

Aging Society and Psychology

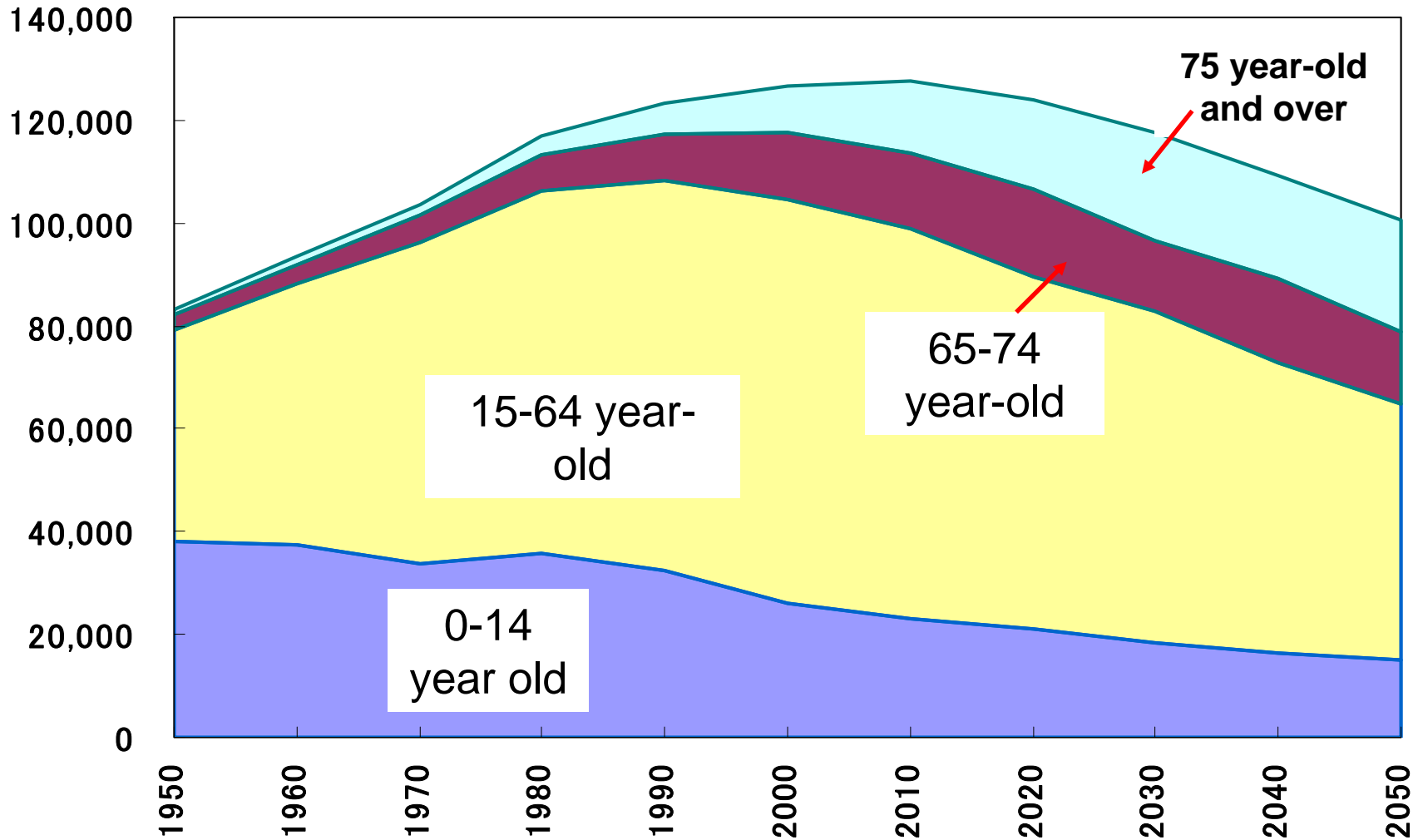
**Program for Gerontological Research,
Organization for Interdisciplinary Research,
The University of Tokyo
<http://gerontology.jp>
Hiroko Akiyama**

