

Syllabus

Truth or dare, trick or treat? Objectivity, Markets and Ethics as Ways of Knowing in the Science of Life. (Introducing Science Studies: An introduction to science studies based on the concept of human life and the human concept of life.)

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PLEASE READ THIS SYLLABUS CLOSELY BEFORE WE START THE COURSE AND READ ITS LAST UPDATED VERSION AGAIN BEFORE YOU BEGIN WORKING ON YOUR PAPER!

LESEN SIE SICH DEN SYLLABUS VOR BEGINN DES SEMINARES UND DESSEN LETZTGÜLTIGE VERSION VOR BEGINN DER HAUSARBEIT SORGFÄLTIG DURCH!

Syllabus Structure:

1. Content of the course
2. Learning goals
3. Presentations and Assignments
4. Formal requirements
5. Grading
6. Office Hours
7. Participation and Tutorials
8. Requirements for course tasks
9. Literature
10. Task and Session plan

Description:

This course focuses on the intersection of the study of Science, Technology & Society (STS), ethics, and political economy. The main goal is to learn how STS perspectives help us understand research strategies, political interdependence, how 'the social' influences progress in science, and how techno-science constitutes what we think of as normal and good: In other words, bio-scientific concepts play an increasingly important role in social and political life, while social and political realities of resource allocation and profit orientation (re)shape the contingencies and exigencies of bioscientific research. We seek to elucidate the often fragile threads that connect science and its publics in an analysis of the processes, practices and effects of scientific concept-formation by charting the scientific, political and ethical implications of the inter-related questions: "What is Life?" and "What, as a consequence, is human Life?" We want to understand how scientific concepts affect the practices and interests of different social actors, and how these actors can reconcile and govern conflicts. The participants of the seminar will be assigned as different focus-groups, representing different social actors (media, politicians, NGOs, scientists, business). Based on the course readings, they will have to learn how to represent the interests of the group they are assigned, while acknowledging differing value-positions. The first half of the seminar will be guided by the 'conflict of interests', the second half will be dedicated to 'solution, co-operation, and tacit governance'. The end-goal is to create a pragmatic model of the discourse between science and its public.

Extended:

The currency of science is truth. But what makes a scientific outcome 'true'? Or is the claim that scientists make, that their work produces the(!) truth and nothing but the truth just like a magician's trick? Are scientific truths not also just another product of human culture? Are not social norms truth-makers? What some consider the truth about disease and illness, others say is only the result of our idea of what is normal and many medical or biological categories are just social constructions that have no basis in reality. However, techno-scientific practices have real world consequences. Medical interventions change bodies for good, interventions in the Earth's climate make whole areas uninhabitable, splitting the atom has created an unimaginably rich yet highly dangerous source for energy. The truth of science lies, obviously, between its social construction, and its worldly (or empirical), political, and ethical consequences. The study of science, technology, & society, or science studies (STS) is the interdisciplinary research field that addresses these multi-faceted questions. In this course, an introduction into science studies will be guided by the investigation of the question 'What is (human) life?'

Research in biology and biomedicine depends upon how we answer this question. But the question reaches beyond those areas. Where we draw the line between human life and animal life is just as crucial. If we close the gap between us and animals, we find ourselves bestowed with an incredible responsibility for our fellow life forms. But equally, research questions that involve the beginning and end of life imply political and ethical consequences: debates on abortion and euthanasia hinge on our definition of life. In other words, bio-scientific concepts play an increasingly important role in social and political life, while social and political realities (re)shape the contingencies and exigencies of bioscientific research. We seek to elucidate the often fragile threads that connect science, politics, and publics in an analysis of the processes, practices and effects of scientific concept-formation by charting the scientific, political and ethical implications of the inter-related questions: "What is Life?" and "What, as a consequence, is human Life?". Techno-scientific concepts and practices, vested interests from stock- and stakeholders, and ethics as a ways of knowing construct knowledges among different social actors, that affect not only scientists themselves, but politicians, corporate managers, journalists, teachers, environmentalists, etc. This course is intended to create a basic understanding and help students develop a tool-kit that will allow them to make critical inquiries into the truth of science and its consequences.

Goals:

- The main goal of this seminar is to understand, develop, and use forms of debate and argument to facilitate solution-oriented communication between science and public. Future academic job-markets demand that students are able to work in multi-perspective work environments and actively mediate conflicts that involve techno-scientific governance. This course is designed to work with students towards an understanding what that means and how necessary tools can be acquired, focusing on an example, bio-science, that concerns people personally and ethically.
- Understanding the relation between scientific practice, and social and political processes
- Understanding the concepts of 'biological life' and 'human life' in contemporary life sciences and bioethics
- Overview ethical processes in science and political decision-making
- Overview of political, social, and ethical implications of progress in the life sciences
- Application of argumentative strategies and forms of tacit government in situation of conflict of interests
- Working within a group (organization, task assignment)
- Learning how to produce a poster-presentation within the group (e.g. using Prezi)
- Multi-perspective: Arguing the perspective of the other
- Forms and tools of debate
- Term Paper (Hausarbeit): A current conflict of interests between bio-science and its publics, describe stakeholders' positions, and offer solutions in the form of tacit governance strategies.
- Introduction to concepts and theories in studies of science, technology, and society (STS)
- Understanding the relation between scientific practice, and social and political processes
- Understanding the concepts of 'biological life' and 'human life' in contemporary life sciences and bioethics
- Overview of funding and ethical processes in science, and political decision-making
- Overview of political, social, and ethical implications of progress in the life sciences
- Application of argumentative strategies and forms of tacit government in situation of conflict of interests
- Diversity: gender and postcolonial critique of science
- Working within a group and individually: Task organization, time management, shared responsibility
- Speech writing
- Grant writing
- Course language is English
- Term Paper (Hausarbeit), optionally in English or German

On presentations and homework assignments

Students will present, individually and with their groups, content that they have prepared before each session. They will analyze and create arguments for discussion. When presenting, students should consider carefully whether they want to use a manuscript to read from, use cue cards or speak freely 'off the cuff'. Speaking without any aids is advisable only for those who already have gained experience in public talking. When preparing a manuscript for a talk or a speech, students should calculate the reading time for a single standard manuscript page to be two to three minutes. Students should practice reading out loud with a timer.

