ERC Starting Grant
Kristien Hens, UA & KUL
• °1975
• 1997: degree ‘licentiaat Germaanse talen Engels-Duits’
• 1997-2007: working in the IT industrie
• 2007: Master in Applied Ethics
• 2010: PhD in Biomedical Sciences (bioethics)
• 2018: PhD in Philosophy
• 2007-2010: PhD @ KUL (Faculty of Medicine)
• 2011-2014: Postdoc in Maastricht (different country)
• 2014-2017: Postdoc at the University of Antwerp
  • BELSPO Back-to-Belgium grant on epigenetics and maternal responsibility
• 2017-2018: (part time) postdoc @ KUL, 10% ZAP at Ugent, 30% ZAP at UAntwerp, temporary positions
2015-2018: Uncertainty

• Uncertainty about job in academia
  • Didn’t want to do anything else!

• Applied for jobs, for grants...
  • Problem: interdisciplinary profile (not ‘real’ philosopher, not ‘real’ biomedical scientist)

• First ERC attempt: 2014: EPIGENRESPONSIBILITY
  • Got a B, not invited to interview
  • Too soon! Idea fairly original but also more of the same
2017: New Attempt

• 7 years + 3 months after PhD
• Extension clause (3 sons)
• Difference with EPIGENRESPONSIBILITY
  • 2014: new subject (epigenetics, autism...)
  • BUT: CV too narrow (many publications but too narrow, not single author philosophical), no methodological innovation, applying old questions to new topics
  • In the mean time: experience with phenomenological research, some publications on epigenetics...
• NeuroEpigenEthics:
  • Not applying old questions to new topics but questioning the questions themselves
  • Different methodologies: X-Phi, finding a way to investigate opinions of people who do not talk, have intellectual disabilities
  • Interdisciplinary not a problem for the ERC!
  • Craziness not a problem for the ERC!
Conceptions of psychiatric conditions as innate or acquired, biological or psychosocial, genetic or environmental influence the ascription of responsibility. Epigenetics strongly indicates that both the social and physical environment affect how genes are expressed, hence suggesting that conceptions, both in folk psychology as in clinical practice, about the nature of some neurodevelopmental disorders as innate and fixed may lack nuance. In NEUROEPIGENETHICS, we investigate how such conceptions influence ascription of responsibility, both capacity responsibility as well as normative responsibility, and analyze what the ethical implications for the child psychiatric clinic are.
- Start several months in advance and send it to as many people as possible
  - ... who will destroy it
- B1: 5 pages, should be a story (not necessary to spell out methodology)
  - Risks, relevance and novelty
- Convince them that you are the best person to do this, but no need for excessive bragging
- B15: methodology, budget, team, advisory board...
  - Budget
  - Ethics approval
  - Team with junior & senior team members
**Sub-Project 3: Epigenetics and normative responsibility.**

**Research Question:** How should we conceive of normative responsibility in the light of the emerging field of epigenetics?

**Research Objective:** To perform an analysis of societal and scientific aspects of epigenetics and the background theories of responsibility in order to apply these to the question of the normative responsibility in the context of epigenetics in general.

**Description:** Epigenetic-wide analysis and similar technologies demonstrate how the environment changes gene expression. Such environmental influences range from food intake during pregnancy to particular matter related to pollution. On the one hand, it has been suggested that these influences could be passed on through future generations. On the other hand, it may be more feasible to change gene expression than it is to change the genes themselves. As such, fully appreciating the impact of epigenetics may provide a molecular basis for a systemic and plastic concept of human nature, situating humans him/herself dynamically altering and being altered by the circumstances in which they live. In this sub-project, we will focus on the question of how epigenetics knowledge about molecular effects, rather than the knowledge of an unexplained causation, affects the discussion. The difference between epigenetic regulations and unexplained causations at first sight can be found in two aspects. First, the timeframe in which potentially harmful effects can happen is expanded. Environmental influences may affect future children not only during pregnancy, but also before people even consider having children. Does this increase individual responsibility or is there a heightened collective responsibility to ensure a consistent environment for harmless procreation over a lifetime? The potential 'heliability' over generations of epigenetic changes complicates the issue further: should women (and men) change their behavior of this possibility affects the health of their grandchildren or great-grandchildren? Should this fact be part of policy decisions? Another aspect of epigenetics, which has been demonstrated in cancer treatment, is that epigenetic changes may be reversible. Does reversibility relieve people or society of part of their responsibility? Do we assert an resistant strategies rather than persuasive strategies, or do we arrest as both? Or does the complexity of our biology, as suggested by epigenetics, call for a revision of our concepts of responsibility in their entirety?

