

The Artificial Intelligence Revolution: How Will Emerging Technologies Reshape Our Society and Ourselves
By Matthew and J.G. Castel

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Both lecturers have worked, lectured and published extensively on the impact of artificial intelligence on different aspects of our society.

The artificial intelligence revolution places us on the edge of change comparable to the rise of human life on earth. Thus, the focus of the lecture series will be on how this change will re-shape the core components of our society and ourselves from our careers to our institutions to our ethics. What sort of future will we end up with: utopia or dystopia? What level of control do we humans still have?

Lecture 1 (Monday, February 6, 2017, 7 to 9 P.M. room YH 204)

Part I

Introduction

Scope of this Series of Workshops on the Merger of Science, Technology and Society. How Will Machines that Perceive, Deep Learn and Reason Affect the Way People Live, Work and Communicate with One Another?

- What is the place of humans in a growing digital environment of increasing complexity which competes and even replaces them?
- Society is not keeping pace with technological change
- Definition and legal status of robots: a robot for every task. How do you humanize robots?
- Can they express emotions and be conscious of themselves? Fallibility of robots and the notion of felicity. Asimov's Laws
- Definition and history of artificial intelligence: Data as the raw material of the information age
- The three types of artificial intelligence

- Where do we stand today? Machine learning and deep learning
- Concerns and dangers caused by the intelligence explosion
- 2 Visions for the future

Part II.

Jobs at risk? Employment and the Workplace: How Will Technology Transform the Career Landscape?

- White-collar jobs at risk: employment and the work place
- The future of the legal profession and the law (European Union Commission on Civil Law Rules on Robotics)
- The future of the medical profession and health care: computer integrated surgery; medical robots and personal care robots
- Huge productivity improvements through technology and huge job creation or the end of the “American Dream”?
- Humans and intelligent systems become inseparable?
- What skills matter in tomorrow’s workforce?

Lecture 2. (Monday, February 13, 2017, 7 to 9 P.M. room YH 204)

Part I.

Technologies and Industries of the Future: How to Foster Lifelong Learning.

- The future of education. How to prepare for tomorrow? Robotics and AI call for another education revolution
- Is the traditional link between learning and earning broken? Does more education lead to higher wages?
- What role do employers have in fostering continuous learning and education?
- Employers embracing “learning” as a core skill
- Should attitudes toward youth change: merit over seniority?
- Massive open online courses and alternative providers of education.
- How should career planning change?

Part II.

Economic and Social Aspects of Emerging Technologies

- Transportation and the age of self-driving vehicles. On demand transportation. A case study of the problems associated with self-driving cars.
- The geographies of the future: how will people live?
- Cities as innovation hubs.
- Is the 21st century a bad time to be a control freak?

Lecture 3. (Monday, February 27, 2017, 7 to 9 P.M. room YH 204)

Part I.

International Aspects of Artificial Intelligence.

- Code wars: the “weaponization” of codes. Cyber attacks a new domain of warfare
- The anatomy of a cyber attack
- Cybercrime: Can computers be used as weapons of mass destruction?

- **What is at risk: the scope of digitization**
- **Cyber security: the next military industrial complex**
- **The use of lethal autonomous weapons systems (LAWS): killer robots and drones**
- **The legal framework governing LAWS**
- **What role should international law play?**
- **Possible solutions to the LAWS Issue**

Part II.

Limits to Growth and Crisis: A Brave New World?

- A thought experiment**
- Machines do not consume**
- What about productivity**
- Long-term risks and the automation paradox**
- Natural limits and the power of the consumer**
- The consumer: Towards a new paradigm**
- The consumer: lost in a sea of amusements?**

Conclusion.

- **Humanity upgrading to irrelevance**