

The Whitehall II study: a successful interdisciplinary paradigm?

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‘The Good, the Bad and the Ugly’: understanding collaboration between the social sciences and the life sciences

Case study 5

1. Whitehall II study: objectives and structure
2. Whitehall II does 'social epidemiology'
3. Collaboration and integration
4. Experiences and lessons

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Whitehall II study

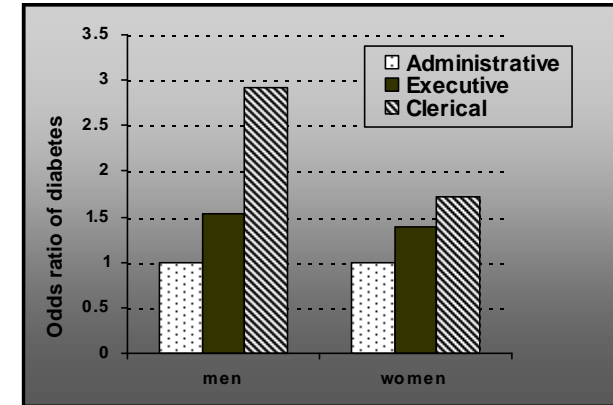
- Set up in 1985
- Cohort of 10,308 civil servants from 20 Civil Service departments, London
- Aged 35-55, ~1/3 women
- Original aim: to understand the role of social class for health
- Future: ageing study
- 11th collection phase underway