**Global Focus on Knowledge
May 25, 2008**

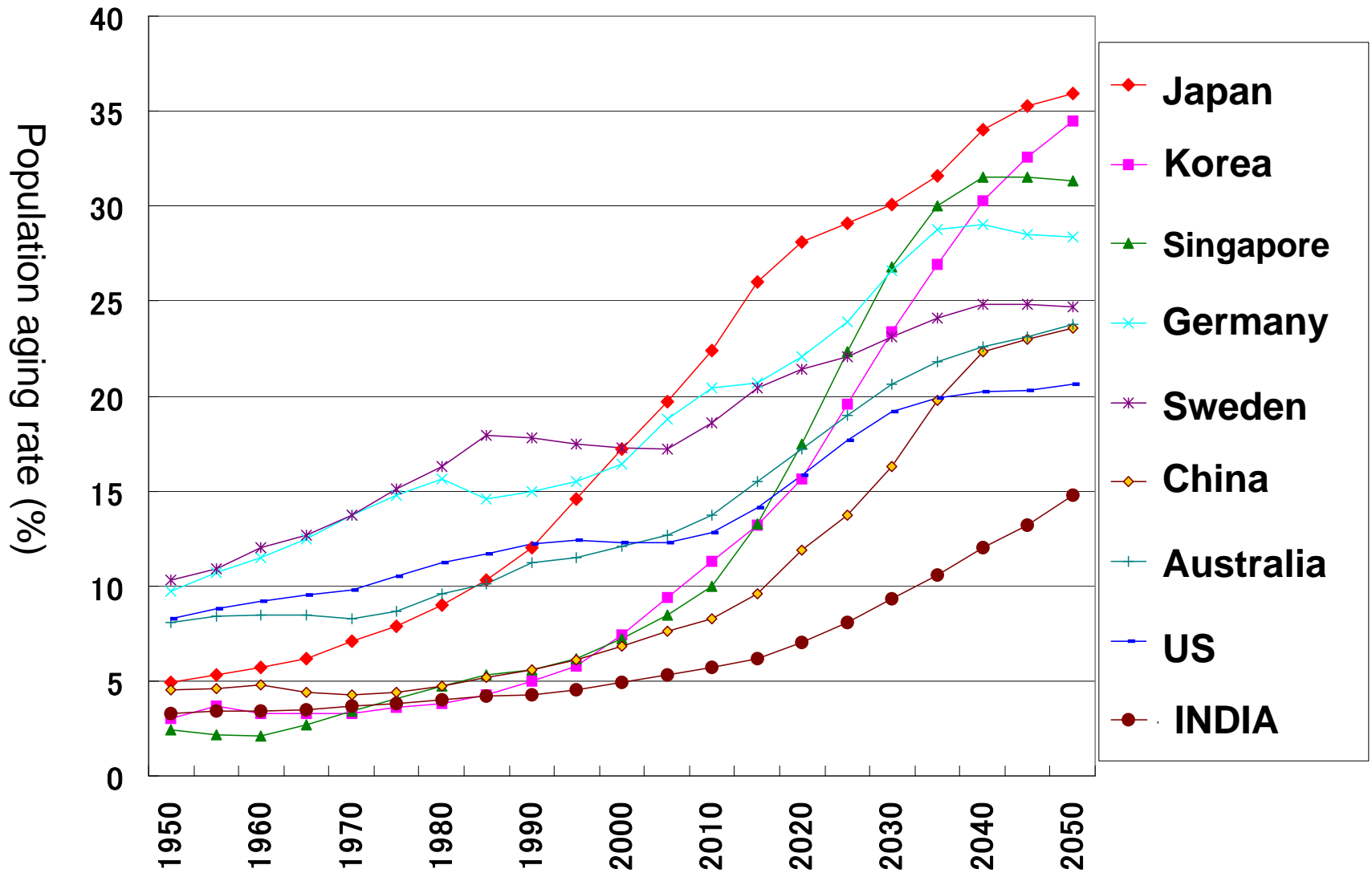
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Demographic Change in Japan(1950–2050)

Per Thousand



Changes in Population Aging Rates around the World (1950–2050)



What is Gerontology?

It is an interdisciplinary field studying a variety of issues concerning the elderly in an aging society.

History of Gerontology (1)

Geriatrics

How long can human life span be extended?

Clarifying the causes of physiological aging

Overcoming adult diseases

Gerontological social sciences

The effects of the aging of the population on the social system, the economy, and the medical system

History of Gerontology (2)

