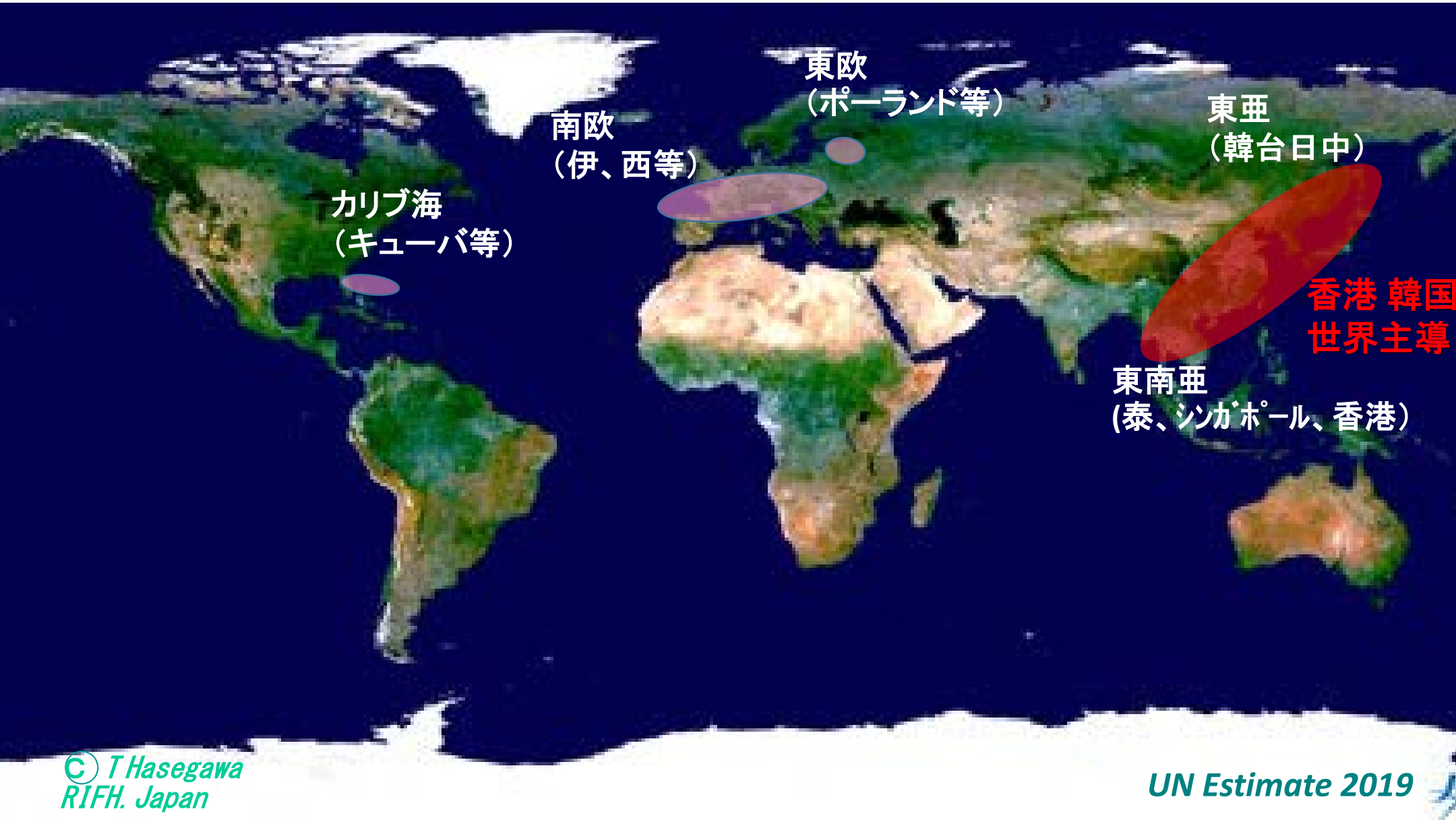

Getting old together in Asia

Kore is the cutting edge

**Japan is not a lonely runner any more！**

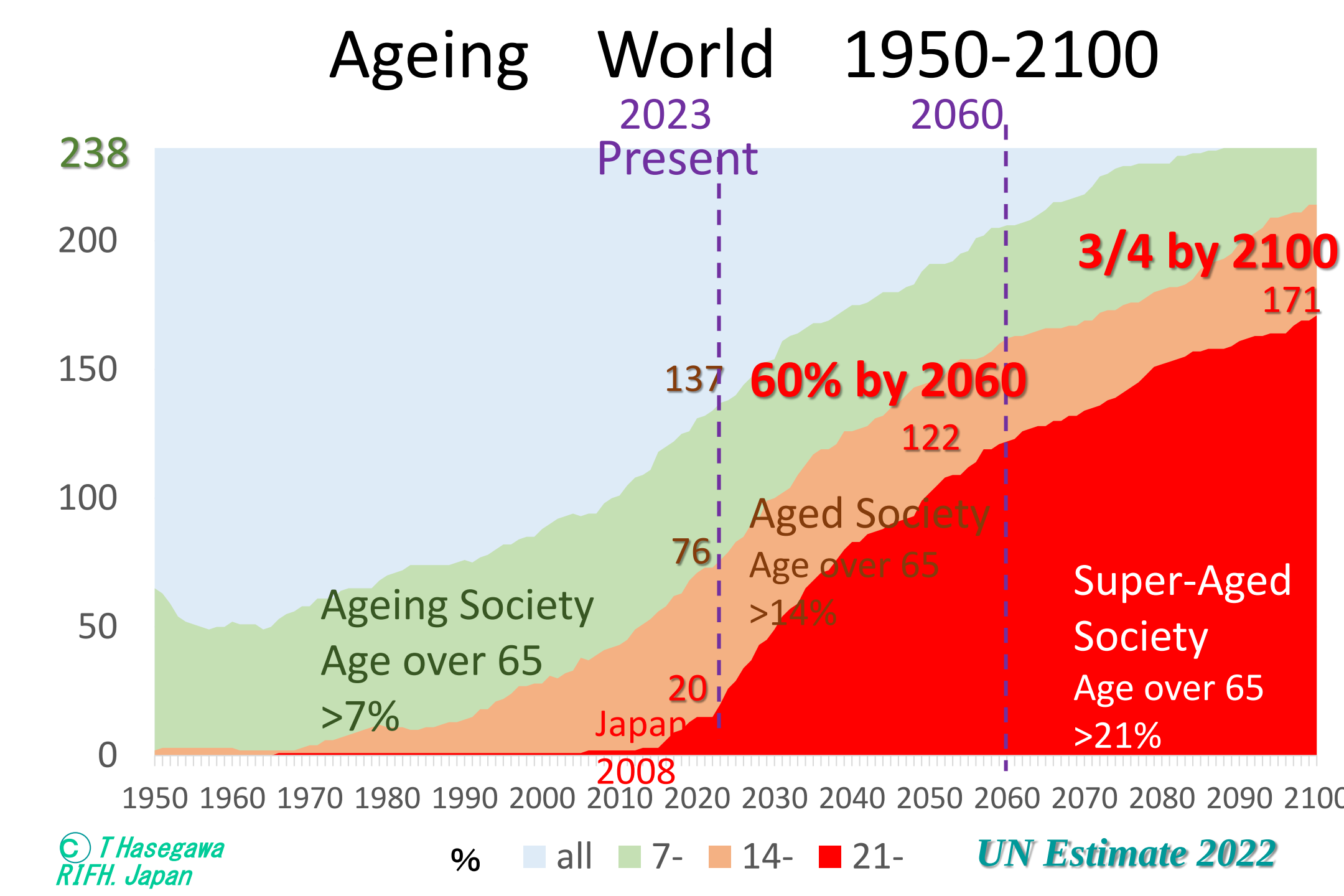
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# 高齢化　世界4大 HOT SPOTS




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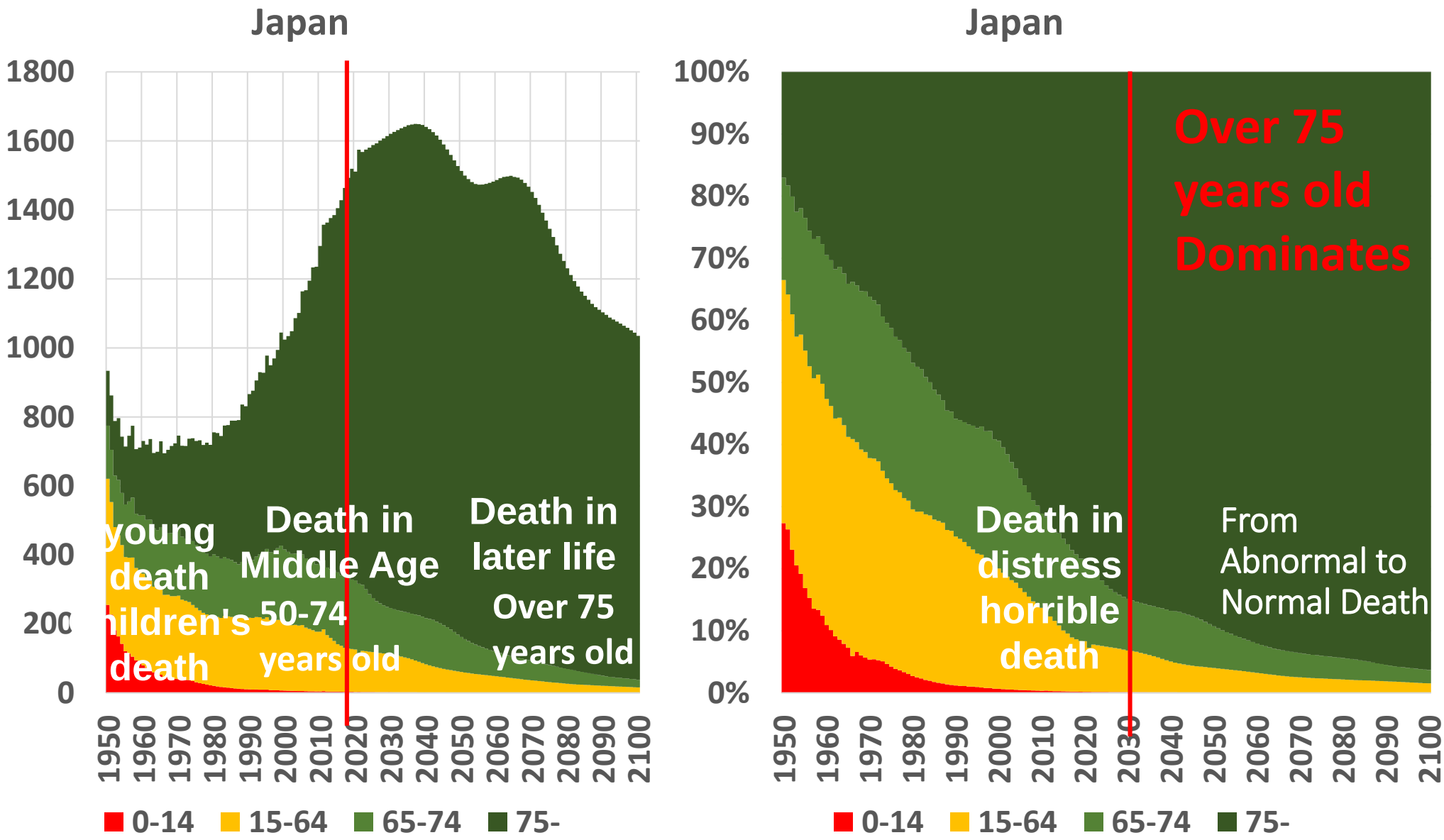
UN Estimate 2019


Ageing World 1950-2100
2023
Present
2060
238
200
150
100
50
0
3/4 by 2100
171
137
60% by 2060
122
76
Aged Society
Age over 65
>14%
Ageing Society
Age over 65
>7%
20
Japan
2008
Super-Aged
Society
Age over 65
>21%
1950 1960 1970 1980 1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100
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% all 7- 14- 21-
UN Estimate 2022