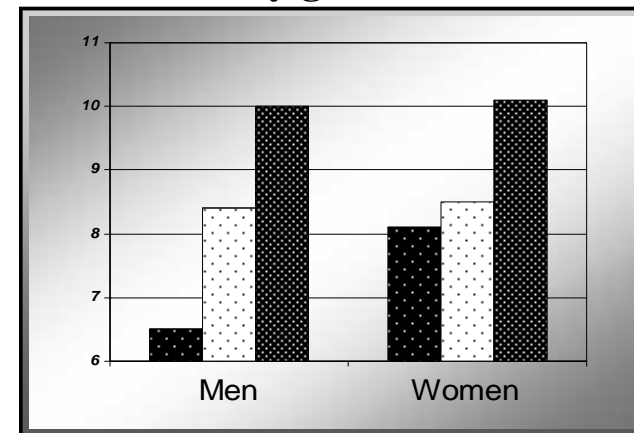
Whitehall II study



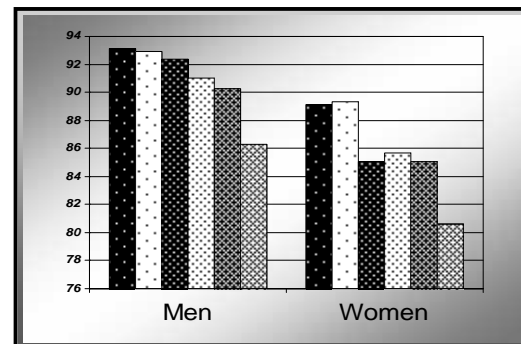
Incident diabetes by grade



Incident coronary event rate by grade

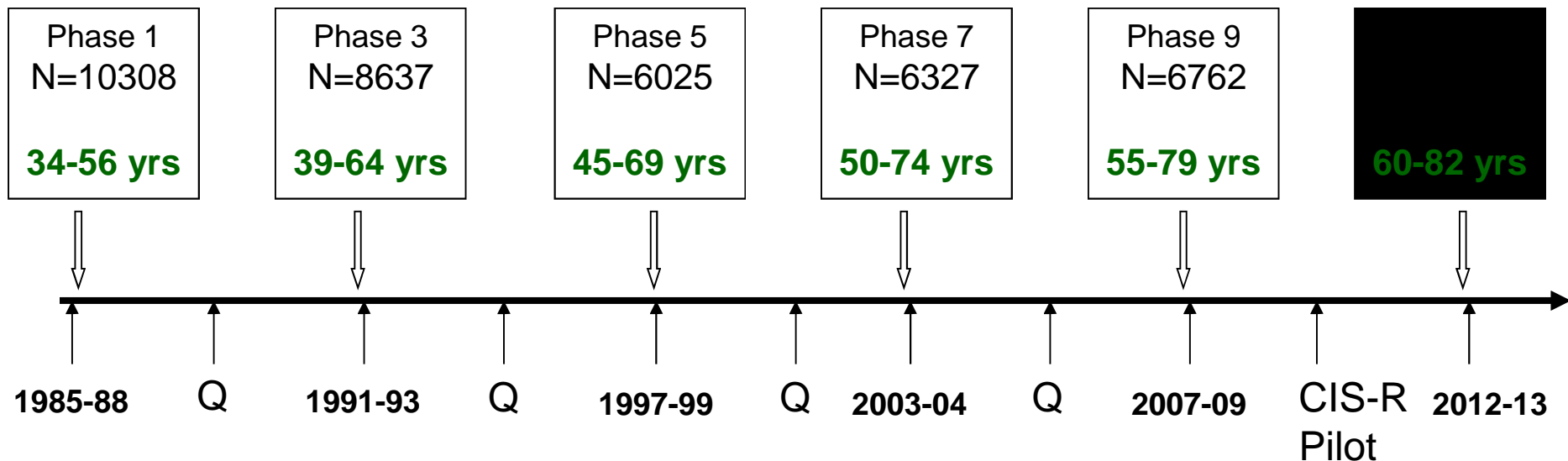


SF-36 physical function scale score by grade at mean age 50



Whitehall II cohort: study design

Morbidity + mortality follow-up



ECG, CVD risk factors	Lung function, walking speed (since Phase 7)
75 g OGTT (since Phase 3)	MMSE (since Phase 7)
Cognitive function (since Phase 5)	Balance, finger tapping, chair rise (Phase 9)
Heart rate variability (since Phase 5)	Pulse wave velocity (Phase 9)
DNA (Phase 7)	