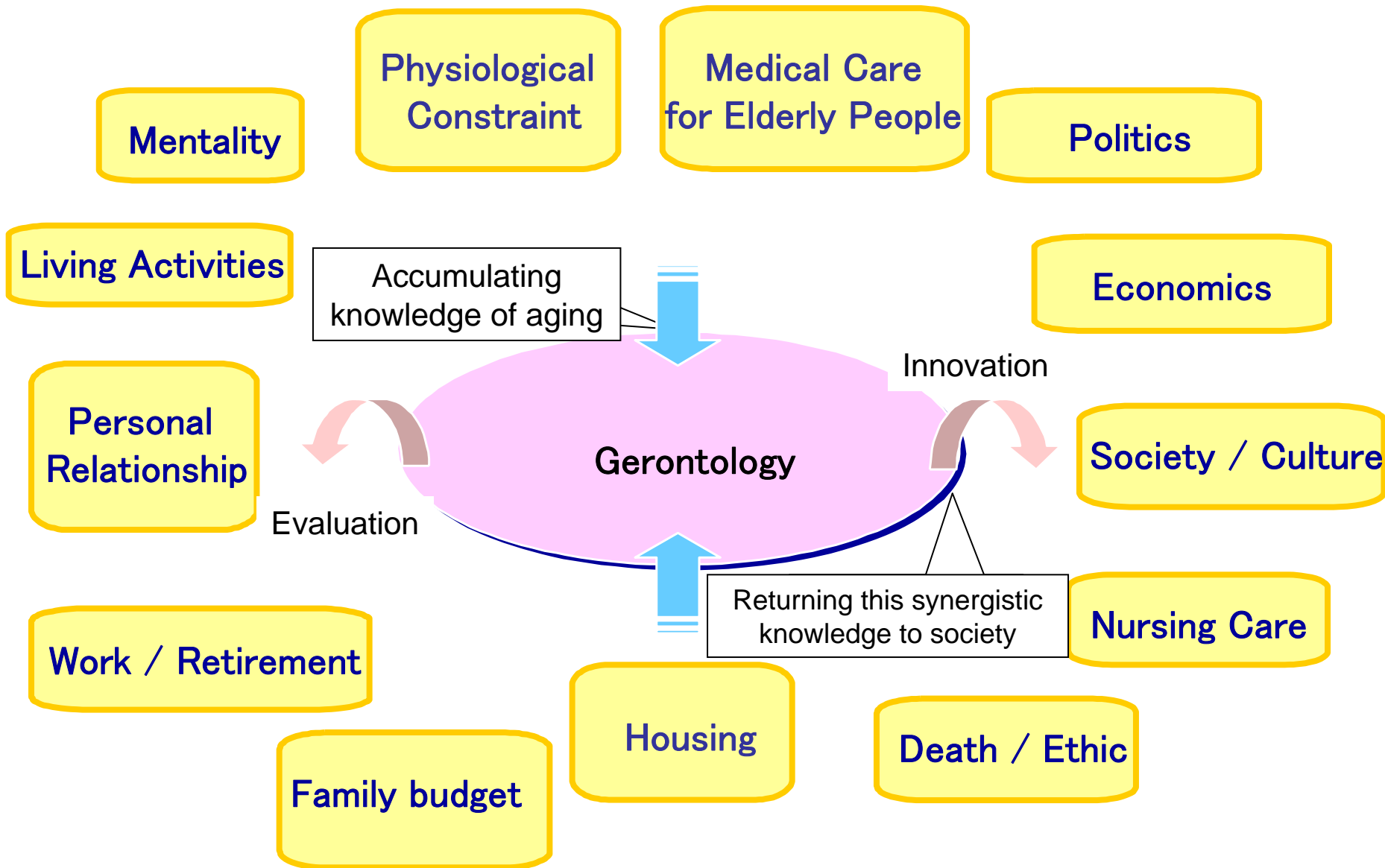
◆ **Search for Quality of Life**

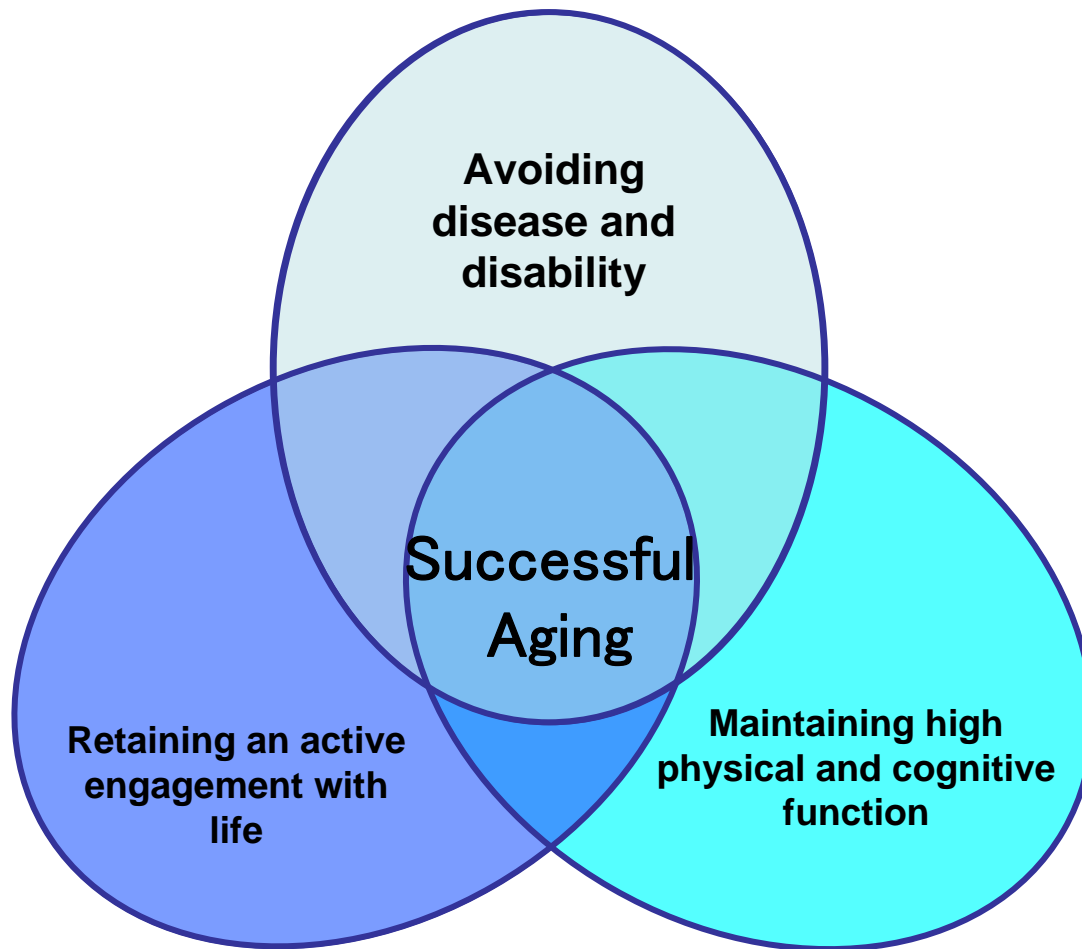
Successful Aging

◆ **Gerontology as an interdisciplinary study**

medical science, nursing science, biology, economics, psychology, sociology, social welfare studies, study of law, engineering, architectonics

Interdisciplinary Gerontology





Criteria of Successful Aging (Rowe & Kahn, 1987)

Ideas of Successful Aging

Being independent and productive

- ◆ Physical independence
- ◆ Economic independence
- ◆ Mental independence
- ◆ Contribution to society

That makes the impossible possible.

Chasing a ball, with a boy's heart. (The Kobe Shimbun 2004/09/15)
Hiromitsu Oshige (64), leader of a soccer school for the elderly

Figure removed due to
copyright restrictions

They've gotten together as partners again. "We will definitely fix them." (The Kobe Shimbun 2004/09/14)

Yoshihide Ishikawa(70), Seichiro Kamata (84), repairing cameras

Figure removed due to
copyright restrictions

**They've got a treasure box. They have the sensitivities of twenty
year olds.** (The Kobe Shimbun 2004/09/14)

Takako Hosoya (74), Sayuri Yanagihara (74), CG artists

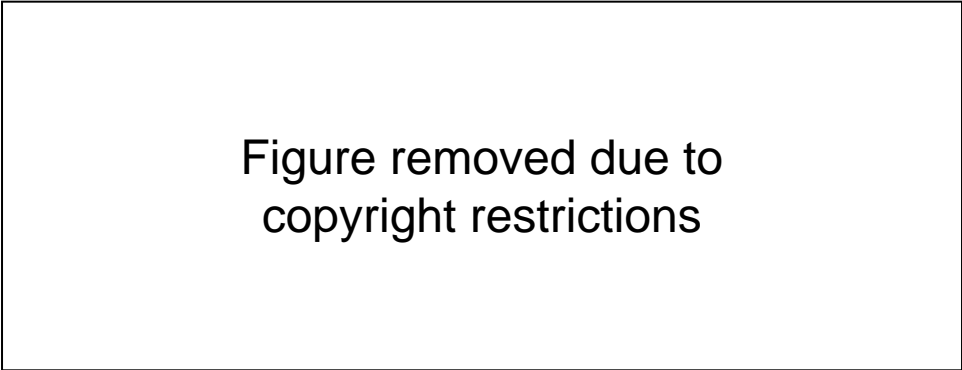


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Visiting their daughter and grandchildren in Los Angeles.