# Death Transition

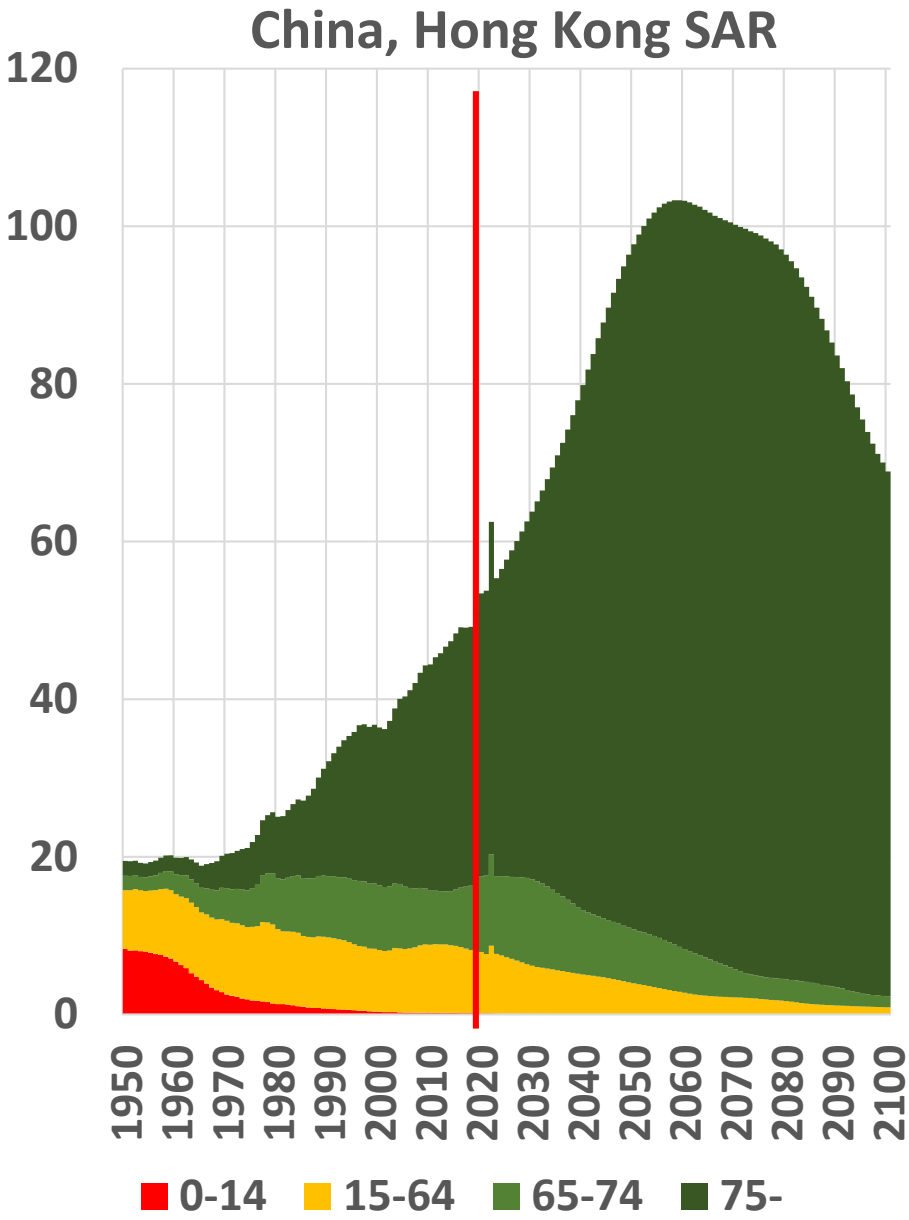
# Normal Death

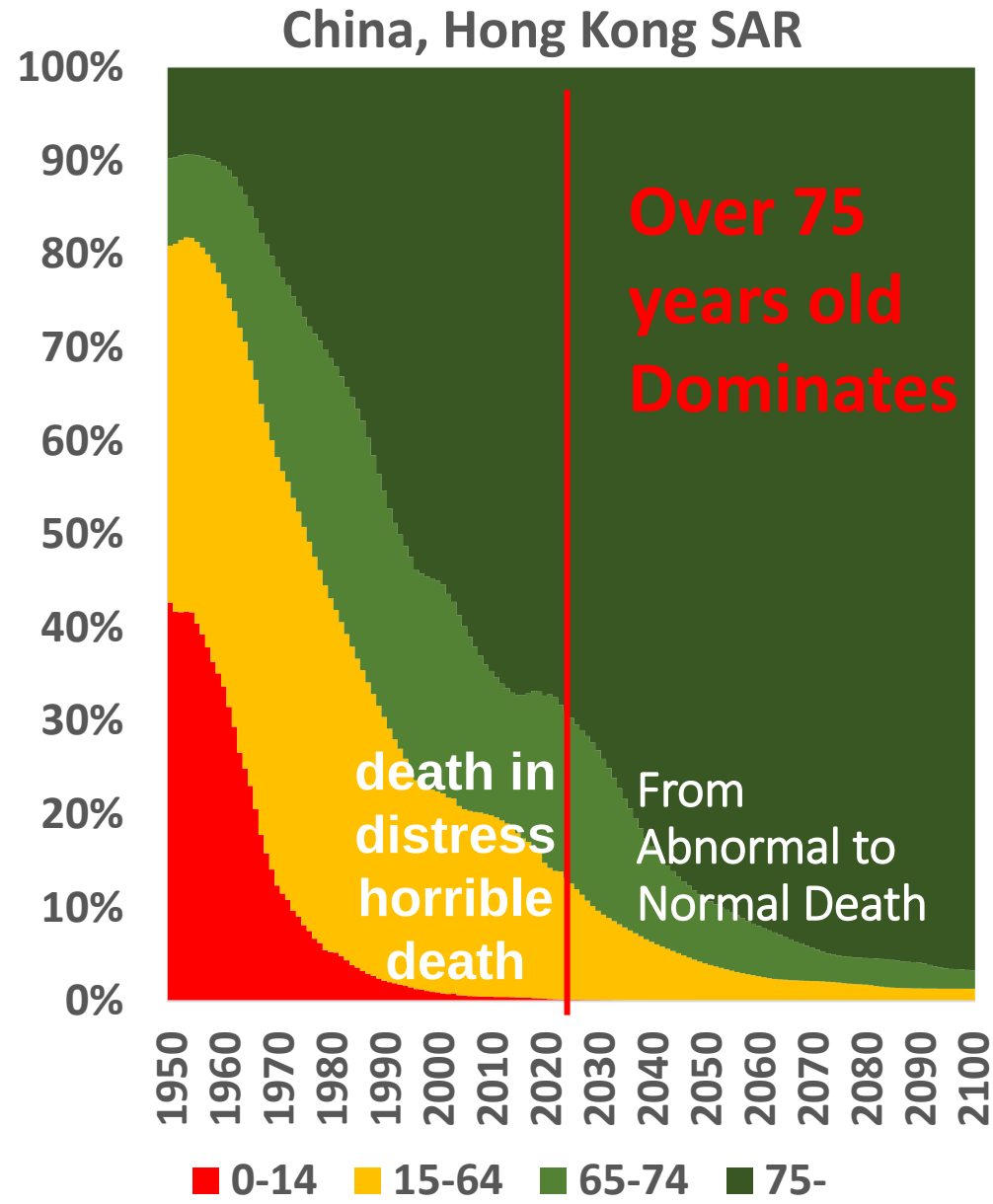
# Dearth age group Transition




*UN WPP 2022*

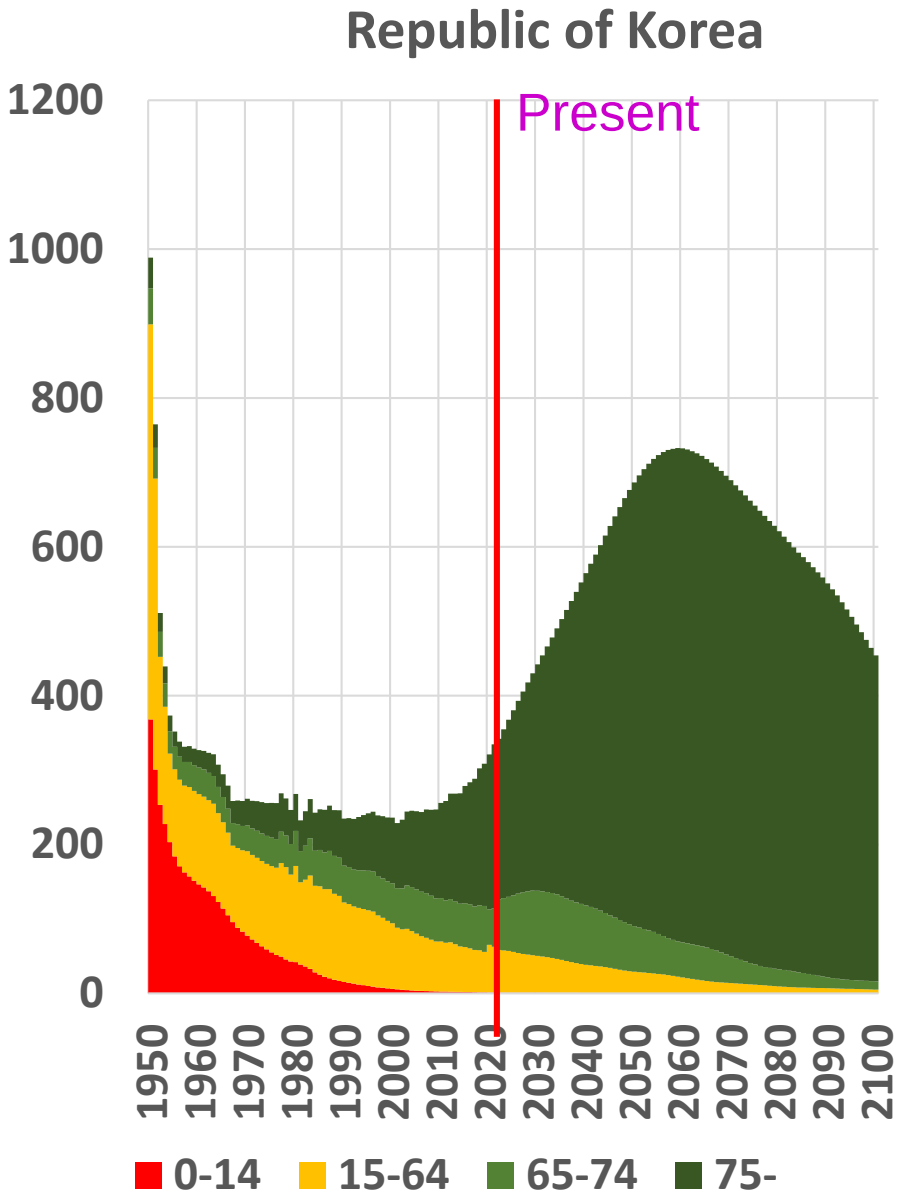
# Dearth age group Transition

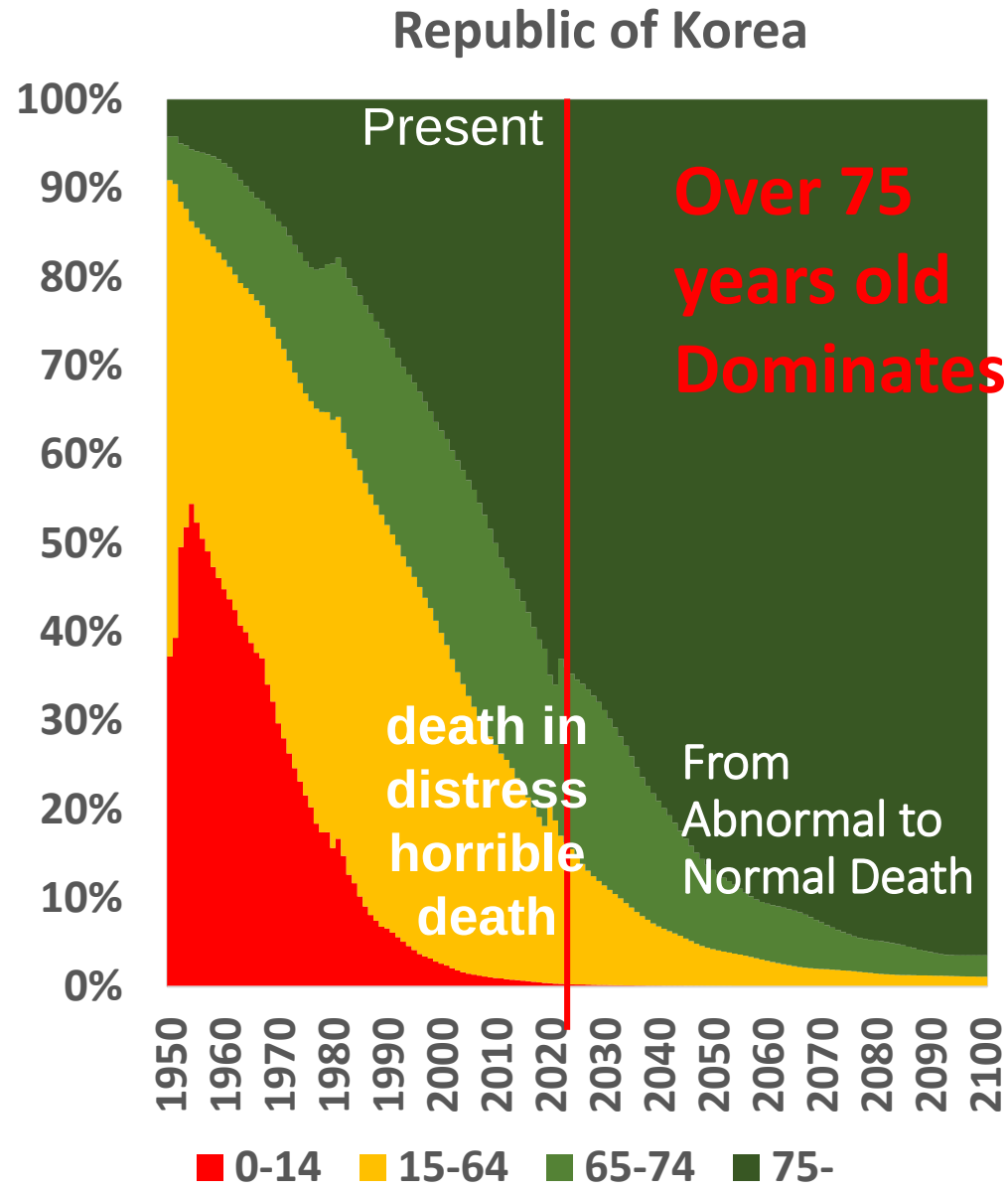



*UN WPP 2022*

# Dearth age group Transition




*UN WPP 2022*

# Death in the Middle Ages

memento mori







Kunstmuseum Basel

# Death of Modernity

Spaghetti syndrome



# Abnormal death

# Normal death

**Hospital**

The place of modern medicine



**Battlefield**

Fight against Unusual Death





Fighting till the death




©T Hasegawa RIFH.

# Perimortal Period
(like Perinatal Period)

To Care for all 3 Terms and 3 Aspect of Death is needed for "Good Quality of Death "

