



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 →
 - 1 with seniors (Tübingen)
3. **Dissemination:** Guide book with course material, publications, PR

Medicine (Tübingen)
Biogerontology (Jena)
Philosophy (Dresden, Bonn)
Teacher training (Tübingen)
Gerontology (Stuttgart)

→ **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**



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



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



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

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



Why are exactly these aspects of biogerontology relevant to learn?

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

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



Why are exactly these aspects of biogerontology relevant to learn?

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

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



**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)

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

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?



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



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?