Presentations and written contributions should in general heed the following guidelines:

- ▲ Begin with an introduction into the topic you are talking about. You might want to consider presenting an actual case (for example referring to a news item) or a fictional story that illustrates the problem or issue. Provide an overview of the structure of your talk or paper. Create curiosity among your audience, but also give some orientation.
- ▲ Summarize the key-points of your argument and explain them, where necessary, explicate technical terms that you are using: Sometimes your goal is the introduction or elaboration of a particular concept.
- ▲ Create an internal connection or a comparative perspective between your views and the texts.
- ▲ Connect the dots in your presentation/paper by referencing what was said in your introduction, argue whether or not the problem raised there has been successfully described, analyzed or resolved by the tools or perspectives discussed.
- ▲ Try to create interesting and provocative questions for further discussion in a conclusion. This may take the form of a provocative hypothesis, further perspectives and ideas that the text(s) under discussion could enable, or you could cite some unresolved questions that you feel still lurk in the text(s), and which you yourself have not yet been able to answer satisfyingly; you may also point out where you felt the text(s) you read was unclear or to something you find hard to understand, and would encourage others to help you make it clearer.

Please consider, when using media and presentation software, such as Keynote, PowerPoint or Prezi, that content and form of your presentation should be appropriate for the use of media/software. Use slides, clips, etc. parsimoniously. Do not crowd slides with text nor use overly complex diagrams. You can find a humorous but quite illustrative depiction of "what not to do" here:

<http://progressivegeographies.com/2013/10/17/an-excellent-presentation-on-how-not-to-give-presentations/>

At this point, the literature for the seminar and your homework should be available through either the library, *mystudy*, or via the internet, while you should please obtain (i.e. buy, download, print) your own copy of the main texts, that you can bring to class. Please make sure you have obtained and read the texts and prepared the work in advance (**time-management**). Please do inform us immediately if you cannot obtain a text, after having explored all possible options, and let us know what you already have tried (usually, the library will give you some information, if a certain book or journal is unavailable). Also, make sure whether other participants have experienced the same problem. We will do our best to find an alternative, if needed.

On the term paper and essay (Formalia zur Hausarbeit und dem Essay)

Official Dates/Abgabetermine:

Exposé(*SL*) 24.01.2014

Paper/Hausarbeit 15.03.2014

1) begründete Fragestellung/Question and Reasoning.

We expect to see you at least once during office hours to discuss your research question for the paper.

2) Exposé (bestanden/nicht bestanden; pass/fail)

Send as a pdf-document.

Coverpage ("Exposé", Date, Name, Student-Id number, email, seminar title, name of instructor, leading question)

Deckblatt („Exposé“, Datum, Name, Matrikelnummer, Email-Adresse, Seminar,

Seminarleitung, Fragestellung)

Exposé of about 2 pages (1000 words), ca. 2 Seiten (1000 Wörter)

List of literature you are considering up to that point

3) Paper/Hausarbeit (will be graded 1.0 to 5.0 [Failed])

Coverpage ("Exposé", Date, Name, Student-Id number, email, seminar title, name of instructor, leading question)

List of contents

kontextbildende Einleitung (ca. 5 Seiten)/Extended Introduction and Context (ca. 5 pages):

Argumentativer Hauptteil (ca. 7 Seiten)/Main Argument (ca. 7 pages)

Fazit (ca. 2 pages)/ Conclusion (ca. 2 pages)

Literaturliste/List of Literature

Eigenständigkeits-Erklärung mit Unterschrift (please use the template!)

Recommended but not mandatory: Include an abstract (250-300 words) and five keywords, after list of contents.

Length: 12 to 15 pages (plus maximum 2 pages Bibliography)

Use 12 point (*Schriftgröße 12*), Times New Roman, 1,5 Spaced (*Zeilenabstand*)

Do not use *neologisms* (technical terms you have made up)

Use established technical terms (Fachbegriffe) where appropriate. Be clear and concise.

Each student has to write their *own* individual paper.

Language/*Sprache*: English!!!!

It is imperative that you make references to texts used in the seminar. However, you should also use additional texts that were not part of the seminar.

If you absolutely do not feel comfortable enough to try and write the paper in English, we ask that you explain your case to us after(!) we have reviewed your exposé in English. We may grant an exception, if you give us a plausible reason and your exposé leads us to believe that your request is warranted.

The final paper is to be created along the following guide lines:

The paper is meant to refer to both the seminar's contents, literatures, and perspectives, and the contents you were offered in the organisation of the module beyond the seminar such as reader and the lectures of the *Ringvorlesung*.

Structurally, this is meant to be reflected in the successive process of working in 'packages'

Please observe that the complete version (!) of the paper is to be send to us by March 15, 2013 at the very latest.

We do not accept papers post-marked after their due date. Papers that are send to us after the due date or that are incomplete will be automatically graded as "5.0/failed".

A short example, consisting of four pages of a paper written for a course in philosophy, that illustrates how to build an argumentative structure and how to think about formalities when writing can be found here:

http://prezi.com/z4hi_fwilbxj/a-sample-philosophy-paper/

Als Hausarbeit (= Prüfungsleistung) werden also Teil 3) bewertet, und zwar mit einer Gesamtnote (1,0, 1,3, 1,7, 2,0 ... 5,0). Es muss am Ende auf jeden Fall eine komplette Hausarbeit inklusive Deckblatt, Inhaltsverzeichnis, Literatur, und Eigenständigkeitserklärung abgegeben werden.