## 3 Terms of Death

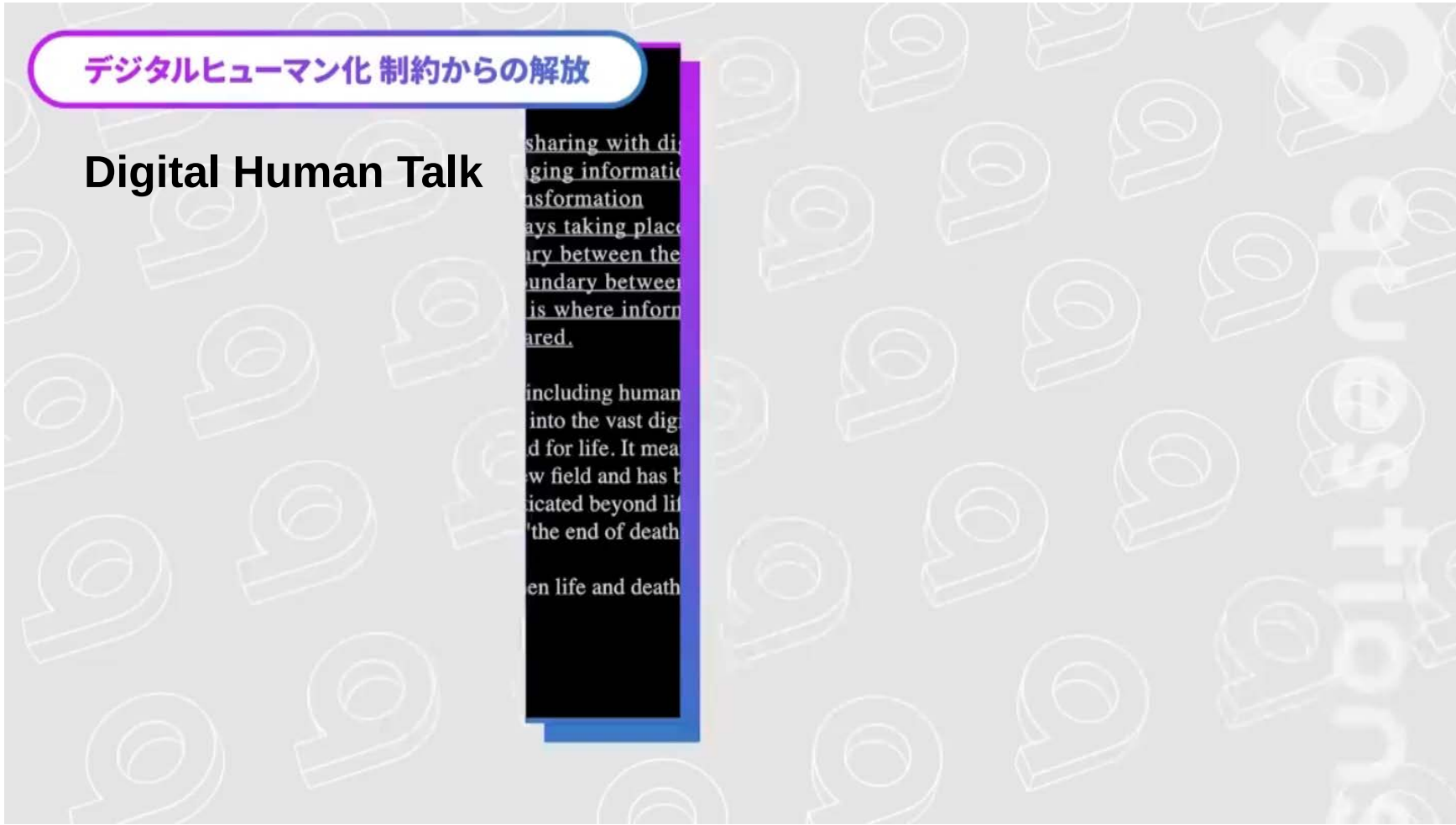
| 3 Aspects of Death | Premortal | Mortal<br>Biological Death | Postmortal |
|---|---|---|---|
| Physical Death | Decline of Physical Function | Determination of Death | Corpse Processing |
| Psychological Death | Reflection on Death | Near Death Experience | Funeral Ceremony |
| Social Death | Decline of Social Relationship | Social Acknowledgement | Management of Assets |

(like WHO definition of Heath)

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RIFH. Japan

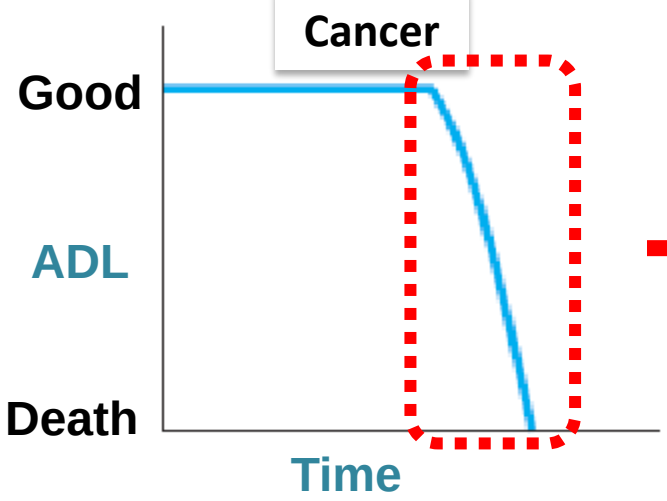
# Digital Impact

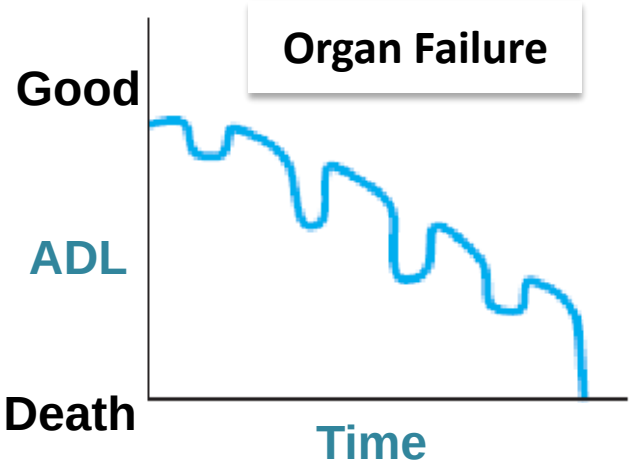
# Death in Digital Society

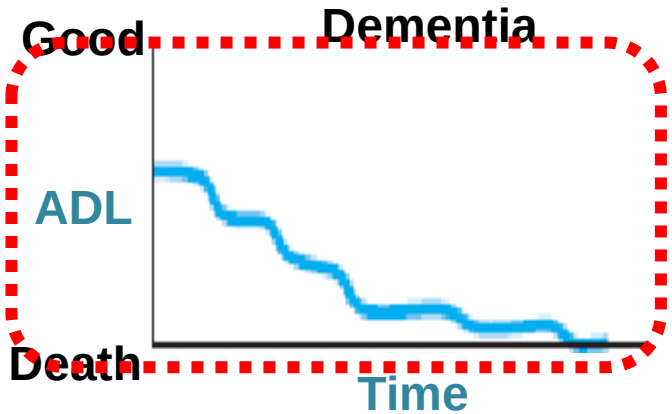



People don’t die anymore in cyber space!