‡ Source : SPI(Japan),Inc.

Symposium Commemorating the Opening of a Program for Research in Gerontology,
Organization for Interdisciplinary Research,
The University of Tokyo
“Interdisciplinary Science for the Realization of Healthy Longevity to 100 Years of Age”
Venue: Yasuda Auditorium



The stages of life

The first stage

Child

The second stage

Adult

The third stage

Older adult

The stages of life

The first stage Child

The second stage Adult

The third stage The young old (Third Age)

The fourth stage The oldest old (Fourth Age)

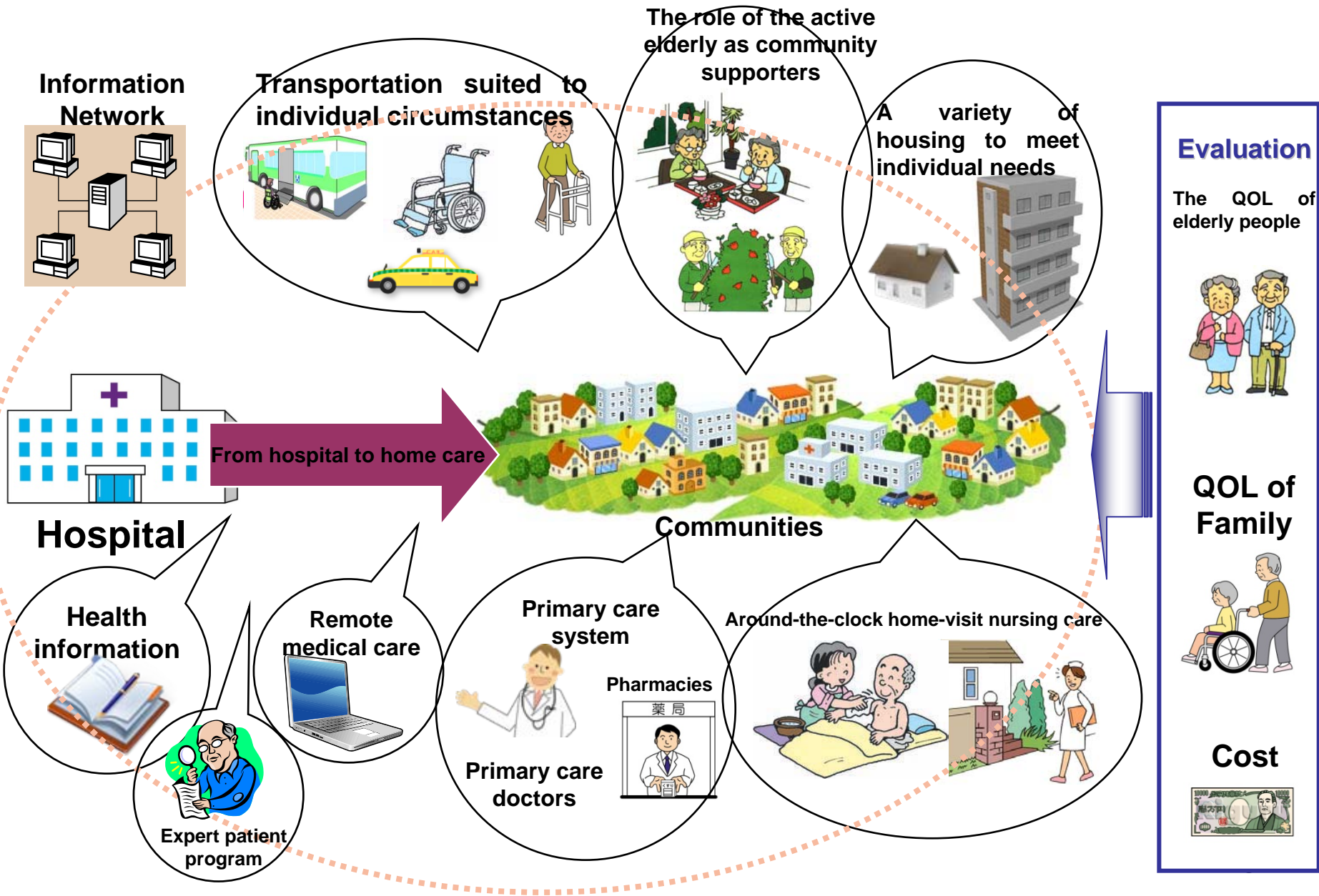
Problems in the Conventional Model of “Successful Aging”

- ◆ **“Being independent and productive” has become an ideology.**
- ◆ **The goal is to prolong the middle-age period until the end of life.**
- ◆ **Individualized lifestyles/ Poor interpersonal relationships**

Eating individually → Eating alone

Successful Aging expanding its scope to Fourth Age?

Aging in place: feeling at home and being themselves in a community



Interdisciplinary Research on Transportation for the Elderly

Personal Factors

Driving characteristics

- When do they start turning the steering wheel?
- Accelerator-off
- Brake-on
- Turn signals-on
- Visual behavior



Physical characteristics

- WCST (Wisconsin Card Sorting Test)
- Complex reactions
- Walking ability
- Balance



Life characteristics

- How often do they drive?
- When did they start driving
- How far do they drive
- Driving at work
- Experience of any accidents?

