Digital Transformations of Education

Rethinking the field from the perspective of Post-phenomenology

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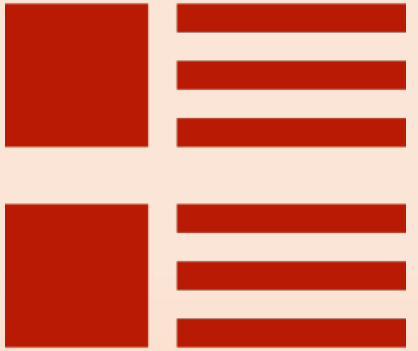
OUTLINE

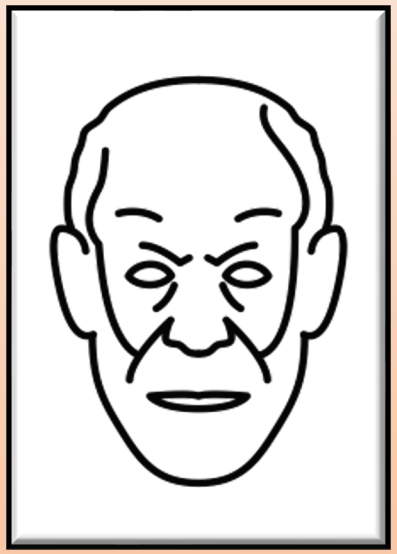


- Introduction. Motivation of the study
- Four revolutions in human history
- Digital Revolution in human consciousness
- The problem of study the digital transformation in human consciousness
- Moving from substantial to relational thinking
- Human worldview. The postphenomenological perspective
- Conclusions