# Care Transition



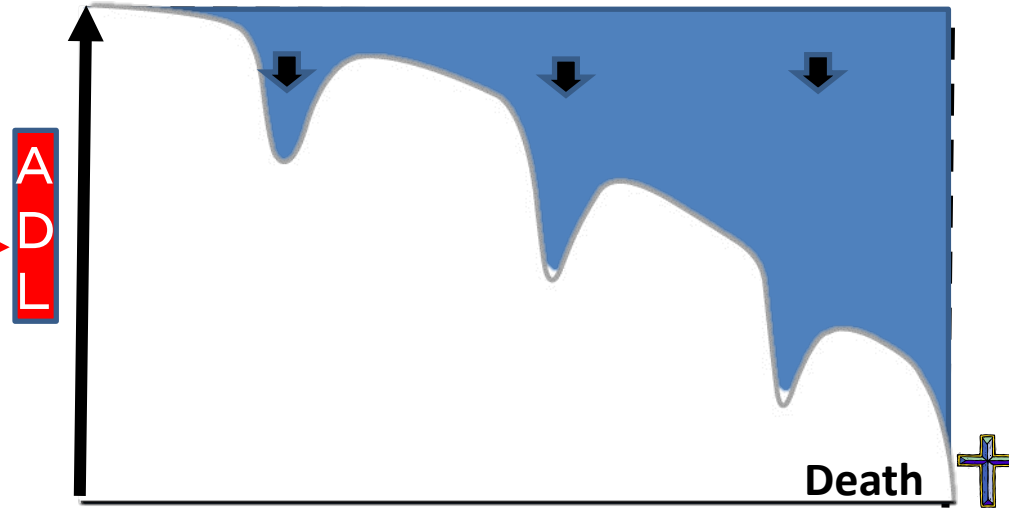




Enlarged

Compressed

## Care Cycle

Repeated Episodes

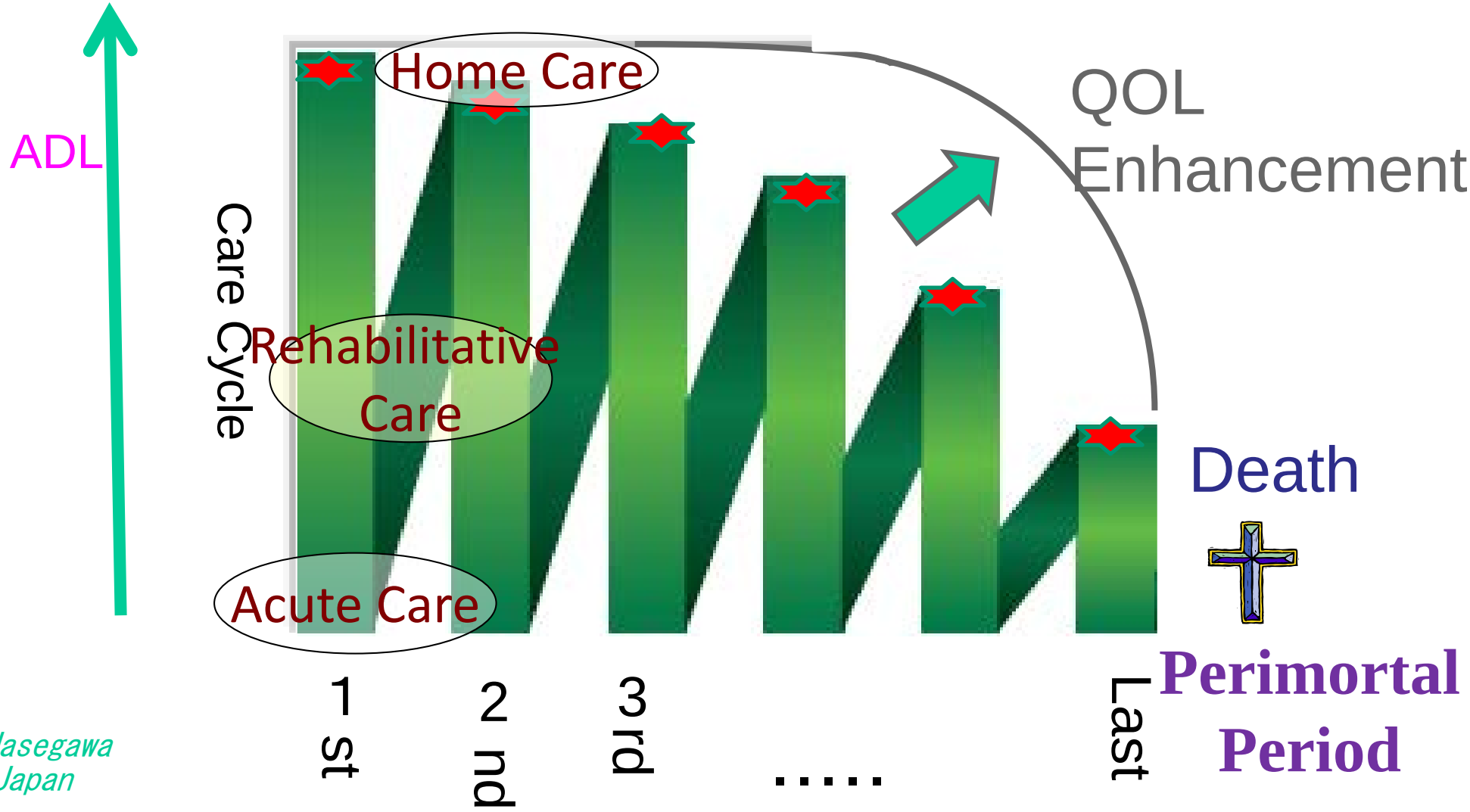



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RIFH. Japan

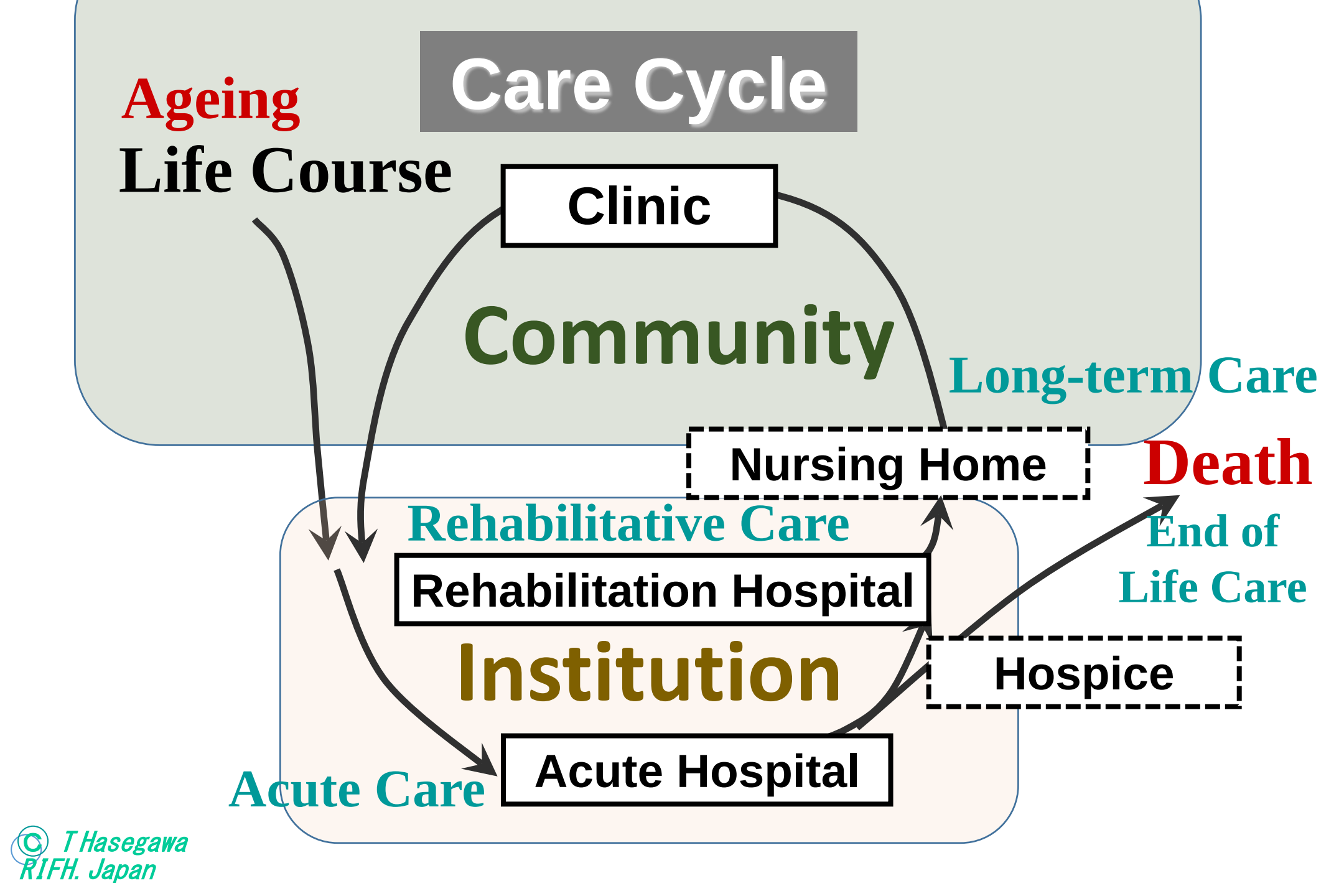
Episode

# Care Spiral

## Follow Life Courses

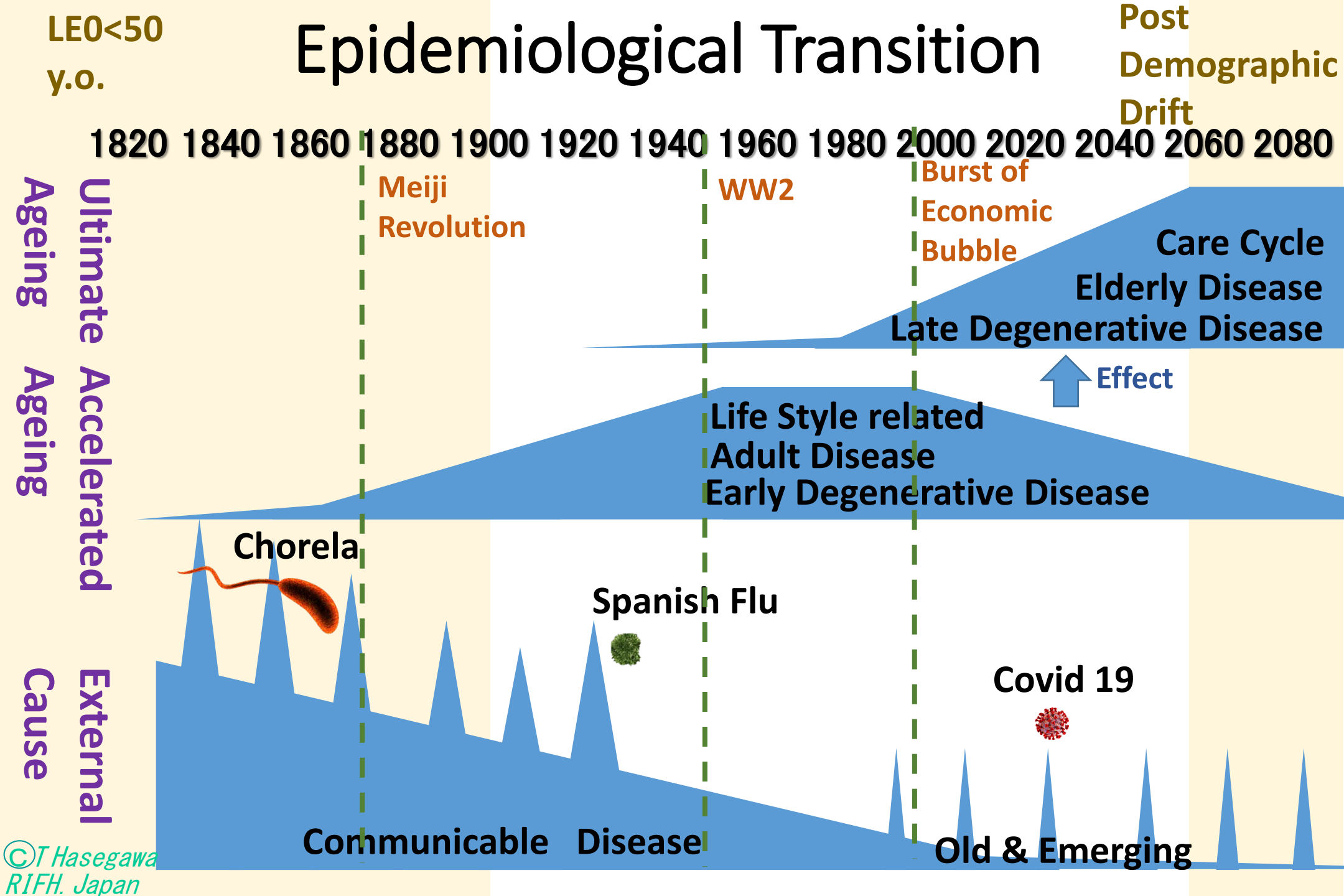



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# System Transition


LE0<50
y.o.
Epidemiological Transition
Post
Demographic
Drift
1820 1840 1860 1880 1900 1920 1940 1960 1980 2000 2020 2040 2060 2080
Meiji
Revolution
WW2
Burst of
Economic
Bubble
Care Cycle
Elderly Disease
Late Degenerative Disease
Effect
Life Style related
Adult Disease
Early Degenerative Disease
Chorela
Spanish Flu
Covid 19
Ageing
Ageing
Ageing
Ultimate Accelerated
External
Cause
Communicable Disease
Old & Emerging
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# Demand for Health Care by Age