Dr Tasnime Akbaraly, nutrition, epi

Dr David Batty, epi

Dr Annie Britton, human science, epi

Dr Eric Brunner, biochemistry, epi

Dr Alexis Elbaz, medicine, epi

Dr Jane Ferrie, epi

Dr Gareth Hagger-Johnson, psychology

Ms Jenny Head, stats

Dr Satoyo Ikehara, public health, academic visitor

Prof Mika Kivimäki, psychology, epi

Dr Meena Kumari, immunology, genetics

Prof Sir Michael Marmot, medicine, epi

Dr Hermann Nabi, psychology

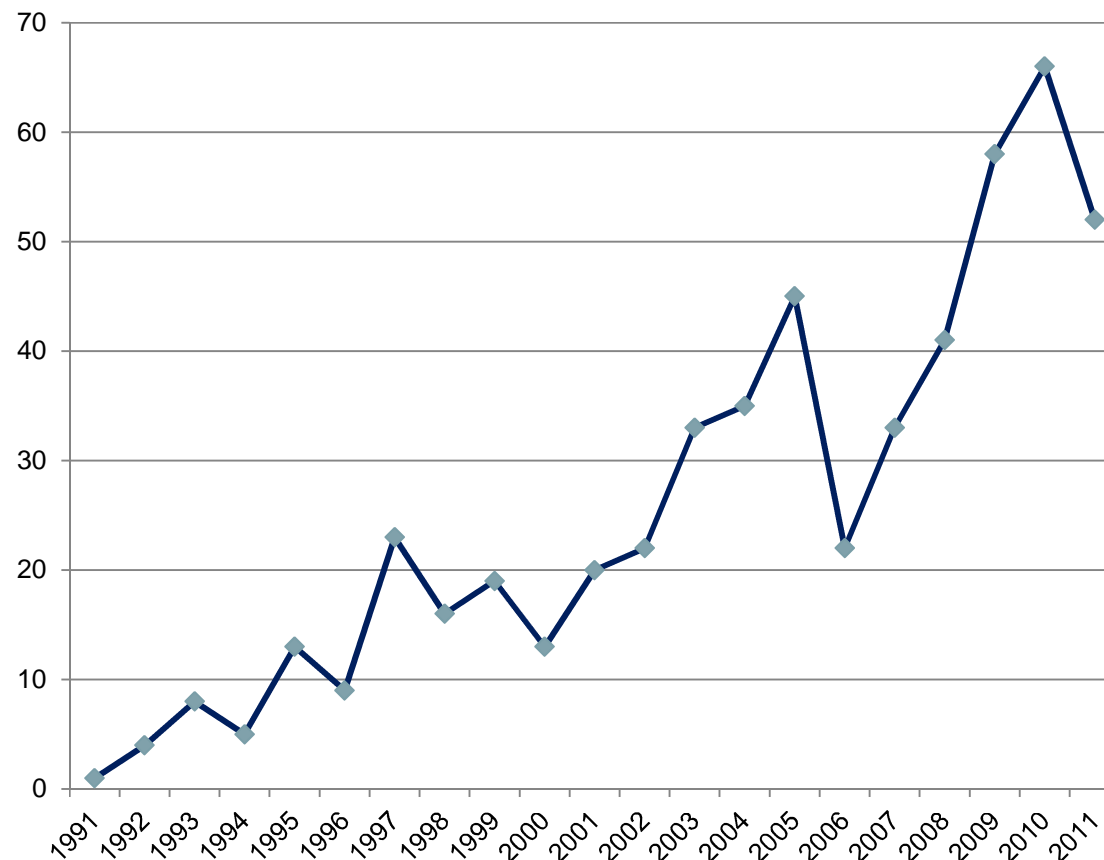