Environmental Factors



Vehicle characteristics

- Cars that are easy to get into and out of
- Cars with an easy-to-see instrument panel
- Cars with a wide view
- Cars which help prevent careless mistakes



Traffic/Community characteristics

An environment in which the elderly can drive safely

- Widening roads
- Priority roads for the elderly
- Residents' acceptance of elderly drivers

An environment in which the elderly can sustain their lives after giving up driving

- Community buses
- Demand buses
- Special transportation services
- Low-floor buses
- Making station facilities barrier-free

Social withdrawal: about 60 percent are adults.

Social withdrawal among adults

- Social withdrawal, the condition in which a person stays at home for a long period without social contact, is increasing.
- What types of people withdraw from society?
- What behavior (violence against family members), or past experience (refusal to go to school) correlates with social withdrawal?
- How can social withdrawal be handled? (Clinical psychology)— It is important to provide support to people who would otherwise tend to withdraw from society.

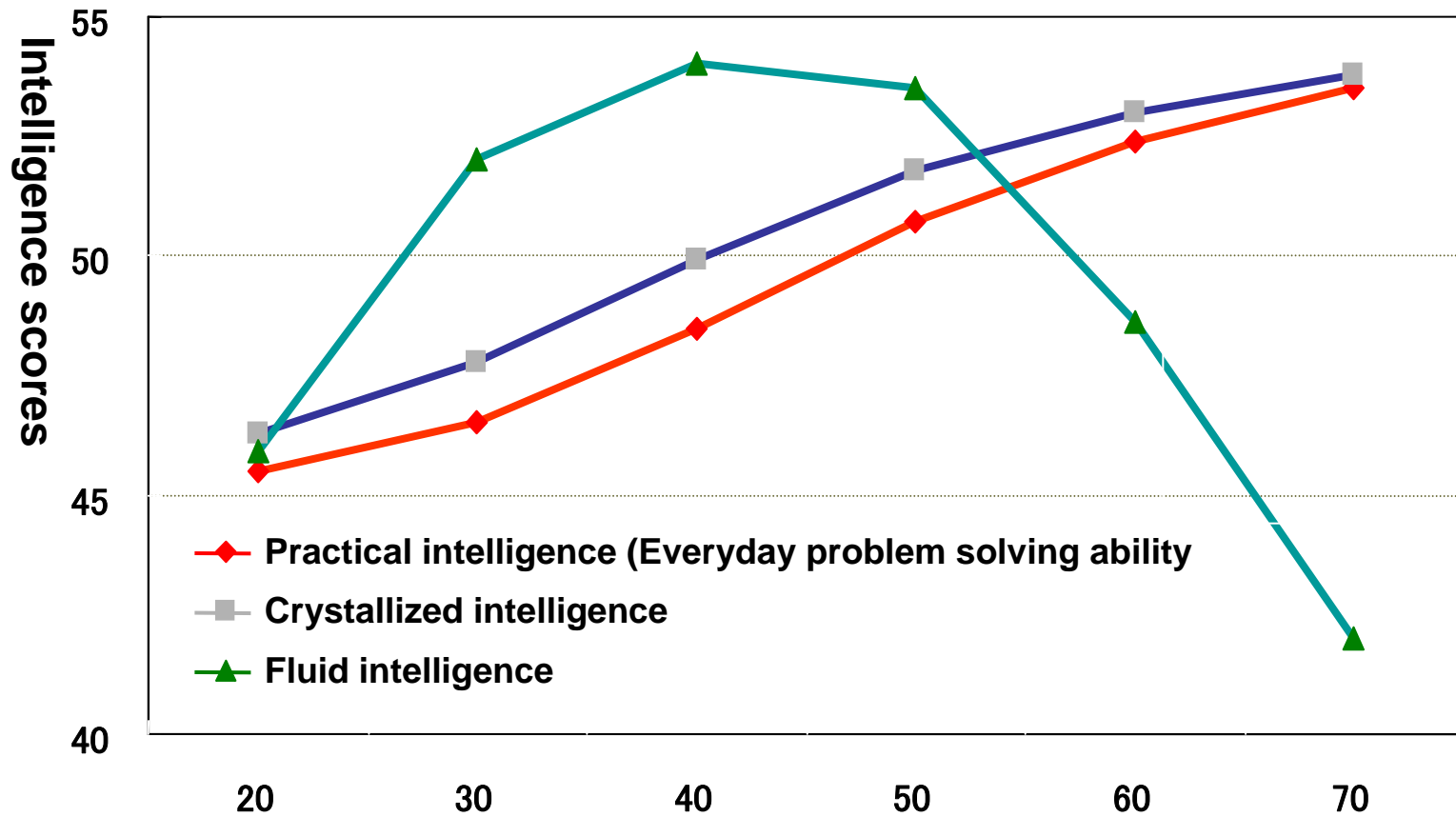
The increase of crime and depression among the elderly

- The above-mentioned are examples of issues in which an increasing number of elderly people are involved. Therefore, it is important to ensure that psychological theories and techniques and scales utilized in evaluation of these issues are relevant to the elderly.
- As mentioned in today's syllabus, psychology is a science which has developed in the west.
- Psychological theories have mainly been developed based on knowledge obtained from studies conducted on young western men.
- Those theories have been treated as if they were universal and applicable to all people.
- When I studied psychology in college 30 years ago, nobody was studying people in middle and old age.
- I wrote my graduation thesis on the feelings of alienation experienced in adolescence.

What is Intelligence?

The ability to deal with various kinds of problems arising from everyday life.