Die Abgabefomalitäten sind wie folgt: Wir benötigen das Exposé (zum 24.1.) und Hausarbeit (zum 15.3) jeweils termingerecht. Nicht fristgerecht abgegebene Arbeiten werden als 'nicht bestanden' bewertet.

The official date for the term paper writing phase is Jan. 31, 2014. If you fall sick (or experience another emergency) after Jan. 31 and require an extension, please obtain a formal note ("Attest") from a physician, which you must hand over to the person in charge of administration of these affairs:

Dr. Andreas Jürgens Leuphana Universität College Scharnhorststr. 1 21335 Lüneburg

If your case is considered valid, you and we will be informed by the Office of Examination Affairs (*Prüfungsamt*) of how many days of extension you are granted. Please take notice of the fact that we have no influence over this process, nor are we allowed to grant you an extension. Extensions on the paper's due date are official matters outside our jurisdiction.

Im **Krankheitsfall** (ab 31.01.2014 = offizieller Beginn der Arbeit an der HA) verschiebt sich die Abgabefrist um die Anzahl der krankgeschriebenen Tage. Die betreffenden Studierenden müssen hierfür bei der

Modulkoordination ein entsprechendes Attest einreichen (**mit Hinweis welches Seminar!**). Wir informieren die Studierenden und die Seminarleitung dann über den neuen Abgabetermin. Attest an:

Dr. Andreas Jürgens Leuphana Universität College Scharnhorststr. 1 21335 Lüneburg

Bedenken Sie daher, dass Lehrende hierauf keinen Einfluss haben. Ein/e Lehrende/r kann und darf keine Verlängerung der Abgabefrist gewähren, d.h. wenden Sie sich, wenn es Ihrer Meinung nach eine ernsthafte (!) Begründung für eine Verlängerung gibt, an die offiziellen Stellen.

Grading:

We consider three dimensions of your paper when deciding on your grade:

- ^ Technical Execution
- ^ Quality
- ^ Originality

Technical Execution is the most important point and makes up for most of your grade and it is the deciding factor whether you can pass this class:

- ^ Did the author follow the structure and format?
- ^ Did the author manage to write clearly.
- ^ Did the author make references to the texts in the course?
- ^ Did the author make citations, and were these made in a coherent style?
- ^ Did the author show an understanding of the subject matter
- ^ Did the author make use of appropriate technical vocabulary

Quality:

- ^ Did the author argue his/her points reasonably and convincingly?
- ^ Did the author use references beyond the course material?
- ^ Did the author's text cohere with his/her group's project presentation in the seminar?
- ^ Did the author provide a realistic evaluation

Originality does not mean that you have to come up with a genius idea that no one else has, what we are looking for is whether or not you can think beyond the literature and argue your own point effectively rather than merely quoting and paraphrasing.

Once again: All the relevant literature should be available through the university library, the electronic journal access of the library or via open access. Please notify me if you have exhausted all means to get a copy of any one of items listed in the literature, and describe to me what you have tried already.

Please note: We will officially report and make sure that anyone caught with the intent of plagiarizing or cheating is pursued to the full extent of legal possibilities.

Office hours:

We are conducting office hours every week during the semester. Consult *mystudy* for specific times, which we will also announce in the first meeting. Office hours are intended to help you with academic and professional questions, i.e. everything to do with the content and formalities of the seminar (organization, literatures, essay, term paper), questions about your professional or academic careers, or with other fields within the areas of our professional competence. We can only emphasize that you should use the office hours to your advantage. It is always better to have raised an issue immediately, and we have had a chance to find a solution or at least discuss some options, before having to deal with the consequences later and unprepared. It is a matter of experience that students who have made use of the variety of options for advise and tutoring (Tutorials, language center, writing workshops, office hours, etc.) also fare better in their exams and grades, and have to deal with less anxiety and stress. The language center of the university, in particular Dr. Isabell May and her team of TAs, exist to help with writing academic papers in English. Your tutor and we, as your lecturers, are committed to helping you to succeed, to learn, and also to experience a seminar that offers a cooperative, interesting and fun atmosphere for studying – however, that depends on your making use of the options for learning and getting advise.

Please do inform your tutor (TA) and us – and when required also the administration of the Leuphana College – in a timely fashion about any problems you may experience, which endanger your participation and success in the seminar.

Tutorium and Active Participation

We do expect your presence and active participation in the seminar. We also assume that you will be present and actively participate in the tutorial (*Tutorium*). Let us reiterate, that it is a proven and reliable fact that there is a correlation between the measures of stress/anxiety, academic success, active participation, and the level of advance preparation. If you have to miss a class or tutorial for a serious (!) reason, please do inform either Dr. Stingl or professor Weiss (class) or your TA (tutorial), and, of course, the members of the group you have been assigned to, for they might have to cover contents you should have prepared/presented, and they can in turn inform you about the seminar's proceedings and important information. You do miss class and tutorial at your own peril.

Requirements for class and group homework

A first thing that we would like you to do, before we begin the seminar, is that you should take a quiet moment at home, make yourself some tea or coffee (or whatever you prefer), arm yourself with pen and a sheet of paper and *just-so* reflect on what it is that does capture your interest when thinking about the semester theme for the *Ring Vorlesung* as an issue, what you hope to understand or believe you will gain from our seminar in particular. Think, in particular, about the concepts and relations of public, state, and science/scholarship. Make a few notes, and try to write up one or two concise questions that you would consider writing about, whether in a small or a lengthy treatise. Keep not only your thoughts but also your notes, since we may need them at the end of the seminar.

You will be assigned to a work group. You should meet with them at least two to three times before each seminar weekend and prepare the tasks you have been assigned. You may also work together in your group to prepare and discuss the general readings. Be smart about how you organize your studies and assignments!