Dr Séverine Sabia, stats

Mr Martin Shipley, stats

Prof Archana Singh-Manoux, psychology, epi

Dr Adam Tabak, medicine, epi

Research output: original papers 1991-2011



Cumulative to 2011 n=538
 excluding genetic consortium papers

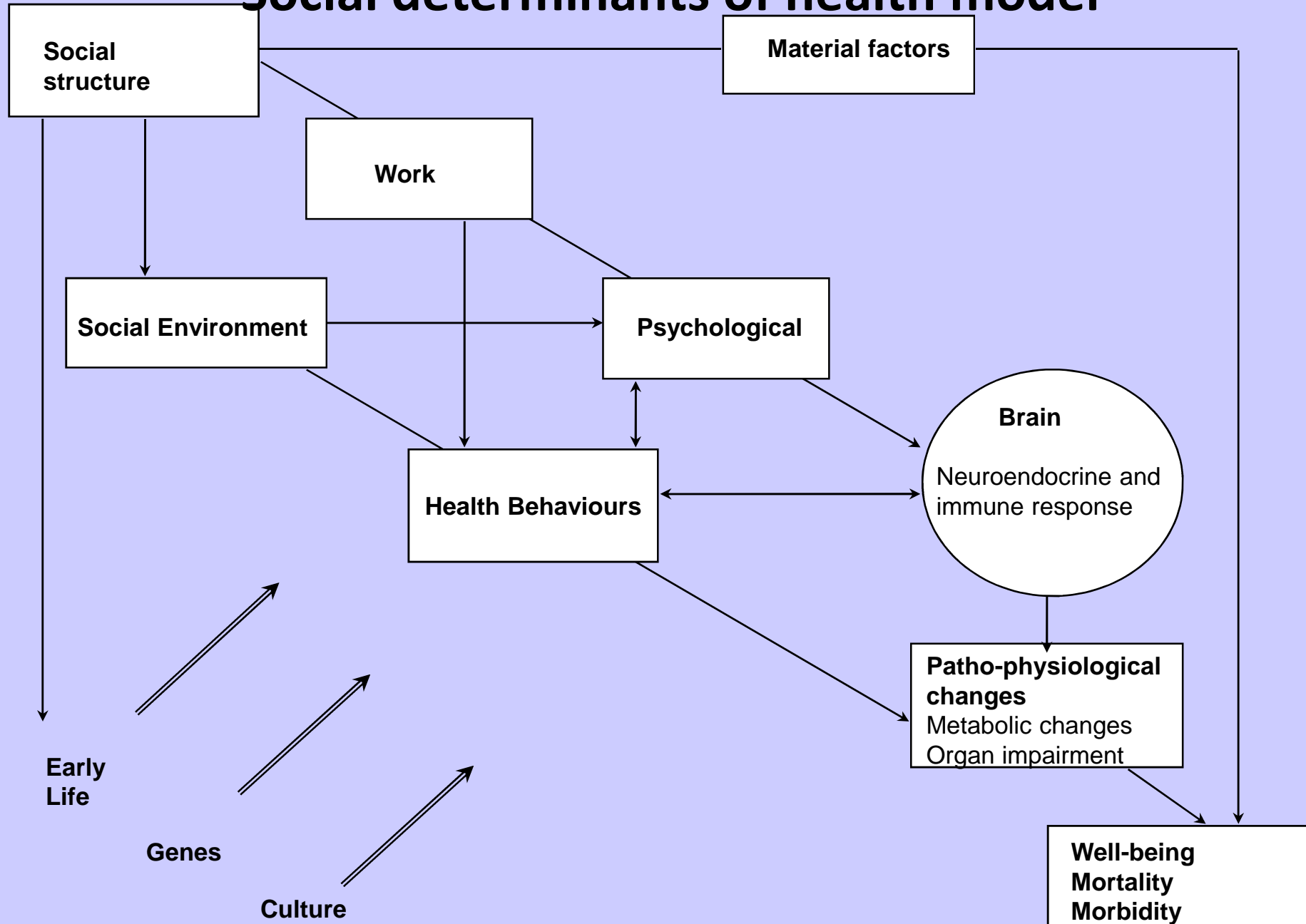
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2. **Whitehall II does ‘social epidemiology’**
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Social epidemiology