Four revolutions in human history

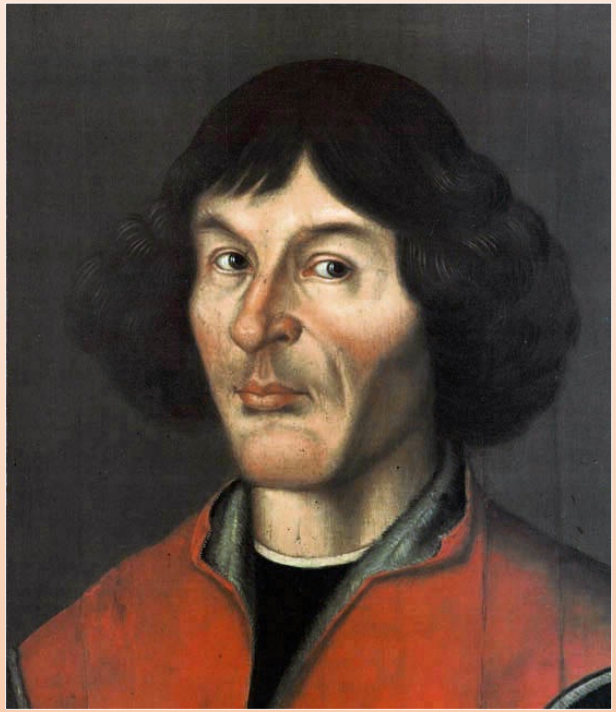
Copernicus
1543

Darwin
1859

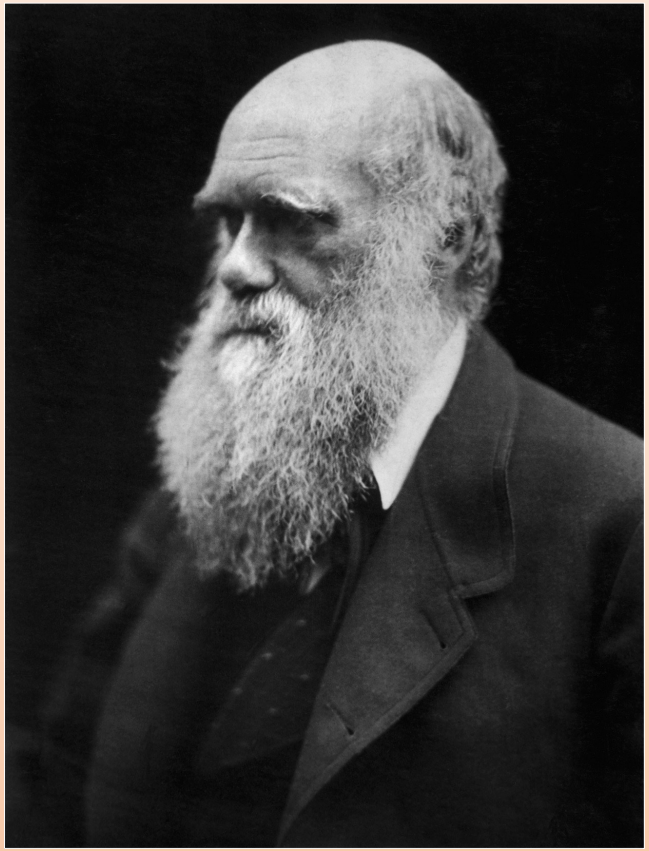


Freud
1917

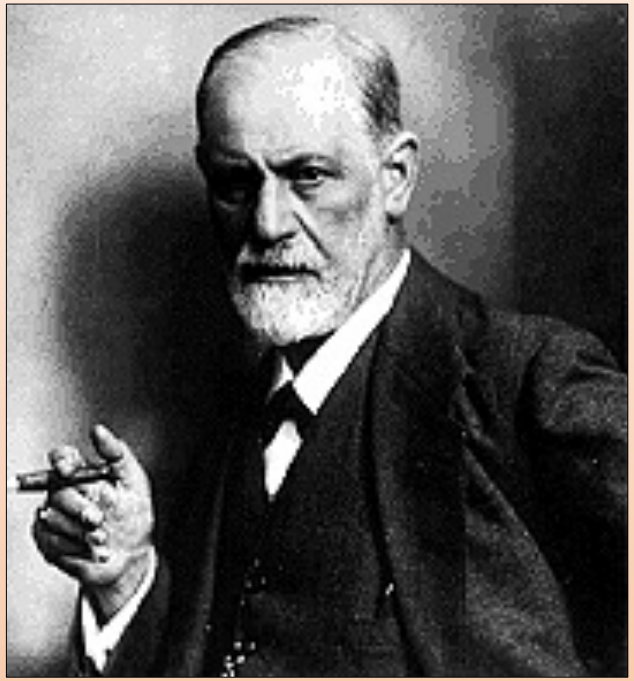
Turing
1936



We are not immobile, at the Centre of the Universe



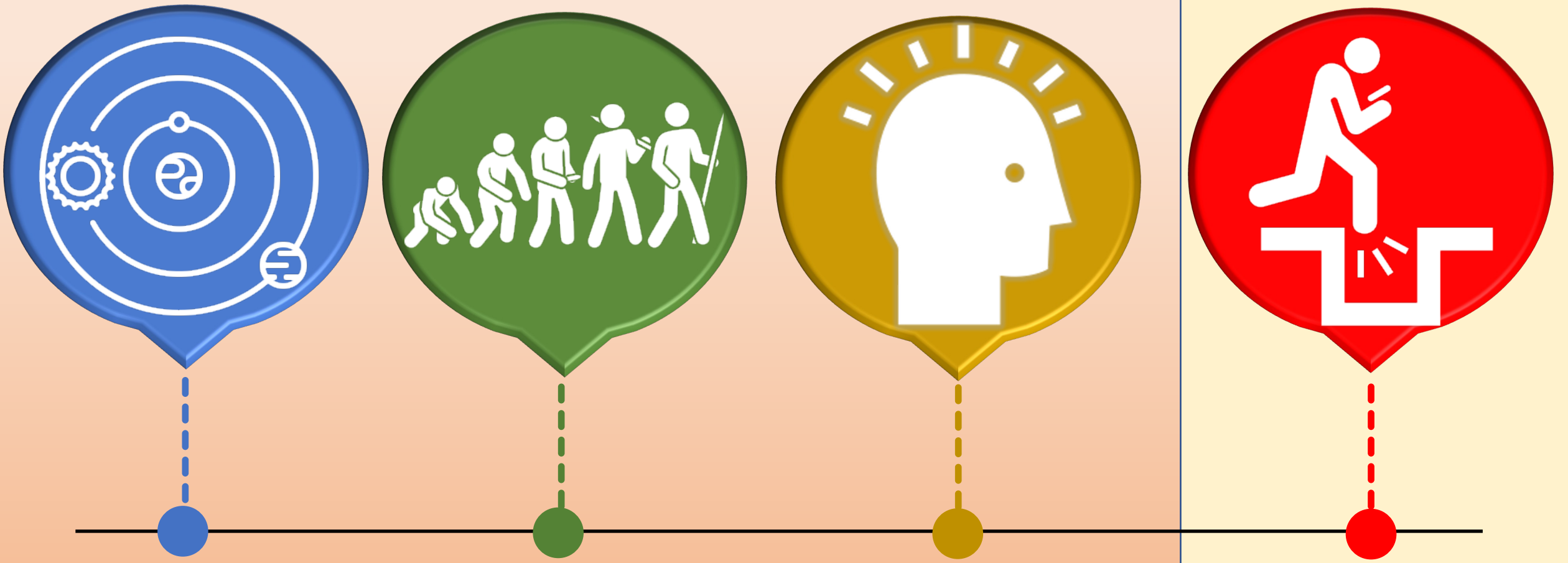
We are not detached and diverse from the rest of the animal world



