



## FLARE Summerschool 2012

### The project „Discourse: Biogerontology“

A course to stimulate the discussion on biogerontology  
- Concepts and experiences -

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## The project:

### Discourse ELSA\*: Biogerontology

Ethical, legal & social implications of biological ageing research  
and its potential medical applications

\*ELSA = Ethical, Legal, Social Aspects

- **Funding:** German Federal Ministry of Education & Research (BMBF)
- **Duration:** February 2012 – January 2013
- **A cooperation of:**
  - **Julia Dietrich**, International Centre for Ethics in the Sciences and Humanities (IZEW), University of Tübingen
  - **Hans-Jörg Ehni**, Institute for Ethics and History of Medicine, University of Tübingen





## ...the project:

### Project partners:

- **Biogerontology:** David Gems (London), Wilfried Briest (Jena)
- **Geriatrics:** Gerhard Eschweiler (Tübingen)
- **Medical ethics:** Maartje Schermer (Rotterdam)
- **Ethics:** Uta Müller (Tübingen)
- **Philosophy:** Thomas Rentsch & Morris Vollmann (Dresden), Michael Fuchs (Bonn)
- **Law:** Sebastian Graf von Kielmansegg (Mannheim)
- **Social gerontology:** Hans-Joachim von Kondratowitz (Berlin), Wolfgang Schlicht (Stuttgart)
- **Theology & psychology:** Ralf Lutz (Tübingen)



## ...the project:

- **Aim of the project:**

**Stimulating public discourse & research  
on ethical, legal & social aspects  
of biogerontology & its potential medical applications**

- **How to stimulate the discourse?**

Instead of a big event (e.g. parliament of stakeholders):

→ **8 smaller courses for potential multipliers**  
(~12 sessions of 90 min)



## The development of the course

1. **Defining the curriculum:** Interdisciplinary research workshop
2. **Testing, evaluating and developing the course:**
  - **1st wave:** 1 course with students of teacher training (Tübingen)
  - **2nd wave:** 7 more courses:
    - 6 with (PhD) students of →
      - Medicine (Tübingen)
      - Biogerontology (Jena)
      - Philosophy (Dresden, Bonn)
      - Teacher training (Tübingen)
      - Gerontology (Stuttgart)
    - 1 with seniors (Tübingen)
3. **Dissemination:** Guide book with course material, publications, PR
  - **A project at the interface between:**
    - Research
    - Didactics & teaching
    - Public relations



## Overview

- **Why stimulate a discourse on biogerontology?**
- **What should the participants learn – and why and how?**
  - **What?** Defining learning contents
  - **Why?** Giving reasons for the definition of learning contents
  - **How?** Didactic implementation
- **Experiences from our 1st course**



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# Why stimulate the discourse on biogerontology?



## Why stimulating the discourse?

- **Echo from an old debate?**

- US, UK: Debate started in 2003
- Germany: Calls for debate in 2009

- **Why is it better to have a discourse?**

- Ageing as a normative question
- Science as part of society
- Discourse as part of democracy

- **What can we achieve?** „Our discussions won't change anything.“

- But 1st course changed:
  - Sensibility for perceiving ethical questions of ageing
  - Attitudes towards ageing and biotechnology
  - Political interests

Examples from:

**Angloamerican literature:**

- Jungst/Binstock 2003
- President's council on bioethics 2003
- Vincent 2003

**German literature:**

- Ehni/Marckmann 2008
- Knell/Weber 2009
- Fraunhofer ISO/IAO 2009





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# What should the participants learn – and why and how?

# Fundamental question of didactics:

## What should be learned – and why and how?

- **What?** Learning contents: Knowledge & competences
- **Why?** Explicating normative assumptions in the definition of learning contents
- **How?** Didactic methods, learning material

## What? Why? How? in the four fields our topic touches...

- Biogerontology
- Ethical aspects
- Legal aspects
- Social aspects

	what	why	how
Biogerontology			
Ethics			
Law			
Social sciences			

...in order to participate competently in a discourse on biogerontology?