For all presentations you prepare, bear in the mind the following advise: You may use presentation software, such as e.g. PowerPoint, as you see fit. For research, you may use the Internet along with the library, of course. However, do yourself a favor and do not merely copy and paste, nor use only a single source of information (be particularly careful with sites like Wikipedia). At the end of any presentation, name your sources (or show them on a slide) and provide at least five different academic/scholarly(!) sources per topic if possible. An encyclopedia, lexicon, or Wikipedia does not qualify as such.

Remember that the task of a presentation is to help define, distinguish and/or compare important concepts and technical terms or socio-historic phases, as well as creating questions and examples for discussion in class. Be a little competitive when researching: the first examples you may find may have already been used by many others abundantly. One important task that your presentations and discussions should accomplish is to help us in arriving together at tentative definitions that will accompany us over the course of the seminar and carry into your writing process. In other words, we want to create a tentative conceptual frame, when speaking about the State or Enlightenment or Postcolonialism, that enables us to be confident that we are speaking about roughly the same things. When researching, you will quickly realize that many concepts that seem clear and easily understood at first, some of which you may have been using often without much reflection, suddenly obtain a quality of being multifarious and obscure: When Kant speaks about Enlightenment, for example, you will find that he does so in a very different way than historians do, you might also find that Kant was not a friend of the idea of *democracy* and that he created a sharp distinction between a concept like *democracy* and that of a *republic*, while many current political theorists and philosophers treat these concepts as if they were interchangeable. Therefore, it is imperative that, when addressing these matters, you should always look for prudent examples to illustrate your use of a concept.

For the different homework tasks to prepare, see below.

Literature:

As was specified, we do expect you to have acquired and read three book-length texts, as well as a number of smaller texts over the course of the seminar. Some but not all of the smaller texts will be uploaded to the materials folder in *mystudy*. If not available online via the library e-book system, in the Material folder you may find some of the longer texts for you to review before you acquire them. It is always good to check these options.

However, since you also are required to learn and practice the use of a university library and other resources, some texts you will just have to try and find yourself.

We understand that for the majority of students as well as instructors such as ourselves, money is always an issue. We try to make certain that the three books together do not exceed a sum of 50.00 Euro, which is still a small investment, but an important, and hopefully productive one. Again, check e-book availability with the library, and in one case or the other, you can inspect a book's contents in the Material folder before you obtain it.

The three books you are to acquire and read in their entirety are:

1) Hird, Myra *The Origins of Sociable Life* (please check the preview in the materials folder)

2) Epstein, Steve *Inclusion* (Please obtain your copy of the book)

3) Third book:

Each member of your group chooses and obtains one of the following. Do not read the same book in your group twice. Everyone must have their own book.

Everyone writes a review (2-4 pages) of their book for the other members of the group. Make the review available to the others in your group, meet and discuss the book. Your review is intended to inform your group about the main points discussed in the book, as well as underline its context and provide a critical appraisal.

Additionally, meet with those members of the other groups who reviewed the same book and compare your reviews and the feedback you got from your group. Decide on which review is best, or rewrite one together, and upload that to *mystudy* as a definite version.

Books are as follows:

i. Cazdyn, Eric *The Already Dead*, Duke UP

or

ii. Rose, *Nikolas Politics of Life Itself*, Princeton UP

or

iii. Cohen, Ed *A body worth defending*, Duke UP

or

iv. Haraway, Donna *When species meet*, Univ. of Minnesota Press

or,

v. Lamb/Jablonka *Evolution in four dimensions*, MIT Press

(if your group has an sixth member: vi. Casper, Monica/Moore, Lisa-Jean *Missing bodies*)

Tasks & Sessions

We may have guest speakers during the course of the seminar, some of whom may be 'beamed in' via Skype. This may result in a few changes in the time-table, since we have to allow for guest-speaker's schedules differing because they may live in a different time-zone, are very busy, etc.

Normally, a guest speaker will present their recent research in about 15 minutes allowing for another 10 minutes of your questions and comments. Please bear in mind that guest speakers are respected and very busy researchers and university teachers who make time and effort to be available to you, while they are doing this for free. Therefore, we ask you to behave in a way that you would like to be treated if you were a guest speaker in someone else's seminar. Pay attention, be silent when the guest is speaking, and when you ask a question do so in a proper form. Thank you!

Plan:

Introduction Nov. 15, 2013 16.45 – 18.15, C II.II7

1. WHAT IS LIFE? BIOS, ZOE, ETHOS. NATURE, CULTURE, NATURECULTURE, AND THE SCIENCEWARS

Introduction "What will we do and how will we do it."

Group Composition.

Individual Literature Research task:

Find and read the following texts:

1. Find in the library and create a copy:

Georges Canguilhem "Biological Objects", in: Canguilhem, A Vital Rationalist, Zone Books: 203 – 216

2. Find text using the resources of the Leuphana Library's Digitale Bibliothek

Stingl, Alexander I. "Truth, Knowledge, Narratives of Selves" in: The American Sociologist, September 2011, Volume 42, Issue 2-3: 207-219

3. Find uploaded in Material Ordner (materials folder)

Weiss, Sabrina M. "Unveiling the modest Cyborg" (upload)

After the Science Wars

1. Write up a notes for discussion regarding the literature, and create your own definitions (1-3 paragraphs) or answers (1-3 paragraphs) for the following concepts/ideas and questions:

1. "Is a biological object a natural object?"

2. "What is life?"

3. "What does it mean to be a human being?"

4. "What is truth and is knowledge the same as truth?"

5. "How do I think the relations between science, publics, and governments should be regulated?"

These definitions and answers will be used during the seminar.

Ways of Knowing Dec. 14, 2013 11.00 – 18.00, C 4.215

2. ETHICS AS A WAY OF KNOWING: TECHNO-SCIENCE AND THE TWIN-BIRTH OF BIO-ETHICS.

Literature basis for all participants:

Hird, Myra. *Sociable Life*. We expect that you have read the entire book at this point.