We are not Cartesian subjects entirely transparent to ourselves

We are not disconnected agents but informational hyperconnected organisms

Four revolutions (wounds) in human consciousness



LUCIANO FLORIDI
Professor of Philosophy and Ethics of Information, Oxford University

When experiencing the forth revolution **"we are modifying our everyday perspective on the ultimate nature of reality, that is, our metaphysics, from a materialist one, in which physical objects and processes play a key role, to an informational one."**

(Floridi, The Fourth Revolution: How the Infosphere is Reshaping Human Reality)

DIGITAL REVOLUTION IN HUMAN CONSCIOUSNESS

According to Floridi, the digital revolution is a “worldview revolution” followed by fundamental transformations in human **consciousness**

CONTRADICTIONS OF THE DIGITAL AGE EDUCATION

John Amos Comenius

- Principles of digital technology are in conflict with the the classroom-lesson system. The concepts of “Place” and “Synchronous time” are pure analog ones
- The phenomenon of hyperconnectivity contradicts the hierarchical structure of educational system
- The traditional instrumentalist perception of digital technologies in education is no longer working

THE PROBLEM…

Our study

“Transformations of Teachers' Consciousness as Symptoms of Digital Revolution” (ISF, 2017-2020)

didn’t indicate the significant transformations…

while a certain amount of “the existential anxiety” among teachers was expected

The research hypothesis:

- Digital transformations in teachers' consciousness cannot be detected within traditional, substantial thinking
- Moving from the substantial to relational thinking is needed

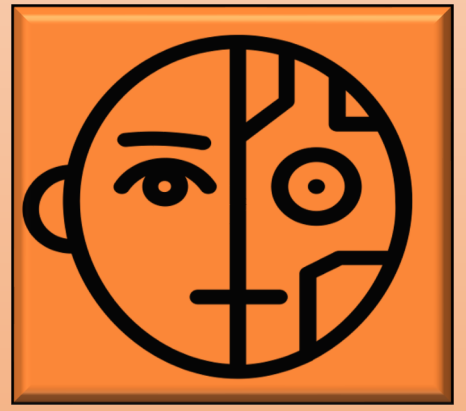
OUR WORLDVIEW

Our self-conception
(who we are)

Our mutual interactions
(how we socialize)

Our metaphysics
(Our conception of reality)

Our agency
(Our interactions with reality)



Postphenomenology of worldview

The systematic analysis of the structure of relations we have with technologies provided by postphenomenology can be applied as a productive model for analyzing human worldview

1. Our self-conception (who we are) - Embodiment
2. Our conception of reality (our metaphysics) - Hermeneutics
3. Our mutual interactions (how we socialize) - Alterity
4. Our interactions with reality (our agency) - Background

OUR SELF-CONCEPTION IS CHANGING

“People start perceiving themselves as the kind of informational organisms that live, flourish, interact, not as stand-alone entities but as networked agents in a world that is made of information.”