## General learning objectives:

- **Not a specific opinion on biogerontology**
- **But: Knowledge & competences for substantiated opinion:**
  - Critical basic understanding of biogerontology
  - Basic understanding of the multidimensionality & heterogeneity of ageing
  - Basic ethical competences
- **Why? → What is a good discourse?**
  - Informed, non reductionist understanding of biogerontology and ageing
  - Normative premises should be explicated, substantiated & put in relation to differing normative premises



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Focus:

**A critical basic understanding of biogerontology**

What should the participants learn  
– and why and how?



1st step:

## Which aspects of biogerontology are relevant to learn?

**Result of our kick-off workshop:**

- 1. The biogerontological phenomenology of ageing**  
→ What is ageing?
- 2. Goals of biogerontology**  
→ How should ageing be?
- 3. Potential medical applications of biogerontology**  
→ What to do about ageing?



## Which aspects of biogerontology are relevant to learn?

### 1. The biogerontological phenomenology of ageing:

- **Focus:** biological aspects of ageing  
→ there are also other aspects & gerontological disciplines
- **Mechanisms:** Ageing = accumulation of cellular & molecular damage  
→ Important progress, but still far from “decoded”  
→ Molecularization, damage, mutability
- **Evolutionary theory:** Ageing is not of evolutionary advantage  
→ anthropological importance (meaning of ageing)
- **Relation between ageing & disease:** Causal? Identical?



## Which aspects of biogerontology are relevant to learn?

### 2. The goals of biogerontology:

- Intra-disciplinary discussion
- **Reformulation of the goal:**
  - Not “only” understanding,
  - but also intervening.
- **Goal of intervention:**
  - Not abolishing ageing!
  - But compression of morbidity, extension of healthy lifespan
  - Side effect: extension of average & maximum lifespan



## Which aspects of biogerontology are relevant to learn?

### 3. Potential medical applications of biogerontology:

- No applications yet, but research strategies to identify promising paths of intervention
- **Three general approaches:**
  - Geriatric innovations
  - A new strategy of intervention: Slowing biological ageing  
→ a long, uncertain way from research to practice
  - Measuring ageing → risk profiles → personalized prevention





2nd step:  
**Why are exactly these aspects  
of biogerontology relevant to learn?**

Not mere **description** of the state of research.

→ **Also: relevant for ethical, legal, social  
implications.**



## Why are exactly these aspects of biogerontology relevant to learn?

What?	Why?
<b>Phäno- menology</b>	<p><b>What is ageing? Which value has ageing?</b></p> <ul style="list-style-type: none"><li>- <b>E + S</b>: Ageing is not only biological decline &amp; also good. → A medical solution is not sufficient or bad</li><li>- <b>E</b>: Ageing is no disease. (disease = normative concept) → Treating ageing is beyond traditional goals of medicine</li><li>- <b>L</b>: Is ageing a disease? → Disease is criterion for a) insurance coverage, b) clinical trials</li><li>- <b>S</b>: Reproduction of reductionistic, images of ageing (discrimination?)</li></ul>

E: ethical aspects, L: legal aspects, S: social scientific aspects



## Why are exactly these aspects of biogerontology relevant to learn?

What?	Why?
<b>Goals</b>	<ul style="list-style-type: none"><li>- <b>E + S</b>: What is good ageing? / What is quality of life in old age?</li><li>- <b>E + S</b>: Would positive or negative consequences for individual and society prevail? (Suffering, resources, costs etc.)</li><li>- <b>S + E + L</b>: Are the goals just? (unequal access, health inequalities in old age)</li></ul>

E: ethical aspects, L: legal aspects, S: social scientific aspects



## **Why are exactly these aspects of biogerontology relevant to learn?**

<b>What?</b>	<b>Why?</b>
<b>Potential applications</b>	<b>What shall we do about ageing?</b> <ul style="list-style-type: none"><li>- <b>E + S</b>: Interventions into ageing: In accordance with what ageing is and should be?</li><li>- <b>E + L</b>: Research ethics: animal trials, clinical trials</li><li>- <b>S</b>: Individualized prevention: Shift of responsibility?</li></ul>

E: ethical aspects, L: legal aspects, S: social scientific aspects



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**3rd step:  
How to teach a  
critical basic understanding of biogerontology?**



## Didactic framework

- **Scope: 4 of 12 sessions (90min) primarily on biogerontology**
  - Also other learning contents
  - Compatible with usual scope of courses
- **Interdisciplinarity: Also for participants with no prior knowledge on biogerontology**
  - Also teaching competences in acquiring an overview on an unfamiliar scientific field
  - Four different methods....