John V Pickstone. (2011). A Brief Introduction to Ways of Knowing and Ways of Working. *History of Science*, 49, 235-245

Quassam, Cassim “Ways of Knowing” (upload)

Mittman, Greg “In Search of Health: Landscape and Disease in American Environmental

History.” *Environmental History* 10 (2005): 184-209. Winner of the 2006 Aldo Leopold-Ralph W. Hidy Award, American Society for Environmental History.

Stingl, Alexander “Digital Divide” in: *Impacts of Technological Change (Sociological Reference Guide)*

Ipswich, MA: Salem Press: 45 - 55 (Upload)

Announce your group’s speaker.

Presentations (10 minutes), using presentation software (PowerPoint, Prezi, Keynote, etc.): Explain the following concepts (historically, where prudent) and how they are related, illustrate with examples:

Group Political:

Government, Governance, Public Private-Partnership

Group Concerned Public:

Public, Private, Privacy

Group Corporate Interests:

Utilitarianism, Capitalism, Free Market

Group Science:

Ontology, Epistemology, Standpoint Theory/Intersectionalism

Group Journalists:

Opinion vs. Knowledge, Lay-Expert Divide, Free Speech

All Groups: Prepare a few discussion points about “digital divide” and how it affects the concepts from your presentations.

3. BIOMEDICINE, MOLECULAR POLITICS, AND 'LIFE ITSELF': EUGENICS THROUGH THE BACKDOOR?
 Clarke, Adele, and et al, eds. *Biomedicalization*. Durham, NC: Duke University Press, 2007:
- a. *Biomedicalization: Technoscientific Transformations of Health, Illness, and U.S. Biomedicine/Adele E. Clarke, Janet K. Shim, Laura Mamo, Jennifer Ruth Fosket, Jennifer R. Fishman: 47 - 87*
 - b. *Gender and Medicalization and Biomedicalization Theories / Elianne Riska: 147 - 172*
 - c. *Marking Populations and Persons at Risk: Molecular Epidemiology and Environmental Health / Sara Shostak : 242 - 262*
- Dumit, Joe "Prescription Maximization and the Accumulation of Surplus Health in the Pharmaceutical Industry: The_BioMarx_Experiment" in: Rajan, Kaushik Sunder, ed. *Lively Capital*. Durham, NC: Duke University Press, 2012: 45 -92

The Issue of Biobanking:

Short introduction for all groups: Wagstaff, A "biobanking regulations"

<http://www.cancerworld.org/Articles/Issues/42/May-June-2011/Cutting-Edge/469/International-biobanking-regulations-the-promise-and-the-pitfalls.html>

All groups will prepare their speakers according to act competently in the following scenario:

A public-private partnership is announced that will establish an international biobank with data collected in Germany, Taiwan, and India. A representative of the company, a government speaker, and a scientist working for the German Ethics committee are speaking to members of the press, NGO-representatives, with company shareholders and high government officials present.

Group Politicians:

How will you establish your relations with corporations in the field, and secure ethical control?

PrivatGen Official Report (http://private-gen.eu/uploads/media/SYNOPSIS_on_the_basis_of_the_full_PRIVATE-Gen_report.pdf) and Biobanks: a Challenge for Europe (http://ec.europa.eu/research/science-society/document_library/pdf_06/biobanks-for-europe_en.pdf)

Group Concerned Public:

Document news, SocialMedia (like Facebook, google+, etc.), and blogpost discussions on biobanks. Conduct interviews with friends and family (make field notes, make sure you do not use actual names but pseudonyms): What do they know about biobanks. What kind of information would they be willing to share, and why?

What kinds of concerns do people have, when asked about biobanks. Consider that you work for an NGO representing the people's interest in privacy.

Group Corporate Interests:

Develop a business model for a biobank. Illustrate by making a poster. Anticipate criticism by

[For "Designing Academic Posters" look at:

<http://www.youtube.com/watch?v=MqgigwIXadA> or <http://colinpurrington.com/tips/academic/posterdesign/>]

Vaught, J. et al "Biobankonomics"

(<http://www.redbiobancos.es/Pages%5CDocs%5Cbiobankonomics.pdf>)

See additionally:

http://www.meduni-graz.at/images/content/file/forschung/biobank/folder_bb_graz_20120515.pdf

Group Scientists:

Research and be prepared to describe, using only the blackboard or flipchart, the current PrivatGen Draft (upload). Search for details on scientific practice and political/ethical "best practices" to compare how biobanking is currently conducted in Germany and Taiwan, how it is or will be conducted in India.

Group Journalists:

Develop critical questions that you would ask in a press-conference for a public-private partnership in establishing a biobank.

Lakoff, Andrew "Diagnostic Liquidity: Mental Illness and the Global Trade in DNA" in: Rajan, Kaushik Sunder, ed. *Lively Capital*. Durham, NC: Duke University Press, 2012: 251 - 278

4. DETERMINING LIFE AND EXPERIENCE: ALGORITHMS OF LIFE FROM THE CENTURY OF THE GENE TO THE CENTURY OF THE BRAIN.

Literature basis for all participants:

Clarke, Adele, and et al, eds. *Biomedicalization*. Durham, NC: Duke University Press, 2007:

Biopsychiatry and the Informatics of Diagnosis: Governing Mentalities / Jackie Orr 353 – 406

Abi-Rached, Joelle, M., Nikolas Rose “The birth of the neuromolecular gaze” in *History of the human sciences* Vol. 23/1, 2010: 11 - 36

Pitts-Taylor, Victoria. “The Plastic Brain: Neoliberalism and the Neuronal Self.” *Health* (London, England: 1997) 14, no. 6 (November 2010): 635 – 652

Schirmann, Felix “Invoking the brain in studying morality” in: *Theory & Psychology*, Vol. 23: 2013, 289 - 304

You should have watched the film ‘Gattaca’ (1997), directed by Andrew Niccol.