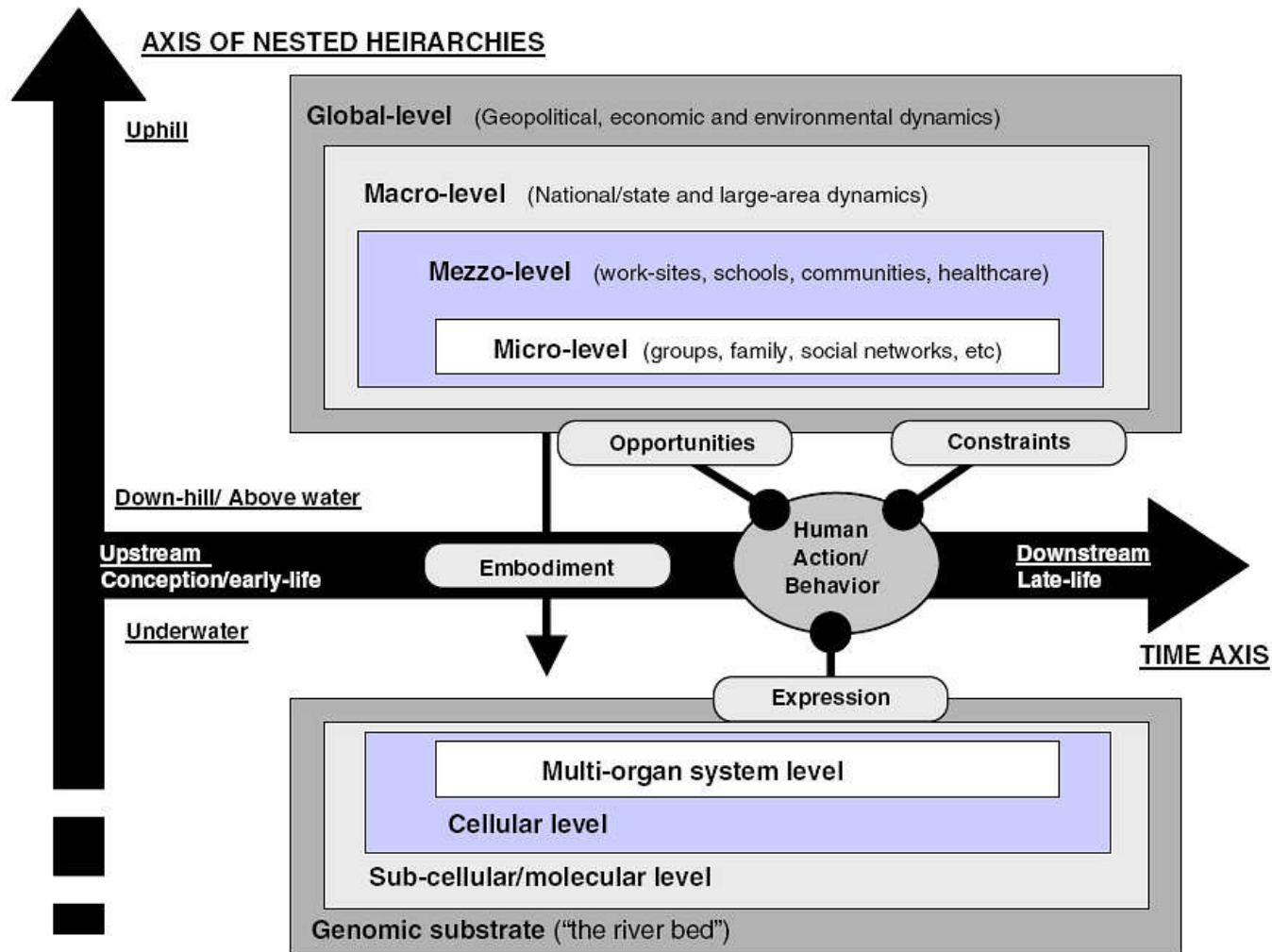
- Last's Dictionary of Epidemiology 4th ed, 2001 OUP
– NO ENTRY
- Berkman and Kawachi *Social Epidemiology* 1st ed OUP
2000, page 6

“soc epi is the branch of epi that studies to social distribution and social determinants of states of health”

Social determinants of health model



Society-behaviour-biology nexus



Funding: programme support

- Medical Research Council
- British Heart Foundation
- National Heart Lung and Blood Institute
- National Institute of Ageing



W2 Data Sharing Policy

- Gated-access approach since September 2007
- Informal discussion before application
- For genetic data, contact Meena Kumari
- Close collaborators and external data users
- Publication of 1-2 papers within the first 2 years?
- New application if further use of data in other areas of interest
- www.ucl.ac.uk/whitehallIII/data_sharing
 - Data sharing policy
 - W2 Data dictionary
 - Questionnaires (PDF)



Received Data Sharing Applications (since Sept 2007)

69 applications

- 19 external (5 PhD)
- 15 collaborations (1 PhD)
- 25 genetic (1 PhD)