## Session 1: Reflecting on a newspaper article on biogerontology

### Learning material:

Newspaper article by David  
Gems (NZZ, 11 March 2012)

### Learning objectives:

- **Interdisciplinary literacy:**
  - Science journalism as source of information
  - Critical reflection on media coverage
- **Understanding biogerontology:**
  - Preliminary understanding of the case
  - Preliminary ethical questions
- **Ethical reflection:**
  - Ethical theories (virtue ethics, utilitarianism, deontological ethics)
  - Which questions arise from the different perspectives?

54	Wissen	NZZ am Sonntag • 11. März 2012
Soll die Medizin das Älterwerden bekämpfen? Pro und Contra		

### Die Jugend soll ewig dauern

Die biologische Forschung muss die Verlängerung des menschlichen Lebens zu ihrem Ziel erklären. Denn Altern ist eigentlich eine Erbkrankheit, die es zu behandeln gilt, *schreibt David Gems*

### Learning activities:

- Writing an essay
- Group work with presentation
- Plenary discussion



## Session 4: Analysing a biogerontological article written for a lay audience

### Learning material:

- **Gems 2009.** Eine Revolution des Alterns.
- **Dietrich 2004:** Ethical judgement:  
Descriptive premises  
+ prescriptive premises  
= Judgement

### Learning activities:

- Presentations on the texts
- Group work: „Finding syllogisms“
- Plenary discussion

### Learning objectives:

- **Interdisciplinary literacy:**
  - Popular articles by experts as a source
- **Understanding biogerontology:**
  - Deeper understanding of Gems' concept
  - History, different strands, discussion on aims
- **Ethical reflection:**
  - (Ethical) Judgements: practical syllogism (Description + prescription = judgement)
  - Formulation of aims is not only descriptive but normative. Explicating normative assumptions





## Session 5: Asking an expert on evolutionary theory of ageing

### Learning material:

Texts on evolutionary theory by

- Gems (2009) “**What is ageing good for?**” (29-31)
- Kirkwood (2005): “**Why ageing occurs**” (p 72-74)

### Learning activities:

- Expert’s lecture
- Plenary discussion with expert

### Learning objectives:

- Interdisciplinary literacy:
  - Asking experts as a source of information
- Understanding biogerontology:
  - Going into detail with one aspect, showing the complexity of the phenomenology
  - Relativating Gems’ position
- Ethical reflection:
  - The question “What is ageing good for?” goes beyond biological description.



## Session 7: Group research: Analysing primary literature on goals of biogerontology

### Learning material:

6 primary sources

- 3 German, 3 UK/US
- 4 texts, 2 websites
- 1 political, 5 scientific

### Learning activities:

- Group research on
  - Goals of biogerontology
  - Medical interventions
- Plenary discussion

### Learning objectives:

- Interdisciplinary literacy:
  - Primary literature as a source of information
- Understanding biogerontology:
  - Diversity of goals & interventions
  - Political, economic influences
  - German sources more moderate
  - Applications in very early stage of development
- Ethical reflection:
  - Critique of utilitarian arguments:  
Consequences are uncertain



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## Reflection on the first course



## Reflection on the first course

- **Not easy to develop critical perspective on biology,** much more critical regarding social science & philosophy
  - Didactic revision: Students' activities AND teachers' input
- **Evaluation of learning progress on biogerontology:**
  - The students' impressions:
    - Acquired sufficient knowledge and want to know more
    - Many felt able to follow the discussion or even teach it
  - The teachers' impressions:
    - Good descriptions in final writing task (Caution e. g. with goals, other disciplines, ageing & disease)
    - For the scope of the course: Sufficient basic understanding of biogerontology



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**Thank you!**  
**What do you think?**