

Multidisciplinary research on aging - politically correct talk, or real advancement of science?

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Researchers in the field of ageing (gerontologists?) come from many basic disciplines

Scientific societies: International Association of Gerontology, Nordic Association of Gerontology, Gerontological Society of America...

Scientific conferences: International, European, American ...

Multidisciplinary journals



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Wikipedia: Gerontology

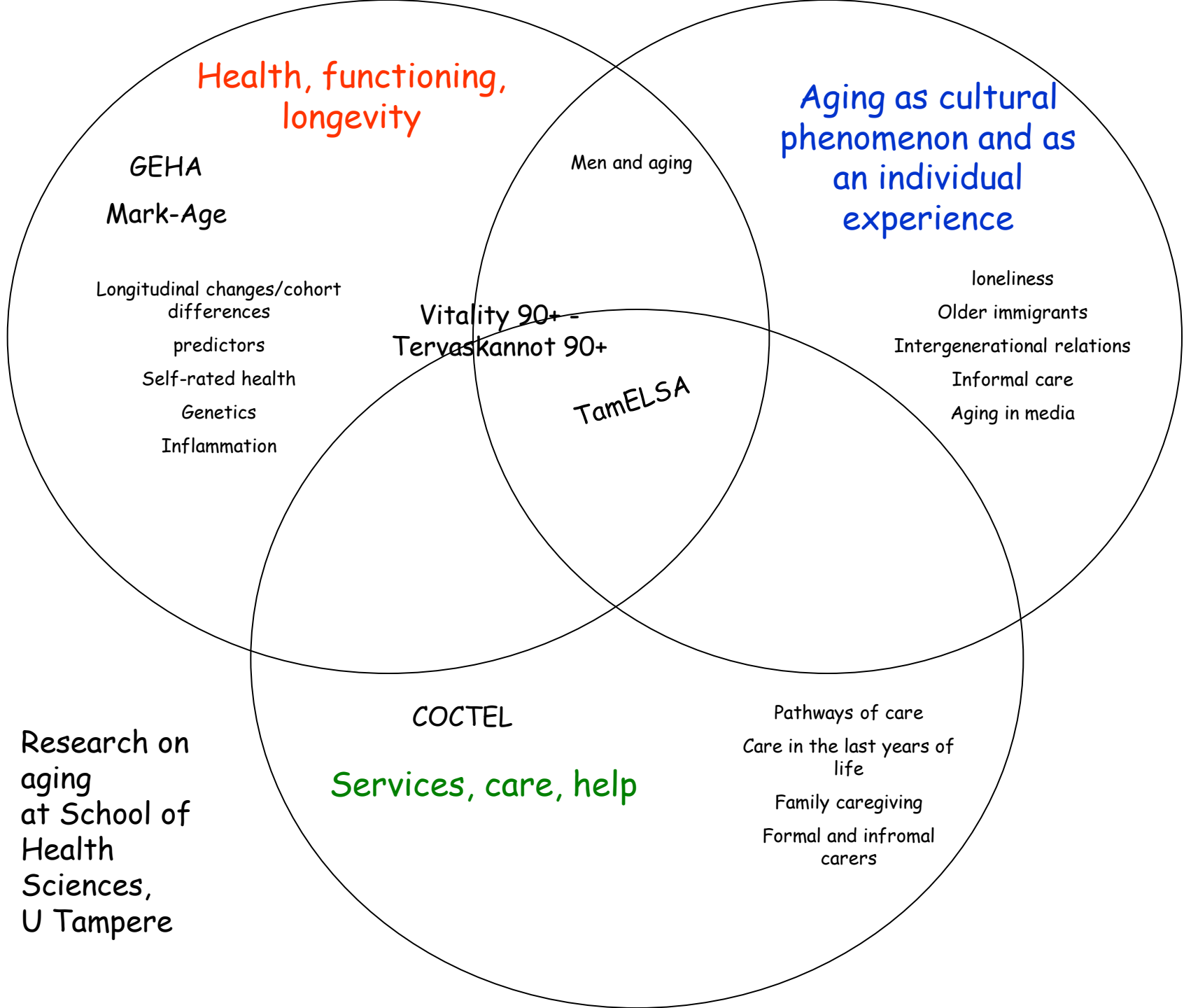
The multidisciplinary nature of gerontology means that there are a number of sub-fields, as well as associated fields such as psychology and sociology that overlap with gerontology

Health and social care (almost) always use knowledge from several disciplines

Not only as collaboration of different experts (social worker, doctor, nurse..) but also each individual expert applies knowledge from different fields of research

From the FLARE Joint Call web pages:

- FLARE has two innovative features: part of the fellowship must be spent in another country and involve **a cross-disciplinary collaboration**. These novel features reflect the strong scientific consensus in ERA-AGE meetings on the need to develop **a multi-disciplinary approach** to ageing research and also a European networking in this area. ...
- The idea of the FLARE programme is to promote future ageing research by supporting **an interdisciplinary exchange** for post-doctoral researchers in Europe.