USA 6

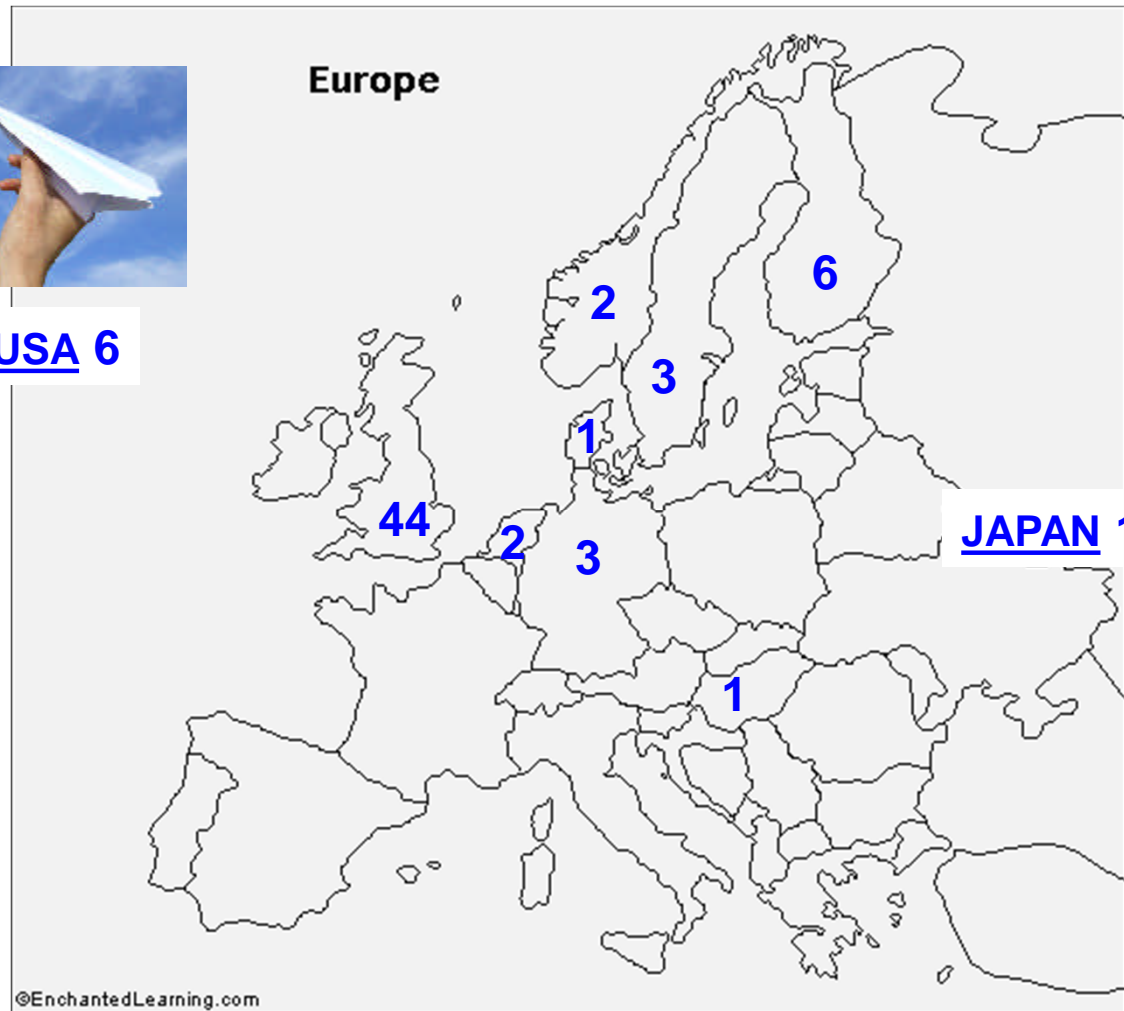
Geography

- 44 UK (7 UCL, 12 UCL genetics)
- 18 Rest of Europe
- 7 Overseas

Approval rate

- At first submission = 63
- Re-submission requested = 6
- Re-submission received = 5