Age

0 years

50 years

75 years

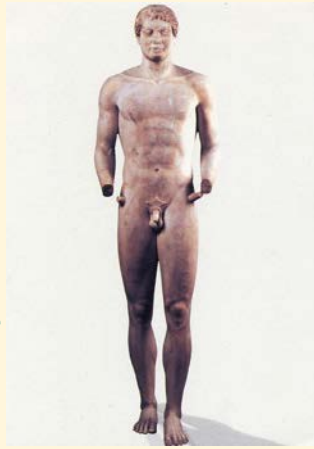


Ageing



**Traditional Diseases**

**External & Reproductive**



**Injury**

**Maternal morbidity**

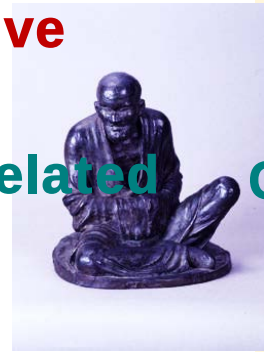
**Prematurity**

**Infectious disease**

**Nutritional deficiency**

**Early Degenerative Diseases**

**Life-style related**



**Cancer**

**Stroke**

**Cardio-Vascular diseases**

**Organ Failure**

**Late Degenerative Diseases**

**Geriatric**

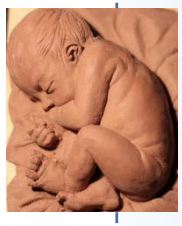
**Dementia**

**Frail Elderly**

**Parkinsonism**

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# Two Different Health Care Demands



Age

0 15 35 50 75

One Disease
One Episode
One Intervention

Care
Cycle

ADL

Perinatal Period

Perimortal Period

Productive & Reproductive Period

Old-Old

Traditional Demand

New

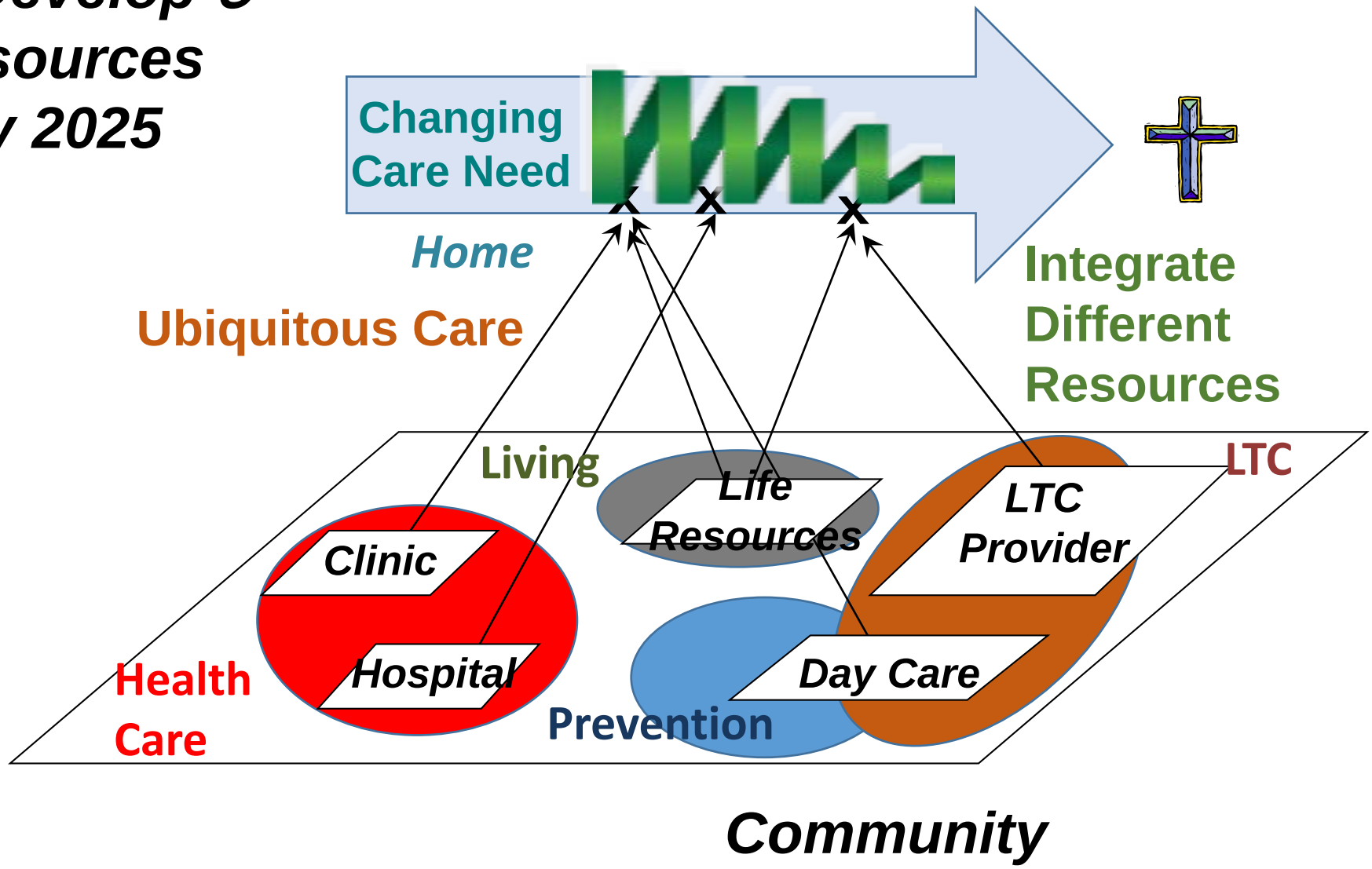
Rapidly Decreasing

Increasing

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# Integrated Community Care

***to Develop 5 Resources by 2025***




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# Goal Analysis

# Objective Shift

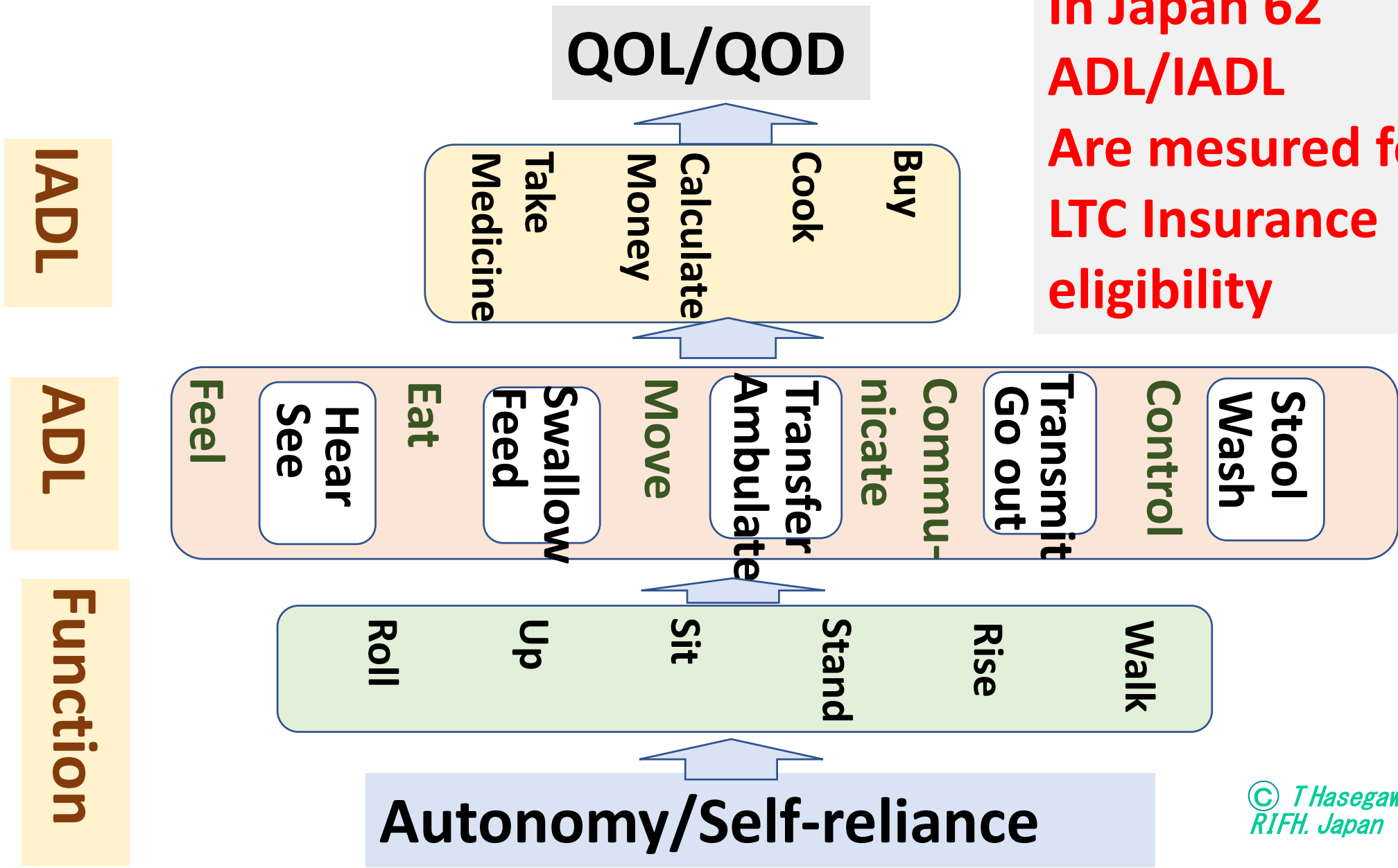
# Major Transitions in Health Care

| | Late 19th century | 21st century |
|---|---|---|
| Lifespan | Up to age 50 | 85 and beyond |
| Cause of Death | External/reproductive | Aging |
| Diseases | Single | Multiple |
| Sequence of events | Single episode | Continuous/ circular |
| Goal | Curing diseases/ saving lives | Improvement in function/support of life |
| Objective | Health | ADL/IADL |
| Location | Hospital | Community |
| Characteristic | Facility-based medical care | Care cycle |
| Originated in | Germany | Japan/ Asia |



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# Three Layers of 20 ADL/IADL



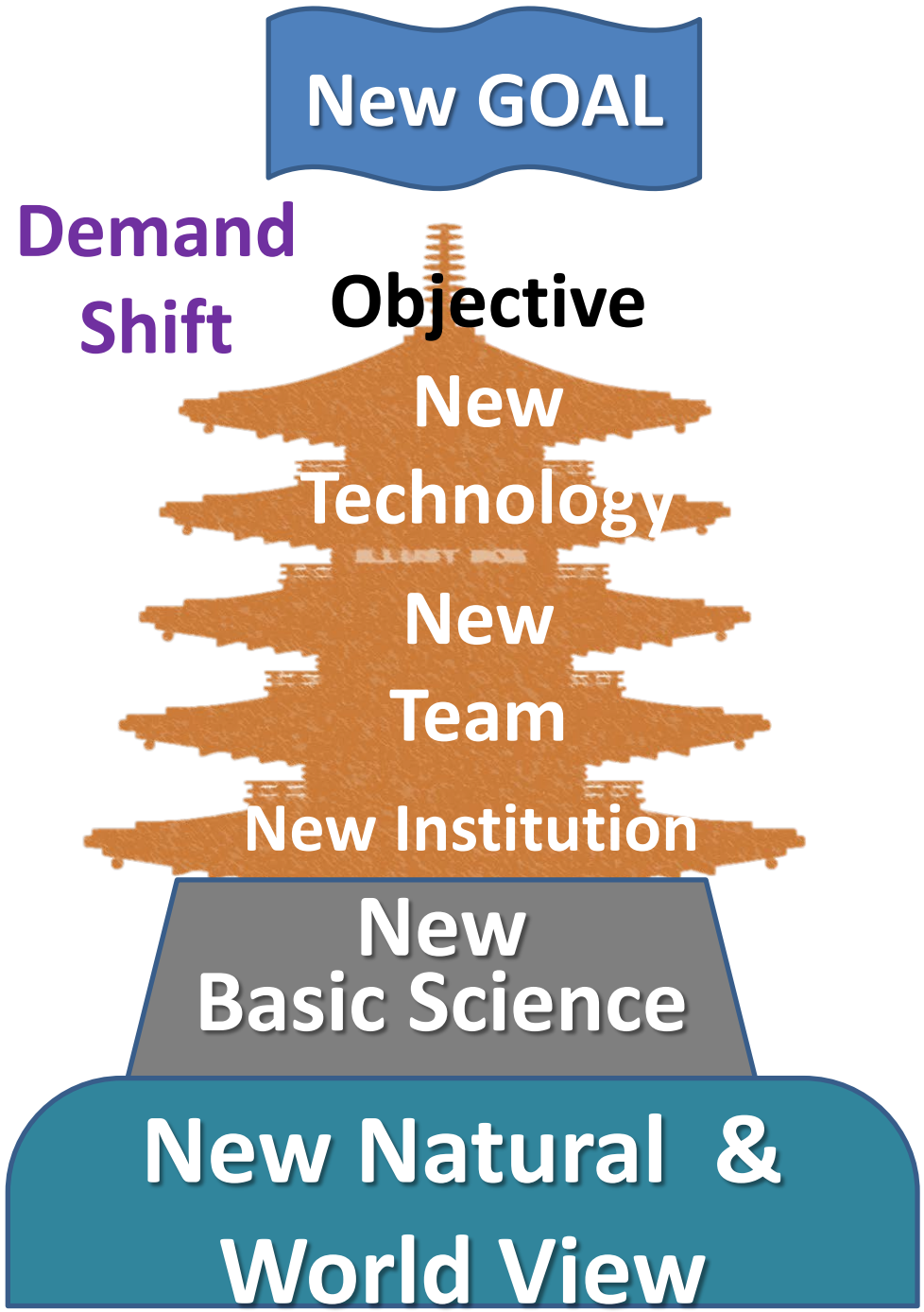

**In Japan 62 ADL/IADL Are mesured for LTC Insurance eligibility**

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Interests by local governments
Use Same System
韓国
日本
中国
New Health System In 21c is from Asia & Japan
Inventor of System Dr TsutSui
台湾
Considering
Vietnum
Request of support to
Thai
これから
スリランカ？