Age-related Change of Intelligence Scores



Age

Source: Cornelius, S.W. and Capsi, A. (1987), "Everyday problem solving in adulthood and old age." *Psychology and Aging*, 2, p150, Figure 5

Fluid Intelligence and Crystallized Intelligence

- **Fluid intelligence:**

Problemsolving abilities to learn new things and adjust to new circumstances

This type of intelligence has a strong correlation with the base of the brain

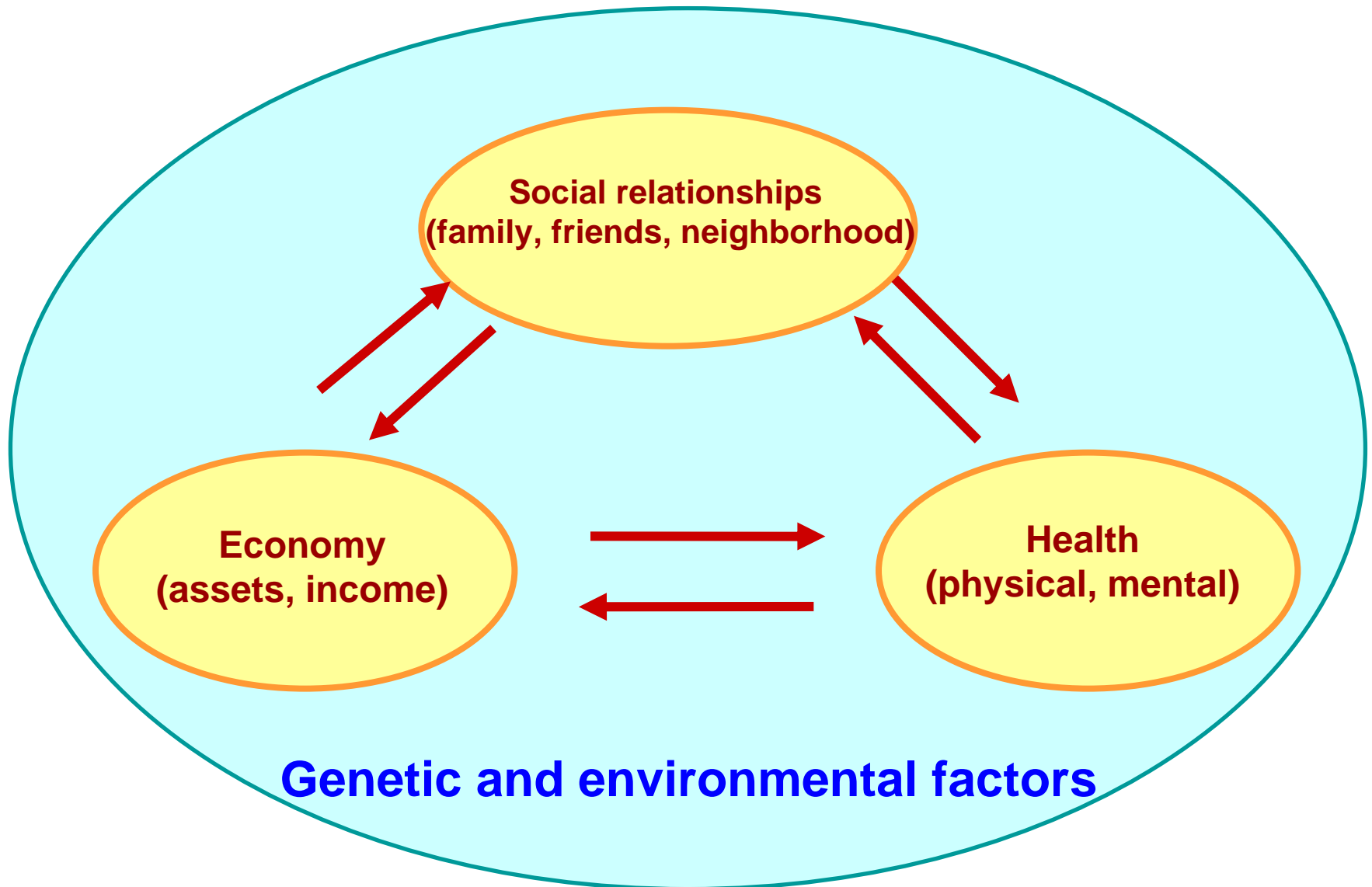
- **Crystallized intelligence:**

The ability to use accumulated knowledge and experience

This type of intelligence has a strong correlation with experience at work and in daily life as well as in school education.

- ◆ **Multidimensionality**
- ◆ **Multidirectionality**
- ◆ **Flexibility**
- ◆ **Great differences between individuals**