Group Task: Do your own research. Create a 10 minute presentation.

Group Scientists:

What neuro-science can and cannot do: Is there something like a free will?

Group Politicians:

Brain research and voting behavior. What must a political campaign manager know about how and why people vote.

Group Concerned Public:

What are the social consequences of the free will debate? Are people, such as murderers or pedophiles guilty of their crimes?

Group Corporate Interests:

Neuro-economics and homo oeconomicus? What must a human being be like to function in today’s economy. Must humans adapt to this economic system or does it represent the way humans are wired to be rational.

Group Journalists:

Research Stories on brain research is promising cures, is telling when you lie, is implanting thoughts in brains, is curing ageing. Analyze how they are being argued, how opinions are presented rhetorically and visually, and how positions are being justified.

The science and practice of learning and studying: Modes of attention, ADHD, strategies of coping.

5. ASSEMBLAGES AND ARRANGEMENTS: WHAT 'MAKES' A SCIENTIFIC TRUTH? THE LOGIC OF SCIENCE VERSUS THE POLITICS OF SCIENCE.

Literature basis for all participants:

Foucault "Truth and Power" in: Foucault, Michel *Power/Knowledge*: 107 - 133

Haraway, Donna "Situated Knowledges" Haraway, Donna „Situated Knowledges“ in McCann, Carole R./ Kim, Seung-Kim *The Feminist Theory Reader*. Routledge, 2013: 412 - 424

Daston, Lorraine "Moral Economy of Science" in: *Osiris* 2nd Series, Vol. 10, Constructing Knowledge in the History of Science (1995), pp. 2-24

Turner, Stephen P. "Webs of Belief Practices", in: *European Journal of Sociology* Vol. 51/3, 2010: 403 - 427

Group tasks:

For the session on "What makes a scientific truth?" in our class on Dec. 14, we will use the creation of the Spider-Goat (do your own research) and an example of gene-therapy for humans tested on animals (begin your research here: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2859173/>

and <http://www.dailymail.co.uk/sciencetech/article-2017818/Embryos-involving-genes-animals-mixed-humans-produced-secretively-past-years.html>

and

<http://www.nature.com/ng/journal/v38/n5/full/ng0506-497.html>).

See Dr. Stingl during his office hours to discuss state of preparations.

Group Politicians:

Find current legislation and ethical principles and stage a (scripted or improvised) 10minute "parliamentary mock debate" over a legislative proposal on the use of animal material in humans (pros and cons).

Concerned Public:

Represent "Skeptics", those who don't believe it is even possible to do that and that this kind of genetic engineering is a hoax, as well as people who find this religiously outrageous. Create a radio- or tv talk-show script 10 minutes length (you also can record this beforehand, using audio-video digital recording equipment and screen it if you like, or stage it in class)

Corporate interests:

Look for stories and scandals "animal" materials used in humans or food, design a marketing strategy, as well as a strategy for dealing with fall-out from scandalization. Present marketing strategy (in whatever form it takes)

Scientists:

Present a 10-minute factual account, with pictures and technical diagrams, of genetic engineering

Journalists:

Collect statements from people on the street, come up with how you want to approach this, i.e. interview people on a Saturday in Lueneburg, and create an 10-minute Report (you can make it into an audio-documentary)

Afterwards: Elected Group Speakers sit down like in a television talks show and debate how a governmental ethics committee (IRB) should be composed, i.e. who should be represented and why. The "audience" (all students in the seminar) will vote for proposals in the end.

Structures and Normativities January 11, 2014 11.00 – 18.00, C 4.215

6. THE HISTORY OF SCIENCE, IS IT JUST A HISTORY OF DEAD WHITE, MALE GENIUSES? GENDER, COLOR, CULTURE.

We expect you to have read Steven Epstein *Inclusion* at this point, as well as your third book and that you have written the review. Preferably you have met with your group and the reviewers of the same book, since the books will be included in the following discussions and your expertise will be called upon. The book review that you have decided upon among the reviewers as the penultimate version should be uploaded a week before the exposé is due.

Literature basis for all participants:

Schiebinger, Londa “Medical Experimentation and Race in the Eighteenth-Century Atlantic World,” in: *Social History of Medicine* Vol. 26/3, 2013: 364 – 382

Rheinberger, Hans-Joerg “Experiment and Orientation” in: *Journal of the History of Biology* Vol. 26/3, 1993: 443 – 471

Groups:

In your group, prepare for a discussion on two subjects. Remember literatures from the first week-end as well.

a) “The gender of the human body and the gender of life itself. Are the objects of science gender-neutral?”

b) Scientific Careers: Just for white men? (Find examples of a typical white male career and a non-typical, i.e. intersectional career in science)

We will use a discussion format that will involve improvised impulse presentations (‘Impusvortrag’)

7. SELLING LIFE, OWNING LIFE: GENES, ANIMALS, TEST SUBJECTS.

Literature basis for all participants:

Brush, Stephen B. “Whose Knowledge, Whose Genes, Whose Rights?” in: Harding, Sandra, ed. *The Postcolonial Science and Technology Studies Reader*. Durham, NC: Duke UP, 2011: 225 – 246

on genes/patents:

http://www.slate.com/articles/health_and_science/science/2013/06/supreme_court_patent_case_science_the_justices_misunderstand_molecular_biology.html

and on indigenous rights and genes read one (!) of the following two:

<http://www.iphandbook.org/handbook/chPDFs/ch16/ipHandbook-Ch%2016%2001%20Karjala%20Patents%20and%20Indigenous%20Peoples.pdf>

or

http://www.indiana.edu/~gender/people/papers/Foster_2012_PatentsFeminismsBiopolitics.pdf

on animal testing

<http://elm.washcoll.edu/index.php/2012/10/in-opposition-of-animal-testing-subjects-of-life-should-never-be-treated-as-a-resource/>

read one (!) of the following two:

<http://www.aalas.org/pdf/08-00007.pdf>

or

http://www.toxicology.org/ai/air/AIR_Final.pdf

Possible supplementary source-book (not mandatory!!!!!!):

http://www.dikseo.teimes.gr/spoudastirio/E-NOTES/A/Animal_Experimentation_Viewpoints.pdf

Each group research and prepare proposition papers (ca. 1, max. 1.5 pages each) on each topic

a) What should an international treaty on genetic material should allow and not allow to be patented.

b) How much and what kind of animal testing should an international treaty allow.