© T Hasegawa

# Total Transition




# New Medical System for the 21st Century

QOL/ADL Improvement

ADL/IADL cluster group

Technological innovation

Extended Care Cycle Care

Professional Role Redefined

Community-based Integrated Care System

Eco-Evolutionary Medicine

From Asia's rich history and culture

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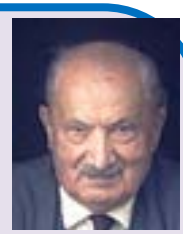
# World View Philosophy Old & New

**Purpose, Technology and Theory**

- view of human rights
- one's view of humanity
- one's view of the body
- one's view of life
- perspective on nature
- world view

## Former

**Heidegger,** existential philosophy



**Kant** German Idealism



**Descartes,** Theory of Machines



**Plato** Greek World



**Christ** Monotheism



Philosophical system behind the technical system

Character system alphabet affected

## New Theories

**Shoeki**



**Ansai**



**Shu Xi**



**Kukai**



**HwaYuan**



A system of thought is necessary to build a theoretical system

one's take on the state of the art

Character system Kanji affected

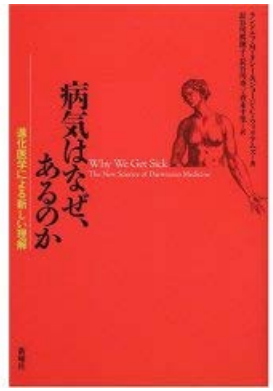
# 進化生態医学

## Ecological & Evolutionary Medicine （EEM)

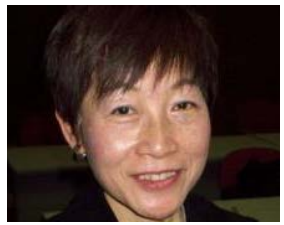
## 21世紀最先端医療支援基礎医学



Randolph. M. Nesse
(University of Michigan, USA)
1948-




Japanese Translation

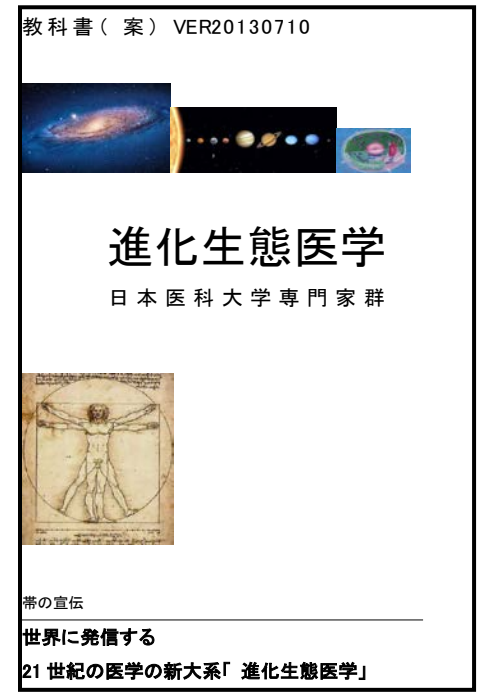


## 翻訳者

長谷川 眞理子
（1952年 - ）
総合研究大学院大学教授、



長谷川提案
未来医療研究機構



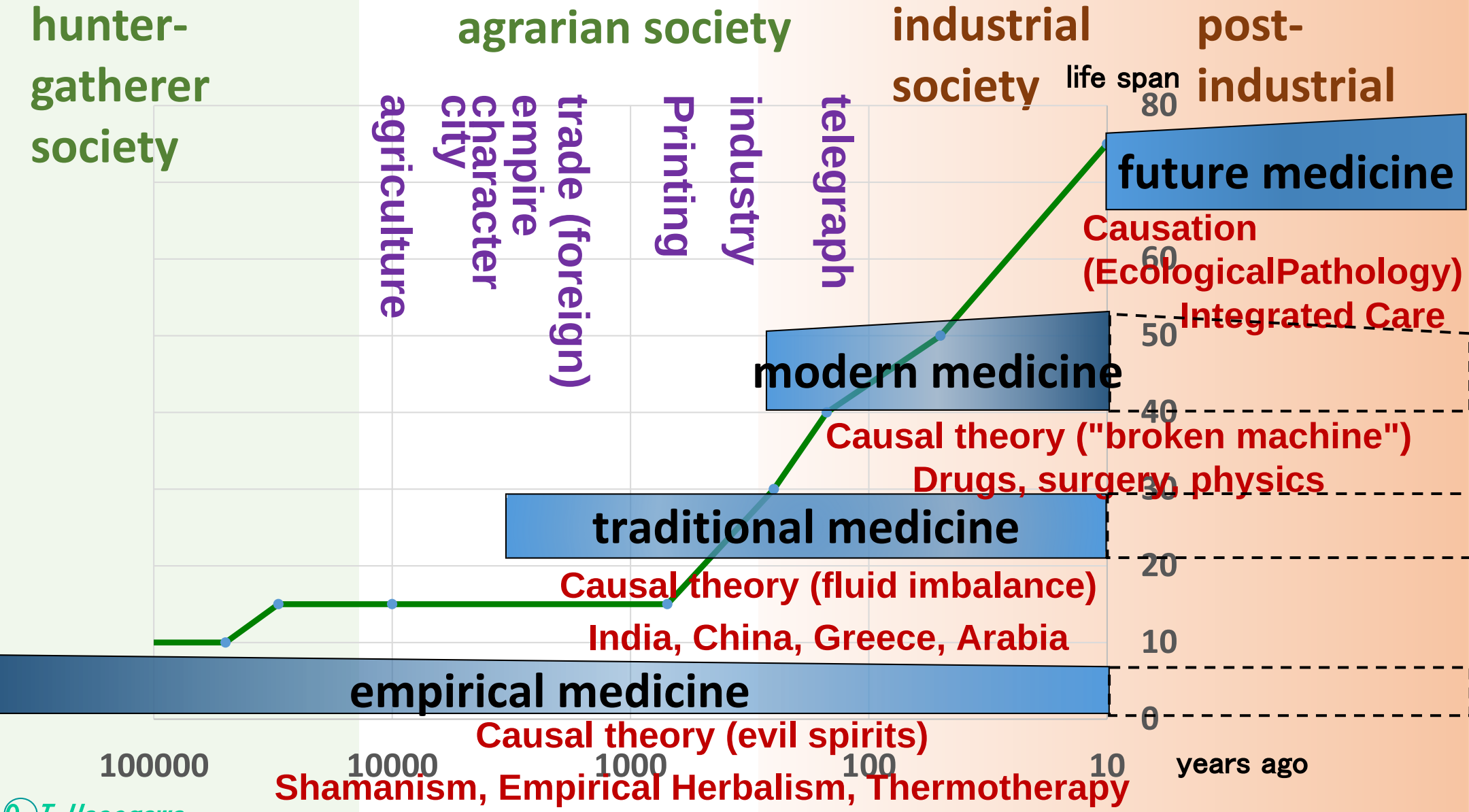

進化医学與
生態学統合
日本医科大学
教授陣乃共同開発
医学教育応用



丸山茂徳教授協力

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# 3 Medicine ... History and Future

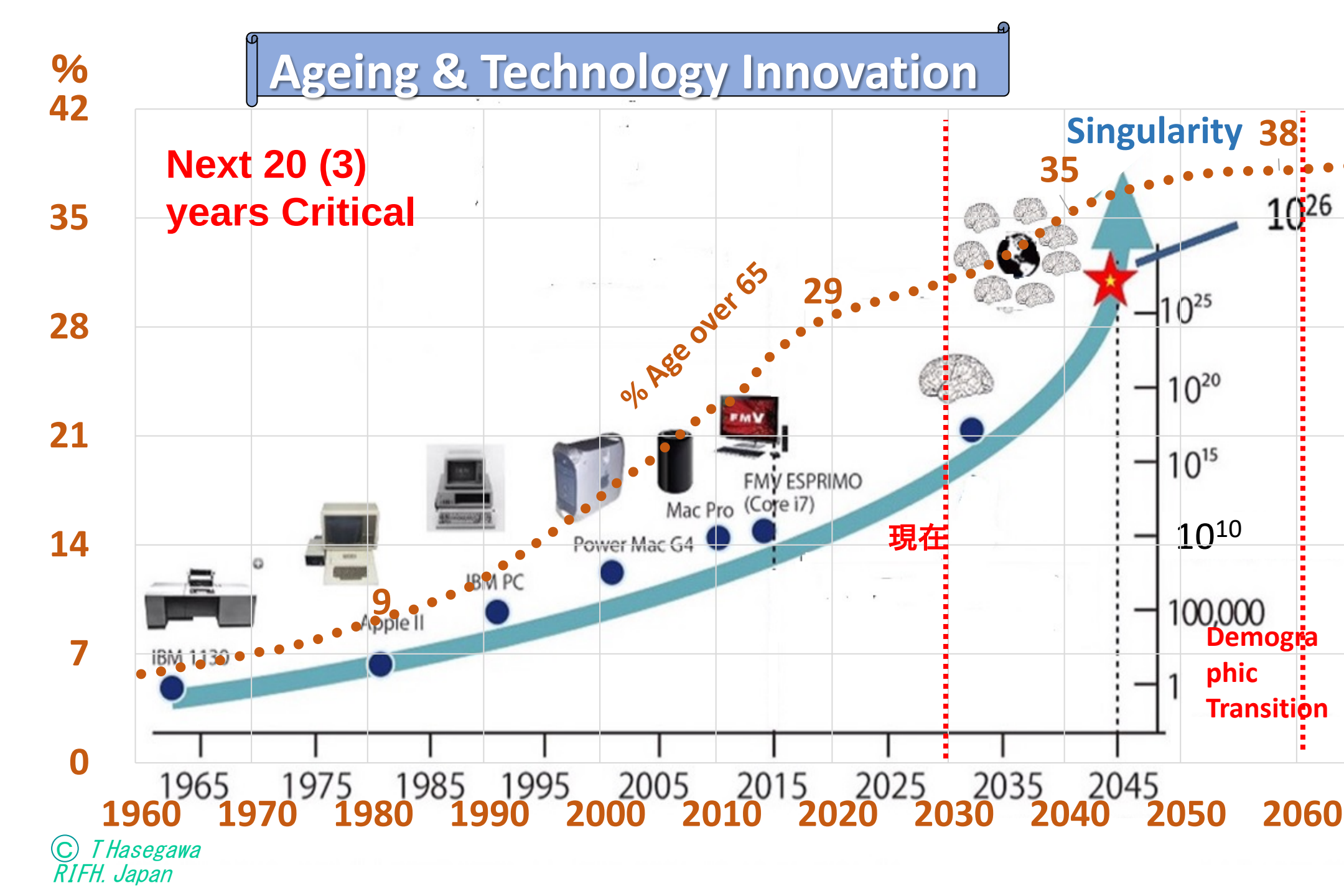



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*Dunn, F. 1976. "Traditional Asian Medicine and Cosmopolitan Medicine as Adaptive Systems. "In C. Leslie, ed. Systems. Berkeley: University of California Press Revised.*

# Technology Innovation

# Ageing & Technology Innovation




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# Japanese Gov Proposal

**Society 5.0**
**Digital Twin under Super City**



Digital Twin

21st century~
Society 5.0
?