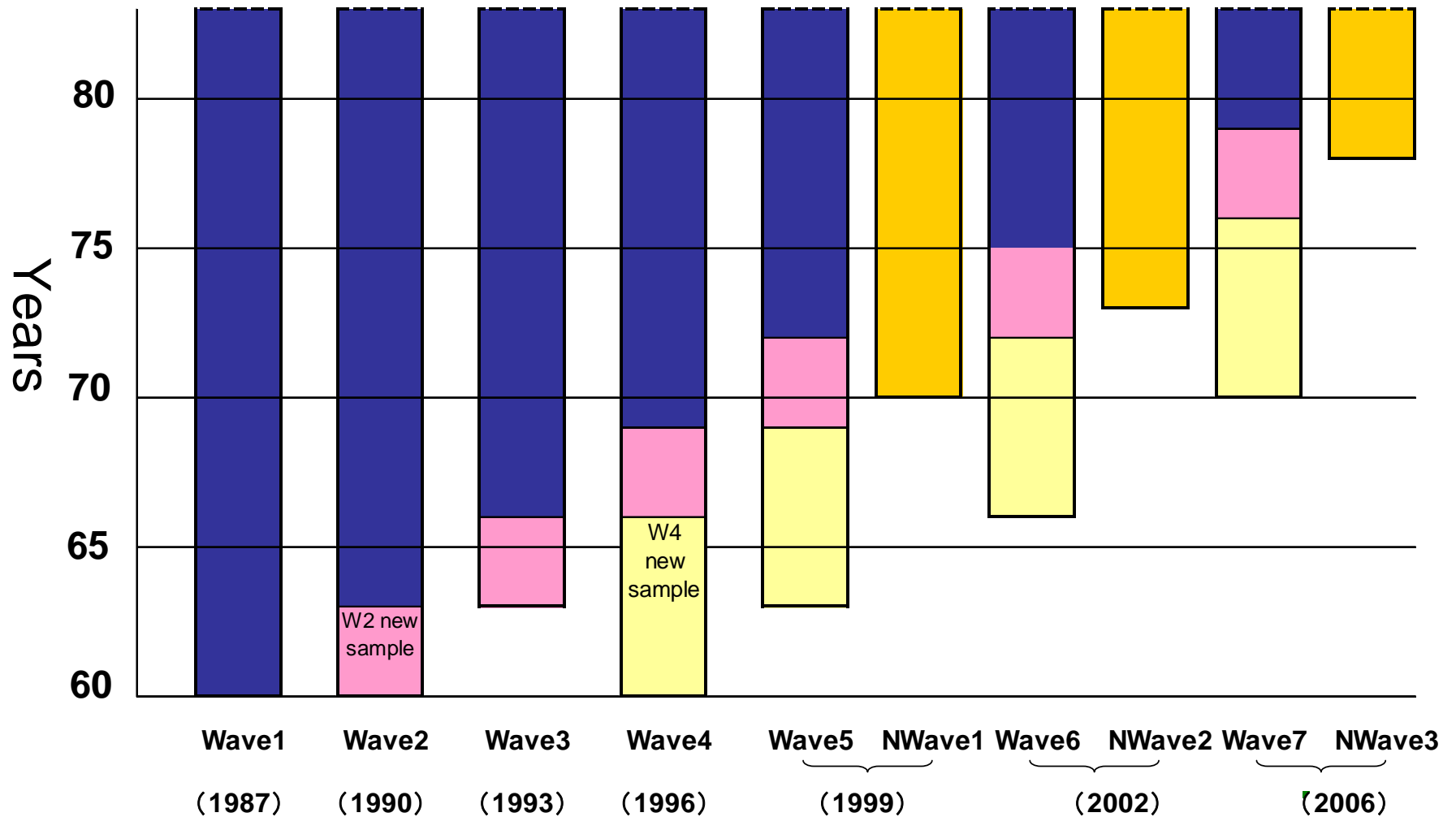
JAHEAD Project




Years of the Panel Surveys

Wave1	1987
Wave2	1990
Wave3	1993
Wave4	1996
Wave5	1999
Wave6	2002
Wave7	2006

The survey samples



Years of the Surveys

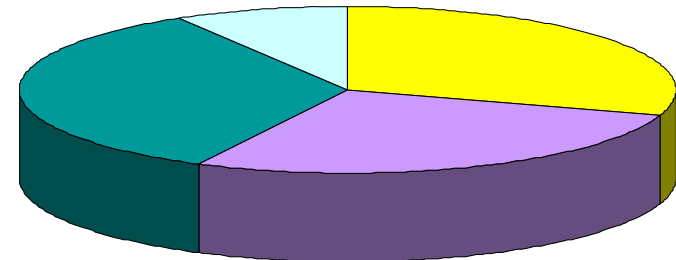
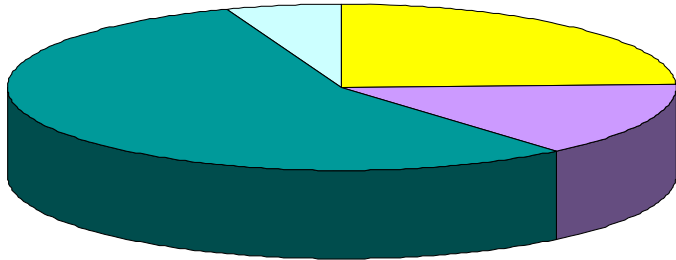
Wave1	1987	
Wave2	1990	
Wave3	1993	
Wave4	1996	
Wave5	1999	
Wave 6	2002	
Wave7	2006	

Condition of Health 15 years later

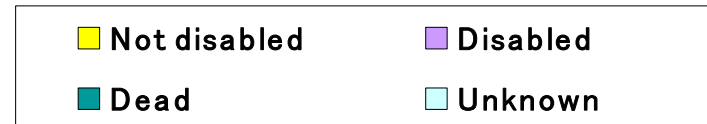
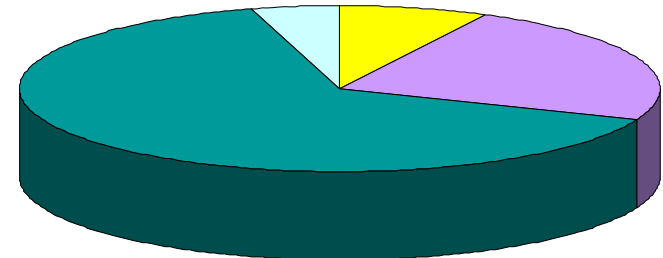
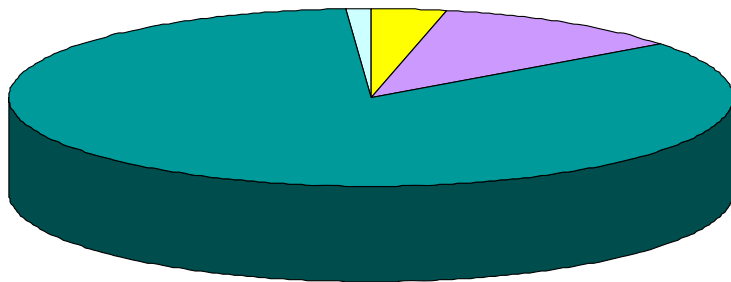
Men