Gerontology Research Center -

a joint effort between the University of Jyväskylä and the University of Tampere

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- Agency of older persons
- Aging and physical activity
- Biology of aging
- Care and services
- Health, functioning and longevity
- Work and life course
- Health sciences
- Immunology
- Medicine
- Molecular biology
- Occupational sciences
- Physical education
- Psychology
- Social policy
- Sociology



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Multidisciplinary

parallel work and collaboration between different disciplines, more than one traditional discipline involved

Interdisciplinary

the disciplines working together influence each others' thinking, new knowledge beyond existing disciplines

Crossdisciplinary Transdisciplinary

Two drivers of multidisciplinary aging research

- Societal challenges: information from several fields, from several disciplines is necessary
 - → creates useful pressures for collaboration but also political jargon about multidisciplinaryity
- Development of science:
 - Specialization, focusing
 - New emerging fields, disciplinary borders not relevant
 - → creates genuine need for collaboration between disciplines

Examples of easier and more tricky meetings...

- Immunology & molecular biology
- Psychology & educational science
- Sociology & cultural anthropology

- Genetics & sociology
- Nursing science & engineering
- Demography & molecular biology
- Epidemiology & qualitative social research
- Critical social gerontology & clinical geriatrics

- Biology & social research
- Quantitative & qualitative approaches

Why does “the science of human aging” need collaboration across biological and social sciences?

- Human biology, including gene expression, is influenced by social circumstances and psychological factors
- Social life and psychology are conditional to biological resources and limits (nothing happens to us that “our genes do not allow”)
- Human beings are unique in many ways, but also many animals are social by nature (e.g. length of life in wild male chimpanzees is dependent on their social status) - applying information of other species
- integrating huge amounts of information is needed to understand aging processes, bioinformatics

Aging

Biological changes with increasing age are inevitable,

BUT

their societal consequences
and their personal meaning

vary from one historical and cultural
setting to another

and are modified by human activity





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Aging

Biological changes with increasing age are plastic and malleable

AND

highly dependent on physical, social, and psychological environment and human activity



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Multidisciplinary collaboration as encounters between cultures

Many levels of multidisciplinary

- Integration of information from several fields, creating new joint approaches
- Approaching same themes from different perspectives, discussion and dialogue
- Elementary knowledge of adjacent field, fundamental respect towards other disciplines, traditions and approaches
- General education of other disciplines, understanding your own field among other disciplines, as part of the great picture



Multidisciplinary collaboration is not without problems (and the problems are not caused by incompetent and difficult people) but different traditions and practices) :

who leads?

whose research questions?

whose concepts?

whose way of writing?

...

...

Social and biological disciplines meet...

CP Snow: two academic cultures

Becher: academic tribes and territories

Differences in

- Object of the study
- Ways to define the object
- Concepts, thematizations
- Understanding the method and the role of the researcher
- Criteria of the quality of research
- Dissemination of the results, publishing traditions

Disciplines as languages: concepts and terms do not translate directly from one field to another

Social and biological disciplines meet (2)

Understanding of research as

- cumulative increase and progress of knowledge (biological sciences)
- vs
- reflective understanding and interpretation (social and humanistic sciences)

Same concepts and terms may be have different meanings

"Qualitative research"

- determining the existence of a chemical component
- research interpreting meanings instead of measuring, focussing on use of language

"Environment"

- living conditions, social networks, quality of air, water, housing
- extracellular environment of a cell, hormonal exposure of a developing brain cell

- Every project in aging research can not and should not be multidisciplinary
- Every expert in aging research should have elementary knowledge of a broader field than her/his own (demography, biology, social aspects of aging)
- Every researcher should pay respect to other disciplines that contribute to the field of aging, even if "their" thoughts and commitments are different from "ours"