End of 20th century~
Society 4.0
Information Society

End of 18th century~
Society 3.0
Industrial Society

13000 BC
Society 2.0
Agrarian Society

The emergence of human beings
Society 1.0
Hunting Society

4th Industrial Revolution
Digital Transformation
AI, IoT, Blockchain

3rd Industrial Revolution
Computer
Internet

2nd Industrial Revolution
Heavy and chemical industry

1st Industrial Revolution
Light industry

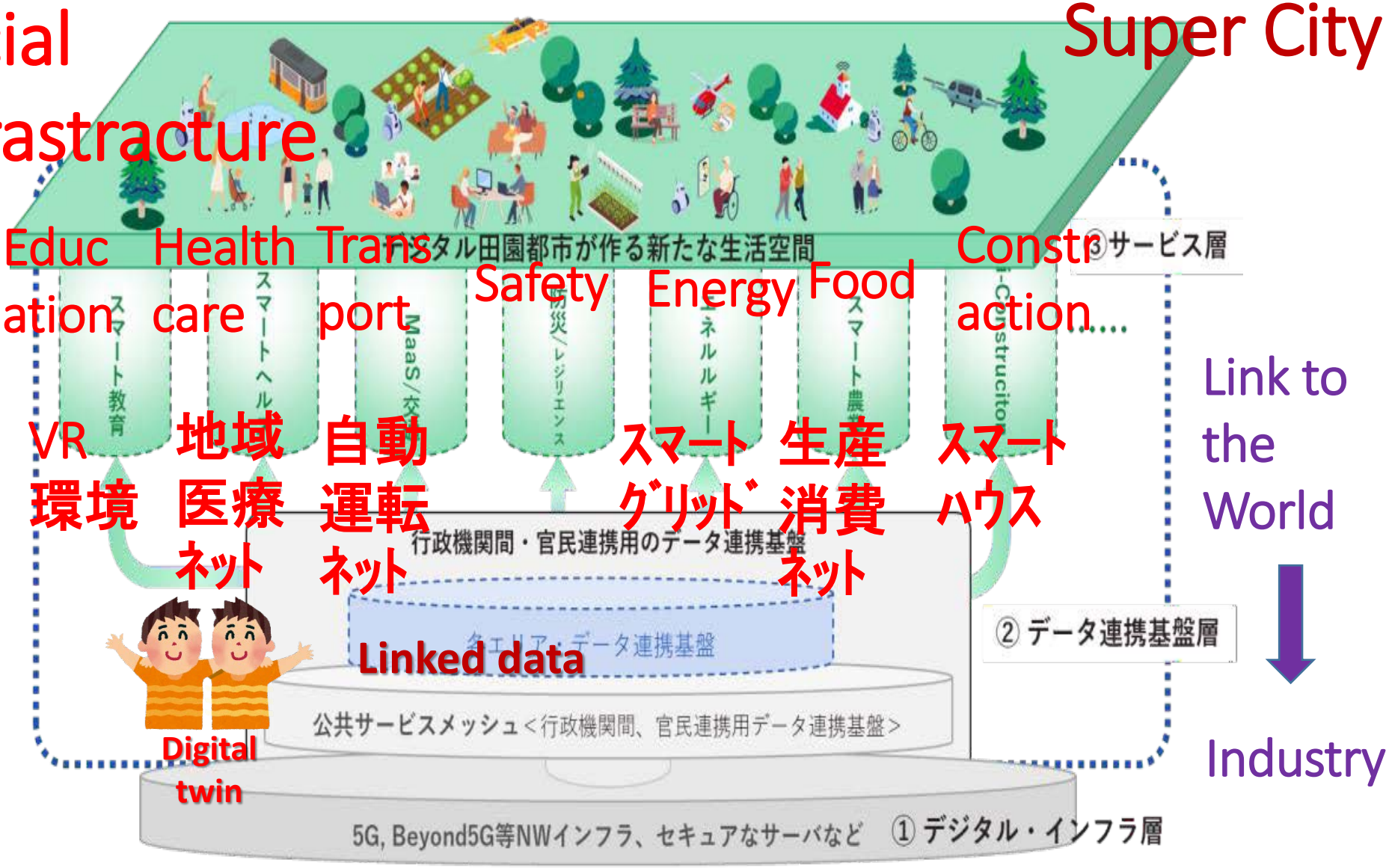
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# German Gov Proposal

# Community building & Health Data

Social Infrastracture

Super City




Educ ation

Health care

Trans port

Safety

Energy

Food

Constr action....

VR 環境

地域 医療 ネット

自動 運転 ネット

スマート グリッド

生産 消費 ネット

スマート ハウス

Linked data

Digital twin

Link to the World

Industry

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*デジタル田園都市国家が目指す将来像について202112より*

# Life Log Data



Digital Twin

生誕 20 40 60 80 100

## 子育てワンストップ



**目指す姿(例)**
子育て関連手続きをオンラインで完結

**施策(例)**
マイナポータルを活用

## 教育



**目指す姿(例)**
日本全国の最先端教材を活用／世界最先端の設備の共用

**施策(例)**
GIGAスクール構想／SINETを活用した大学教育

## 生活の利便



**目指す姿(例)**
どこにいても必要なものが届く／どこにでもいける

**施策(例)**
ドローンと自動走行で空間を超越

## 安全安心



**目指す姿(例)**
最先端技術を使った予防／予測／救助

**施策(例)**
防災プラットフォーム の構築／防災業務のデジタル化／クラウドを利用した被災者支援

## 遠隔介護・医療



**目指す姿(例)**
どこにいても個別最適医療／介護を受けられる

**施策(例)**
スマホでライフログ情報を確保／民間サービスと連携

## お悔やみワンストップ



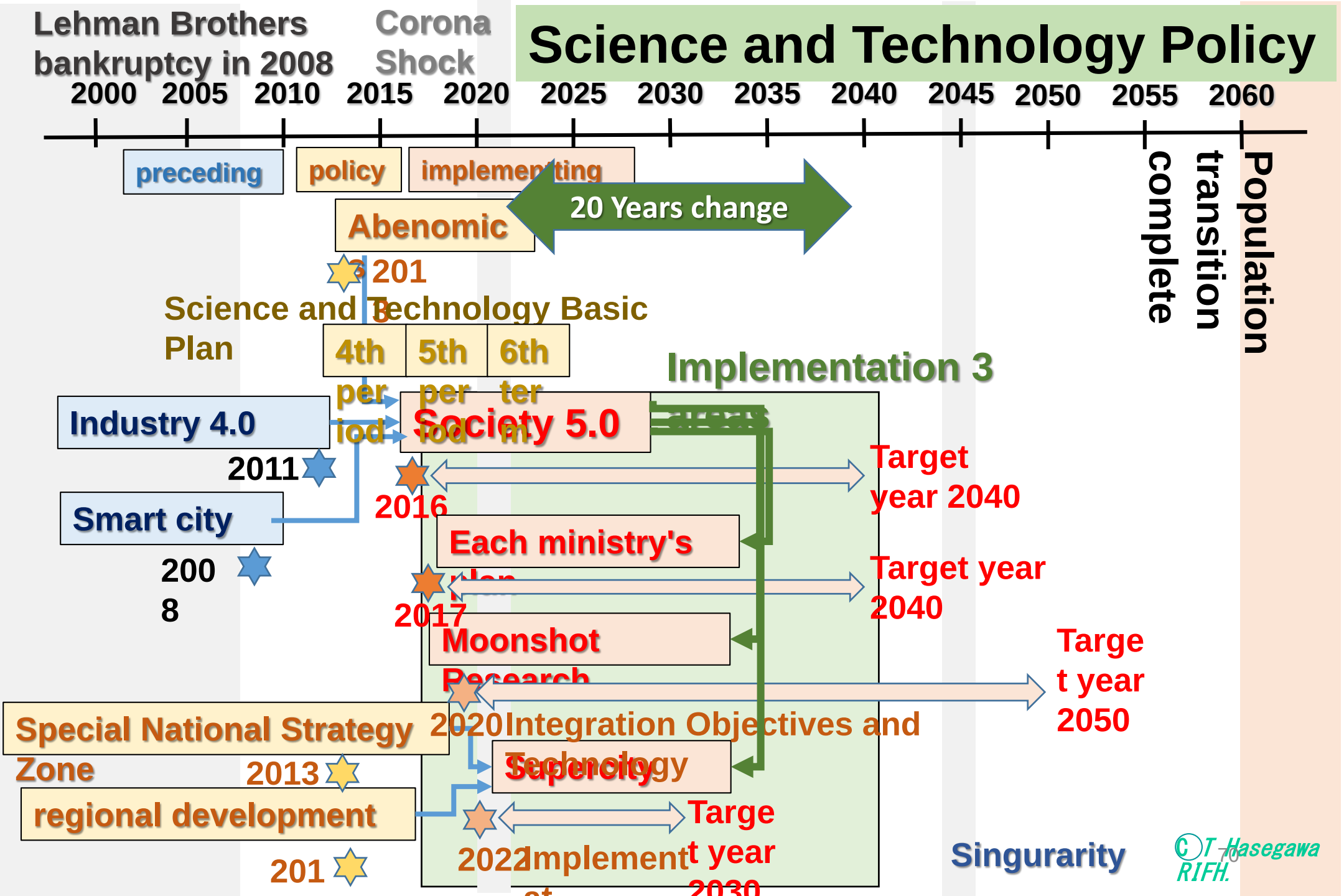
**目指す姿(例)**
憂いなく永眠

**施策(例)**
戸籍情報システムを活用した法定相続人の特定／死亡手続きのオンライン完結

Grow Learn Work Heal Monitor Morn

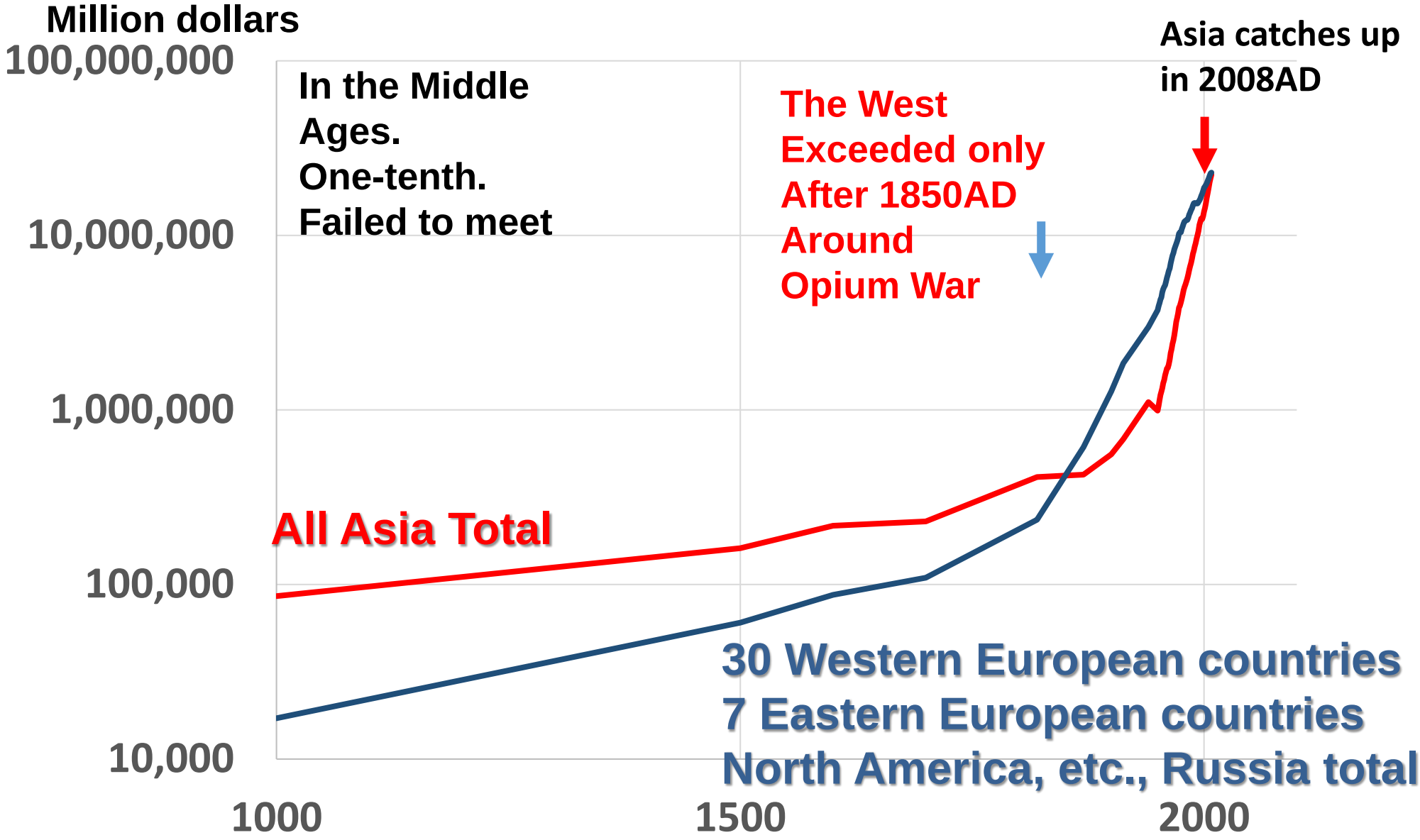
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# Science and Technology Policy