Women

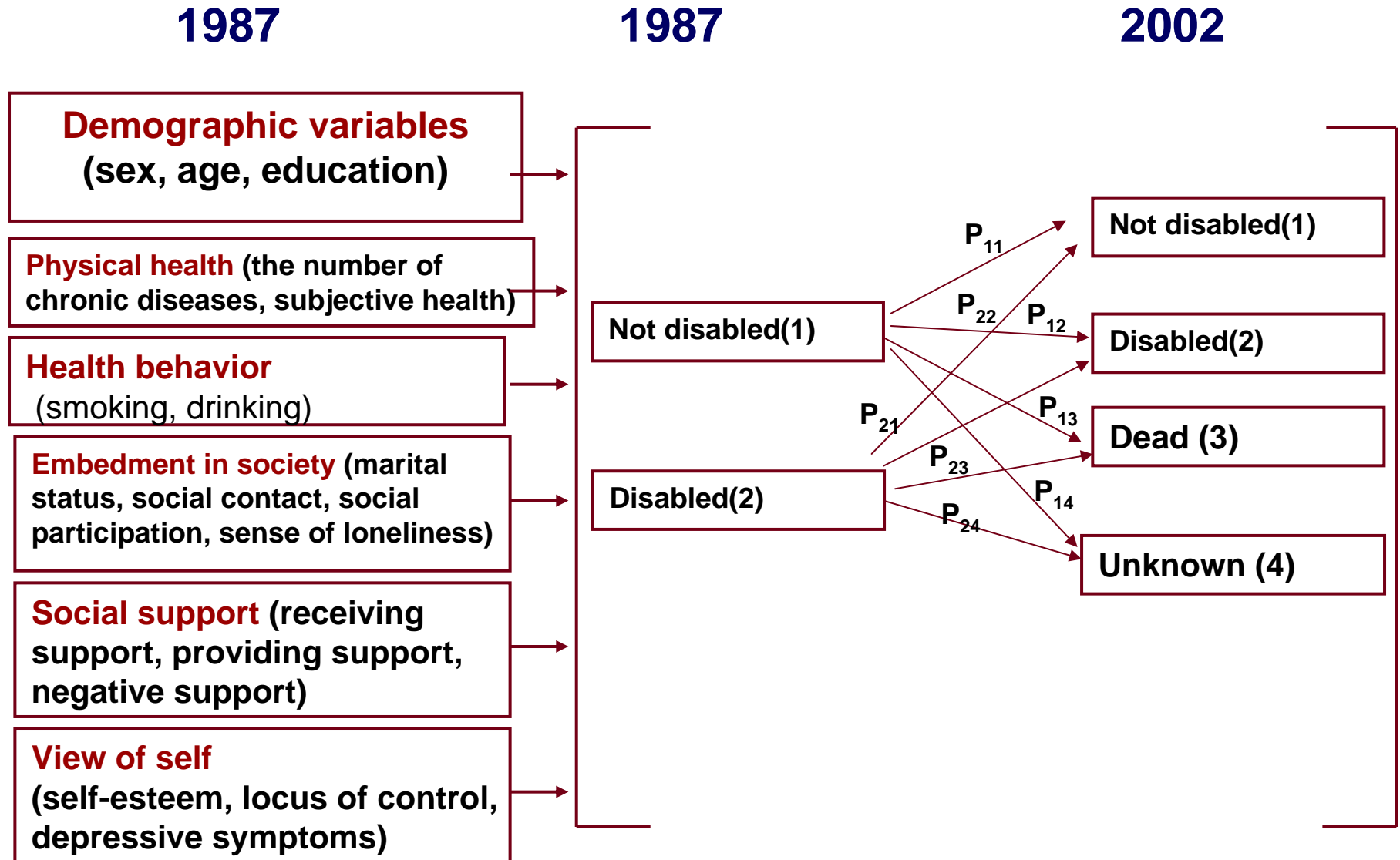
Those who had no disabilities in 1987 (N=1963)



Those who had disabilities in 1987 (N=221)



What are the factors related to health conditions 15 years later?



Factors strongly related to health conditions 15 years later

1987

The elderly with no disabilities

2002	Men (N=804)		Women (N=947)	
	Disabled / Not disabled	Dead /Not disabled	Disabled /Not disabled	Dead/Not disabled
Age	1.1394 ***	1.2318 ***	1.1783 ***	1.2798 ***
Education	0.9767	0.9567	1.0243	0.9966
Number of diseases	1.1375	1.1625	1.1098	1.2480 *
Subjective health	0.8361	0.7049 +	0.8544	0.9475
Smoking/no smoking	1.0470	1.9717 ***	1.5585	1.8439 *
Amount of drinking	0.9929	1.0002	1.0130	0.9874
Amount of drinking ²	1.0001	1.0000	0.9995	1.0001
Marital status	1.4964	0.6413	1.2153	1.0219
Social contact	1.0306	1.0945	1.0546	1.0226
Social participation	1.0584	0.5955 **	1.0463	0.9458
Sense of loneliness	1.5948 *	1.5323 *	1.2734	1.0880
Receiving support	1.0973	1.0365	1.0668	1.0200
Providing support	0.8947	0.8781	0.9259	0.8711
Negative support	1.7609 *	1.4862	0.8693	0.9853
Self-esteem	1.1913	1.2897	0.6883 *	0.8271
Locus of control	1.1201	0.9291	0.7730	0.6623 *
Depressive symptoms	0.7533	0.8443	1.1285	2.2175 *
Likelihood ratio	1540.80		2144.07	

+ p<.10, * p<.05, ** p<.01, *** p<.001.

Men

Participation in group activities

Ex: Community associations, sports and hobby groups, study groups, volunteer groups

It's especially important for men who have lost their wives.

Women

Mental independence

To be able to make decisions and act on their own

Face-to-face Contact with Friends, Neighbors, and Relatives