The language you use should reflect your group identity, but the argument you develop should reflect the possibility of building a consensus with the other groups. Use the topics, discussions, literatures, and ideas from session 3 and 5 as your basis. Decide on each paper, which of the of the propositions you will not sacrifice under any circumstance

8. THE ABLEIST-PARADIGM: WHY THE WORLD IS BUILT FOR 'NORMAL' PEOPLE.

Texts and materials for all:

You should have watched the documentary 'Murderball', if possible (search for it online)

<http://ableism.wordpress.com/ableism-glossary/>

http://www.feminish.com/wp-content/uploads/2012/08/the_politics_of_ableism.pdf

All students should consider over X-mas holidays, while travelling and celebrating, what kinds of services everyday objects, household constructions might be inaccessible or difficult, if not impossible to use, if their body configuration was (1) only slightly or (2) very different. Use your cell-phones to document these situations. Consider what the notion of "living a normal life" means for people who do not have the same body configuration.

When you meet in your group. Discuss your findings. Consider which of the situations and sceneries you have found during the holidays can be found in the same way at Leuphana University. Consider your group's identity and how you can include Others in transforming Leuphana. Make a few notes

Group Politicians:

Consider how politicians can help improve situations for people with different body configurations at Leuphana University. Also consider if they should, and why and why not. Who are their potential allies and enemies, when considering legislation.

Group Concerned Public:

How will publics react to political efforts to change the situation at Leuphana? How can publics be informed and persuaded? Should they be persuaded?

Group Corporate Interests:

What are corporate stakes in Leuphana including different body configurations in its structure? Can companies help? Are corporations ready for more highly educated people "with disabilities". How will corporate culture be changed (keyword: corporate citizenship) if disability is no longer a constraint?

Group Scientists:

With regard to any person with a different-than-normal body configuration: Should science change the body of a person or the environment of a person? Should science be the institution to define or question what is a normal body configuration? What role should scientific considerations play for integrating students with differences at Leuphana?

Group Journalists:

What kind of media reporting is adequate to raise awareness of failures and problems? Should media be the first place to raise these issues? How can awareness be created without blame or stereotypes? What kinds of reactions should journalists consider?

We will discuss what kind of strategy Leuphana students should chose to create awareness of different body configurations in the student body, and how Leuphana does or should deal with them.

9. AGE, HEALTH AND TECHNOLOGY: FROM AMBIENT ASSISTANT TECHNOLOGIES TO LIVING LONGER - THE ETHICAL, MEDICAL, ECONOMIC, AND DEMOGRAPHIC CHALLENGES OF 'GRAYING THE CYBORG'

Literature basis for all participants:

Kelly Joyce and Laura Mamo "Graying the cyborg" at:

<http://www.drexel.edu/~media/Files/histpol/Publications/grayingthecyborg.ashx>

Schuelke, Astrid, et al "Ambient Assistive Technologies" at: <http://www.peh-med.com/content/5/1/8>

Kenner, Alison "Securing the Elderly Body" at:

<http://www.surveillance-and-society.org/articles5%283%29/elderly.pdf>

You should have watched the film 'Ghost in the Shell' (1995), directed by Mamou Oshii

Research Grant Writing Exercise in class

"Homework" Overnite: Think about ethical issues of your project for an IRB explanation, for next day.

Challenges Jan. 12, 2014 10.00 - 19.00, C 4.215

10. WHERE THE BODY BEGINS AND ENDS: MIND, SKIN, BACTERIA, GUT-BIOMES, BODY ECOLOGIES.

Literature basis for all participants:

Mol, AnneMarie "I eat an apple" in: *Subjectivity*, Vol. 22, 2008, at:

<http://www.palgrave-journals.com/sub/journal/v22/n1/pdf/sub20082a.pdf>

"The Body Politic" in: *The Economist* at:

http://cirge.stanford.edu/Genetics%20of%20politics_%20Body%20politicThe%20Economist.pdf

Kinross, J., et al "Gut microbiome-host interactions in health and disease" *Genome Medicine* Vol. 11/3, 2011, at: <http://genomemedicine.com/content/pdf/gm228.pdf>

The following three videos (ca. 4 minutes each): "Puzzle of perception", "How do we perceive color?", and "You are not brain" by Alva Noe at: <http://bigthink.com/users/alvanoe>

Look through the following lesson websites:

"Skin: Behavior and Health Connection", "Skin as an organ", "The Ecology of your Skin 1-3"

<http://sciencenetlinks.com/collections/skin-deep-project/>

also these short blog entries:

<http://bigthink.com/strange-maps/444-the-public-option-a- tonic-for-the-body-politic>

<http://governingtemptation.wordpress.com/2011/10/13/a-body-politic-the-right-to-make-live-and-let-die/>

<http://www.npr.org/blogs/health/2013/07/22/203659797/staying-healthy-may-mean-learning-to-love-our-microbiomes>

Consider in your group together before the seminar, if we would think about the 'body politic' today with our contemporary understanding of biology and the current global socio-political situation, what place and function would your group's identity serve in it. Where and how do the other groups fit in and connect/interact with yours? How would you visualize this?