- Actioned = 64
- "Dormant" = 5

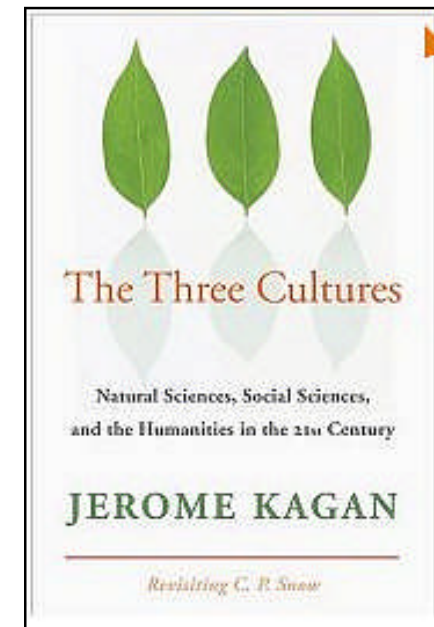


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Following Jerome Kagan

On the distinctions between the cultures of natural and social science...

- **Primary concerns**
- **Sources of evidence**
- **Vocabulary and preferred set of explanations**
- **Importance of social conditions and historical events**
- **Importance of ethical values**
- **Dependence on financial support**
- **Lone or team working**
- **Contribution to the national economy**
- **Aesthetic criteria for research product**



Kagan rubric 1

1. Primary concerns

HYBRID: human behaviour and its impact on biology and health

2. Sources of evidence

HYBRID: self-report plus biological measures, observation; large-scale quantitative methods based on distributional assumptions

3. Vocabulary and preferred set of explanations

HYBRID: primary social, psychological and behavioural explanations; biological manifestations and mechanisms

4. Importance of social conditions and historical events

SOCIAL: Central to the research agenda

Kagan rubric 2

5. Importance of ethical values

SOCIAL: grounded in belief that equity is key issue in population health

6. Dependence on financial support

NATURAL SCIENCE MODEL: highly dependent on programme support

7. Lone or team working

HYBRID: Mid-size team work

8. Contribution to the national economy

NATURAL SCIENCE MODEL: Active policy influence

9. Aesthetic criteria for research product

HYBRID: Broad theorised and evidence-based conclusions

Shared culture

Coherence

Do we have proper shared culture?

Common purpose

Co-directors

Mika Kivimaki (Helsinki/UCL, psychology)

Archana Singh-Manoux (Paris/UCL, psychology)

Eric Brunner (UCL (Osaka), epidemiology)