**Methodology:** In this part, we will analyse the ethical and philosophical literature on responsibility in depth against the background of findings in epigenetics. We will analyse philosophical approaches to the concept of responsibility, the clash and interaction between individual and collective responsibility and the impact of dynamic demarcations. We will bring on concepts of responsibility, we will apply the results of our investigations to the specific content of epigenetics, with special attention to how epigenetics, reversibility and long-term effects of epigenetic influences complicate or unfold the discussion on responsibility.

**Tasks & Goals:** There is a risk that if epigenetics as a field of study is overlooked, and hence that a project trying to find out how epigenetics influences concepts of responsibility is overstepping its relevance. However, in science, epigenetics is generally acknowledged as offering a new and complex outlook on (human and other) biology. Moreover, even if it is not possible to read out new arts of responsible decisions directly from the science of epigenetics, it can function as a metaphor of the complexity of human dynamics and interactions, and as such the complexity of questions regarding responsibility.

**Timeline:** Year 2-3.

**Deliverables:** One conference and a special issue or edited volume on ‘Epigenetics, Ethics and Responsibility’, covering issues surrounding the ethics of epigenetics in the context of responsibility towards future.
NEUROEPIGENETICS

Kristien Hens, PI
Bio-ethicist, interdisciplinary expertise
(applied ethics, genetics, philosophy, ethics, qualitative research methods)

Daniela Cutas
Professor in Ethics, Umea University
Expertise: family ethics, responsibility towards children

Sander van de Cruys
Researcher in experimental psychology
Expertise: neurodevelopmental disorders

Andreas De Block
Professor in Philosophy, KU Leuven
Expertise: philosophy of psychiatry

Anna Smajdor
Professor in Ethics, Oslo University
Expertise: epigenetics and reproduction, concepts of naturalness

Jean Steyaert
Professor in child psychiatry
Expertise: neurodevelopmental disorders (autism & Tourette syndrome) psychiatric genetics
• 5 minutes presentation, 15 minutes questions
  • Depends on panel
• Be yourself!
• Don’t waste time learning the presentation by heart!
• Do mock interviews!
  • They are horrible, but do it anyway
• Ask people to read your proposal and send you all possible questions
  • Spend a couple of days in advance answering them ON PAPER
• Be enthusiastic about your proposal!
Epigenetics: Life is experience

- Human beings as dynamically linked to environment
- Case: neurodevelopmental disorders
1.5 Months later...

We are pleased to inform you that your proposal has been retained for funding in this call.
1.5 months later...

- Unbelief, euphoria...
- Lots of administrative stuff before it can actually start...
  - Ethics approval, DPO officer,...
- Cold feet
  - Suddenly you have to manage a team
- But also: dream come true!
Should you do it?

• Look before you leap
  • Investment of time and nerves is great!
  • There is value in incremental research, applied research, valorisation research

• But for me...
  • Appreciation of interdisciplinary research
  • ‘non-conventional’ CV did not really matter
  • Place for crazy ideas
  • No need for ZAP position in order to apply
  • Possibility to start a research team
Investigating entanglements of human biology, responsibility and experience

NeuroEpigenEthics aims to investigate how dynamic concepts of human biology influence the ascription of responsibility, specifically in the context of neuro-developmental disorders. We use a combination of theoretical and empirical methods, with a special focus on the importance of experience stories.