# Summery

# World GDP Comparison Trends 1000-2008AD






# Sharing of Trade & Culture

## Like Mediterranean Sea

中世交易

交易据点

釜山
博多
坊津
沖縄
那覇
呂宋
ルソン島
寧波
杭州
宋
広東
広州
泉州
タンロン
大越
会安
大理
真臘
チャンパー
ナコーンパノム
インドラプラ
ヴィジャヤ
ベンガル湾
ベンガル
ラ朝
ジャーヴール
運羅
ジャーナラ
ヨムイサ
安南
マレー半島
南シナ海
ボルネオ島
ジャワ島
北東季節風
(11~3月)
西季節風
~9月)
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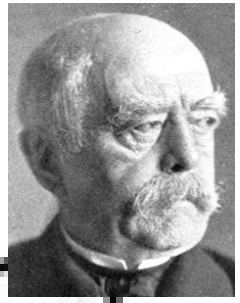
# Longevity of Germany 37 y.o. around 1850



Rudolf Virchow



Robert Koch



Otto Bismark

**Studied Medicine in Germany**



Organized Steeling of Knowledge Property

**Copied Health Insurance System**

模倣

輸入



北里柴三郎



森鴎外



後藤新平

# New Medical Sciences for 21 Century

## Collaborative Research with Asian countries



前世界医師会長
横倉　義武



日本医学会長
門田　守人



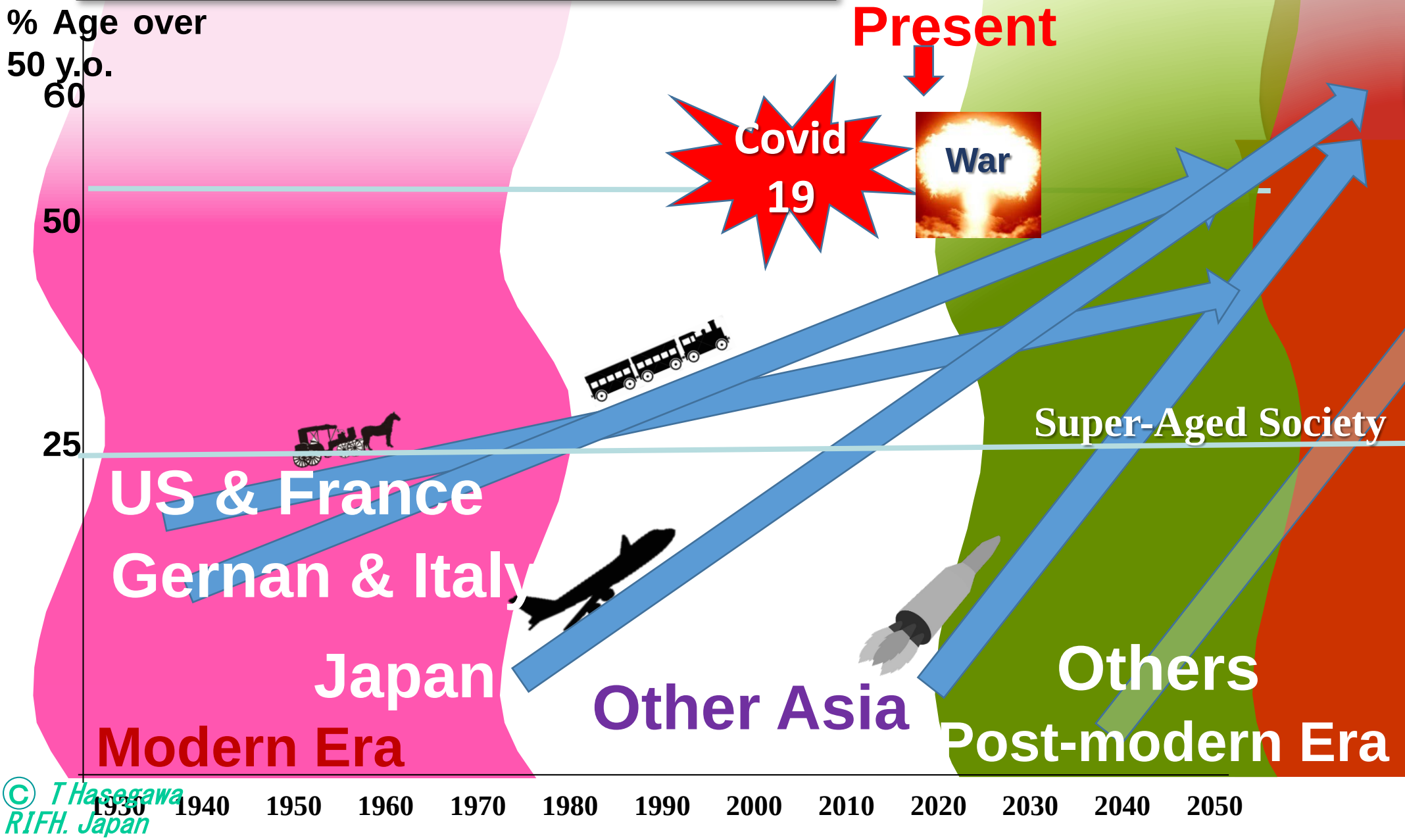
前日本医療研究
開発機構理事長
末松　誠

Return with Asia



asegawa
apan

# Future of the World




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# Welcome to Tokyo

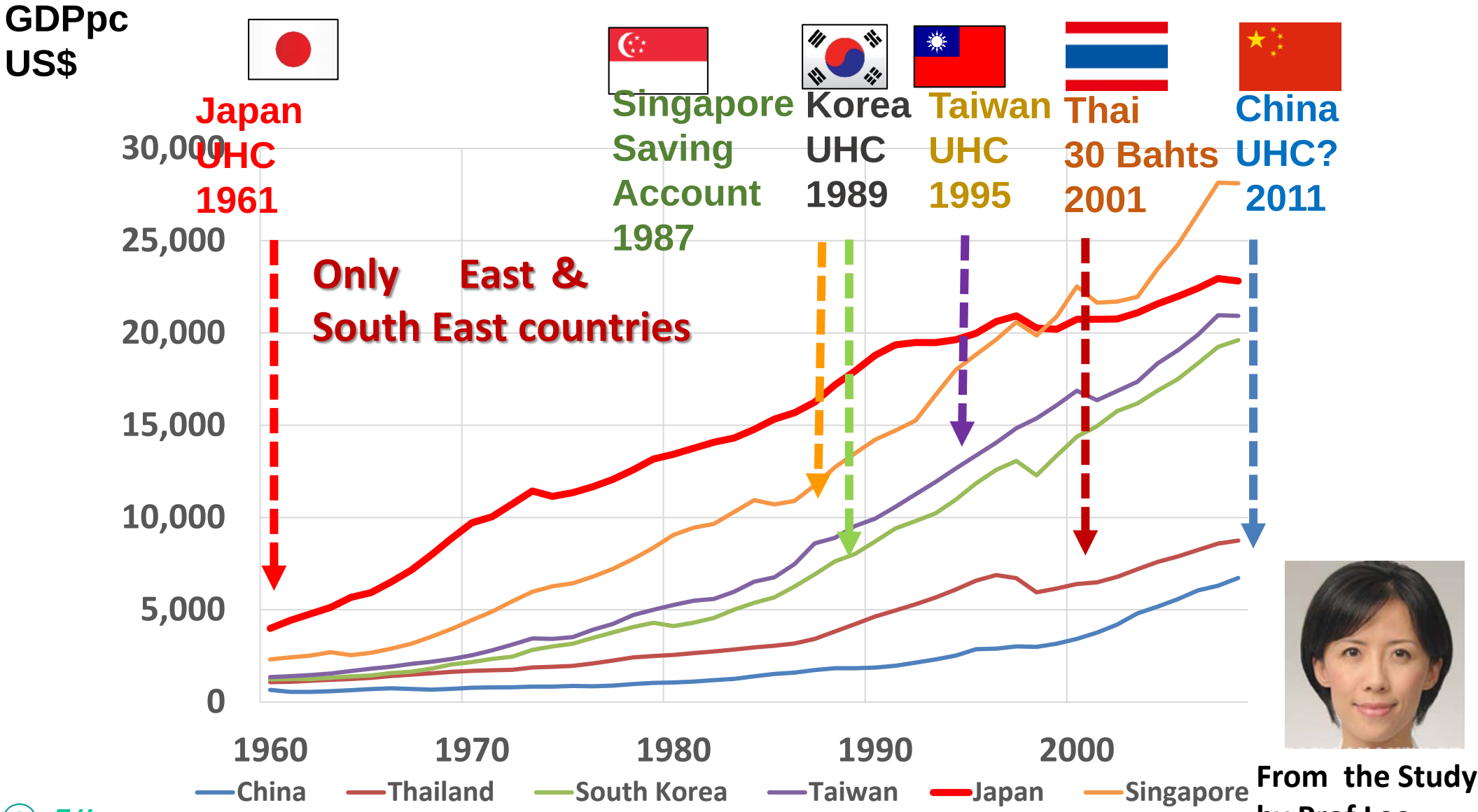

Welcome to
25th Anniversary
12/ 8 2023
Character of Snake
巳 this year
in Chinese
T.HASEGAWA
2013
2/2 Sat ~ 2/3 Sun
Location
Nippon Medical School
Alumni House 3rd Floor
Host: Department of Health Policy & Management, Nippon Medical School
Professor & Chair Toshihiko Hasegawa
Department of Social Medicine, Toho University
Professor & Chair Tomonori Hasegawa
Info: DragonNetSecretariat (81)358028202 dragonnet15th@gmail.com
15th Anniversary
Its accomplishment
and future.
ragon Net
History: Health policy research network including Asian eading researchers and practitioners working for constructing universal health insurance system in Korea and Taiwan.
The network has been contributing social security and health policy in Asian coutries.
Participants:
Japan Ministry of Health,JICA, Labor & Welfare, Doshisha University, Kagawa University, Aoyama Gakuin University, Meio University, Tokyo Dental College
Korea Seoul National University
Taiwan National Taiwan University
Hong Kong Hong Kong Polytechnic University
Singapore National University of Singapore
Thailand National Health Security Office
Vietnam Ministry of Health
Tohaku Hasegawa
1542-1610
T.HASEGAWA

# Dragon Net Story

DRAGON NET

**Contribution to human history toward UHC**

# UHC Established Year and GDP pc






From the Study by Prof Lee

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