Group Politicians

Group Concerned Public

Group Corporate Interests

Group Scientists

Group Journalists

In class, we want to consider and discuss how we would create a coherent visual metaphor or visual model.

II. IT TAKES A VILLAGE, A COMPUTER PROGRAM, SOME PILLS, AND A CAREER PLAN: CHILDREN'S DEVELOPMENT, DEVELOPMENTAL DISORDERS, AND THE IDEA OF A 'GOOD LIFE'.

Literature basis for all participants:

Read either

Stingl "Abstraction, Attention, Distraction: Digital Classroom" draft for Leonardo Almanac (upload)

or

Stingl/Weiss "Before and Beyond the label: ADHD and its agencies and ecologies" in Dellwing/Harbusch, eds. *Krankheitskonstruktionen und Krankheitstreiberei*, Wiesbaden: Springer VS, 2013

Recall the literatures and discussions from Sessions 3 and 4, and the movie *Gattaca*

also be familiarize yourself with these web-sites:

<http://www.onbeing.org/blog/first-time-flying-kite/3988>

http://well.blogs.nytimes.com/2013/09/18/how-physical-fitness-may-promote-school-success/?_r=0

<http://www.webmd.com/brain/autism/development-disorder>

<http://www.cdc.gov/ncbddd/developmentaldisabilities/facts.html>

ADHD-tests:

<http://psychcentral.com/addquiz.htm>

<http://www.childmind.org/en/health/disorder-guide/intellectual-development-disorder>

(check out this site's "symptom checker")

Everybody prepare a list of your goals in life that you want to accomplish, and how society has so far helped or hindered you. Write another list what you would want for your children and how society should help you and where society has no right to interfere. (Please bear in mind that you should not use personal details that you do not want to share with others publically)

12. SCIENCE AND GOVERNANCE: THE EXAMPLES OF 'BIOBANKS AND PRIVACY', 'HUMAN AUGMENTATION/ABELISM' AND 'ANIMAL RIGHTS'

Reading in class of text by Franklin, Sarah.

Group Politicians

Group Concerned Public

Group Corporate Interests

Group Scientists

Group Journalists

You should have chosen the field and ideas you have chosen in your group for the term paper

Before this meeting: Choose in your group, which one of the following three fields all of you want to work on for your term paper:

1) Owning Life (Biobanking/Seed Banks/PatentingGMOs), 2) Abelism and Augmentation 3) Animal Rights

Define your interest in the field more precisely: For example, restrict your group to a specific technology, historic era, author/school, theory, geographic location, film or book, etc..

Everyone in the group chooses one of the following key questions for your paper. Do not choose the same question twice. Everybody writes their own, individual paper, but you can prepare together:

1. "Is a biological object a natural object?"

2. "What is life?"

3. "What does it mean to be a human/autonomous being?"

4. "What is truth and is knowledge the same as truth?"

5. "How should the relations between science, publics, corporation and/or governments be regulated?"

13. WHAT IS LIFE (FROM VIRUSES, TO ANIMALS AND HUMANS, TO ARTIFICIAL INTELLIGENCE) AND WHY SHOULD WE CARE?

Literature basis for all participants:

We will revisit Mira Hird's book extensively.

Carla Hustak and Natasha Myers "Involutionary Momentum: Affective Ecologies and the Sciences of Plant/Insect Encounters" in: *differences: a journal of feminist cultural studies*. Special Issue edited by Sophia Roosth and Astrid Schrader Vol. 23 (3), 2012: 74-117.

Gilbert, S.F., Sapp, J. and Tauber, A.I. "A symbiotic view of life: We have never been individuals." in: *Quarterly Review of Biology*, December 2012, Vol. 87, No. 4: 325 - 341

Prepare a presentation in your group of about 10 minutes, on life science topic of your choosing (for example based on a news story). Present the core issue of the topic. Include a definition of "life" that your group has come up with. Show why it is important that everybody takes an interest in this topic, i.e. how it concerns us all. Explicate your group identity's stake in it and why and how you would need to co-operate with the other groups in dealing with the issue, if possible based on your own definition of life.

Group Politicians

Group Concerned Public

Group Corporate Interests

Group Scientists

Group Journalists

14. A CO-OPERATIVE MODEL FOR RESOLVING CONFLICTS BETWEEN SCIENCE, PUBLICS, MARKETS, STATES.

Literature basis for all participants:

Harding, Sandra, ed. *The Postcolonial Science and Technology Studies Reader*. Durham, NC: Duke UP, 2011:

Toward the Integration of Knowledge Systems: Challenges to Thought and Practice / Catherine A. Odora Hoppers: 388 - 402

Science in a Era of Globalization: Alternative Pathways / David J. Hess: 419 - 438

Civic Science for Sustainability: Reframing the Role of Experts, Policymakers, and Citizens in Environmental Governance / Karen Bäckstrand: 439 - 458

In your group, prepare a handful bullet points on the role that your group's identity can play in globalized, integrated *civic science*. Before class, discuss in your group what your identity contributes to civic science, but also where it must provide necessary correctives and limits. We will have a summarizing event in class that aims at constructing the outline of a model of civic governance for the life sciences.

Term Paper:

Choose in your group, which one of the following three fields all of you want to work on for your term paper:

1) Owning Life (Biobanking/Seed Banks/Patenting GMOs), 2) Ableism and Augmentation 3) Animal Rights
Define your interest in the field more precisely: For example, restrict your group to a specific technology, historic era, author/school, theory, geographic location, film or book, etc..

Everyone in the group chooses one of the following key questions for your paper. Do not choose the same question twice. Everybody writes their own, individual paper, but you can prepare together:

1. "Is a biological object a natural object?"
2. "What is life?"
3. "What does it mean to be a human/autonomous being?"
4. "What is truth and is knowledge the same as truth?"
5. "How should the relations between science, publics, corporation and/or governments be regulated?"