(Floridi, The Fourth Revolution:

How the Infosphere is Reshaping Human Reality)

EMBODIMENT

OUR METAPHYSICS IS CHANGING

“Digital technologies are modifying the very nature of, and hence what we mean by, reality, by transforming it into an infosphere.”

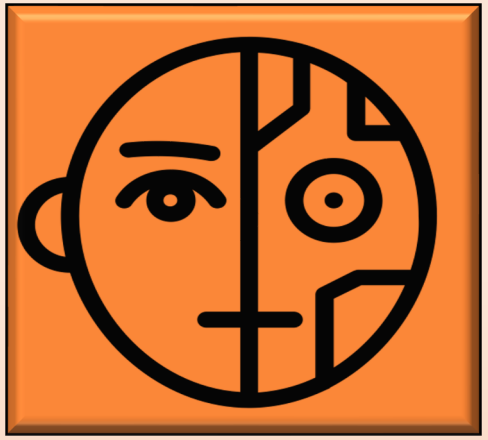
(Floridi, The Fourth Revolution:
How the Infosphere is Reshaping Human Reality)

HERMENEUTICS

OUR MUTUAL INTERACTIONS IS CHANGING

We are hyperconnected entities having an ubiquitous, permanent, context aware access to data

ALTERITY



OUR AGENCY IS CHANGING

We are - an integral component of the digital reality

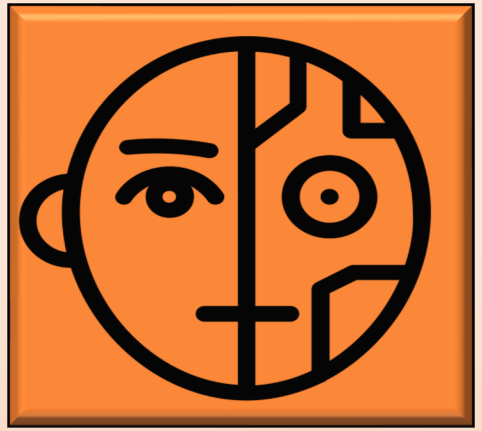
BACKGROUND

Worldview

Our Self-conception

Our Metaphysics

Our Interactions

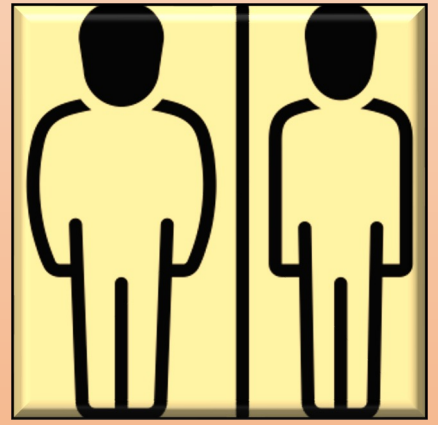


Our Agency

Postphenomenology

Embodiment

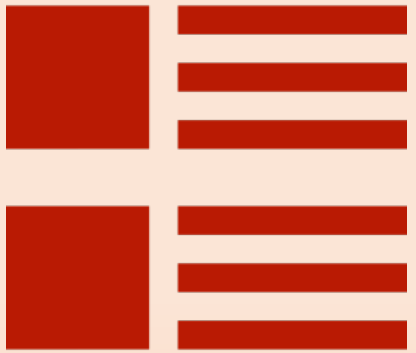
Hermeneutics



Alterity

Background

Recent Publications



- G. Shamir, G. Wellner, I. Levin. Postphenomenological Studies of Machine Learning Education in Elementary School. EDULEARN22 (in press).
- M. Marom, G. Wellner, I. Levin. Epistemology and Education in the Digital Age – A Postphenomenological View. EDULEARN22 (in press).
- G. Wellner and I. Levin. Ihde Meets Papert: Combining Postphenomenology and Constructionism for a Future Agenda of Philosophy of Education in the Era of Digital Technologies. Learning, Media and Technology (submitted for publication).

CONCLUSIONS

- In the digital age, the human worldview can be effectively represented as a system of postphenomenological relations
- The analysis of postphenomenological relations is a promising methodology for identifying digital transformations in human consciousness
- We believe that the postphenomenological methodology can demonstrate the existence of digital transformations
- Advances in postphenomenology can have a significant impact on education in the digital age