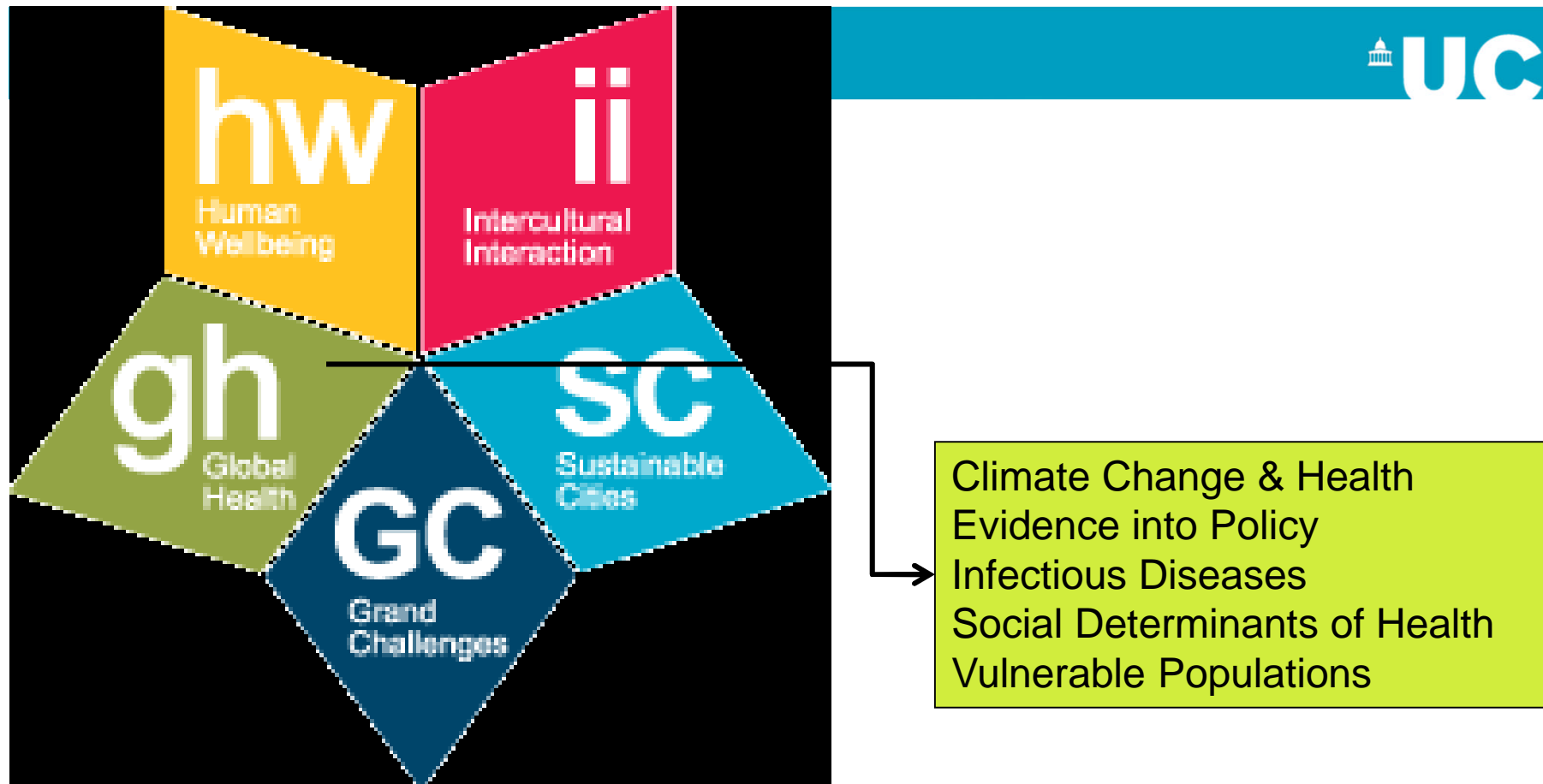
UCL



Summer School 2010

Social Determinants of Health

www.ucl.ac.uk/healthandsociety



UCL Grand Challenges is a central feature of the UCL Research Strategy, which aims to:

- cultivate leadership founded in excellence
- foster cross-disciplinarity grounded in expertise
- realise the impact of a global university.



Arts and Sciences (BASc) programmes

These exciting new degrees:

- offer great flexibility and choice across the breadth of UCL
- provide the depth and range of knowledge needed to thrive in our global society
- are designed to equip students for leading careers

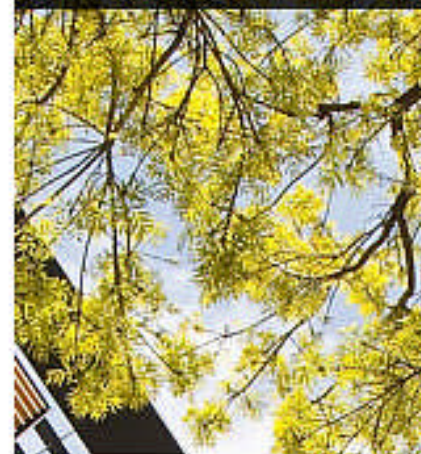
Students choose a major and a minor Pathway, and study interdisciplinary Core courses written to link their Arts and Science subjects in innovative ways.

Pathways

Cultures
Health and Environment
Sciences and Engineering
Societies

Core Courses

Approaches to Knowledge
Quantitative Methods
Interdisciplinary Research
Object-based learning
Qualitative Thinking
The Knowledge Economy



Starting September 2012

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PROBLEMS

Status hierarchy

Research assessment

Confidence → training

Promotion/retention

The Rainbow Effect

LESSONS

Quality does the trick

Scrap/minimize the clinical pay scale in non-clinical subjects