

Scenarios, Fictions, and Imagined Possibilities in Science, Engineering and Education

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Professional Culture of the Specialist of the Future

- ❖ annual conference at Peter the Great Saint Petersburg Polytechnic University
- ❖ part of the Springer book-series “Lecture Notes in Networks and Systems”
- ❖ ideally, a platform and network for collaboration
- ❖ an international, interdisciplinary, peer-reviewed, open-access, academic journal: *Technology and Language*

professional *culture*:

- ❖ the research culture of science
- ❖ engineering and public administration as a cultural practice
- ❖ the role of educators to foster this culture

Lecture Notes in Networks and Systems 830

Daria Bylieva
Alfred Nordmann *Editors*

The World of Games: Technologies for Experimenting, Thinking, Learning

XXIII Professional Culture of the
Specialist of the Future, Volume 1

 Springer

Lecture Notes in Networks and Systems 829

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The World of Games: Technologies for Experimenting, Thinking, Learning

XXIII Professional Culture
of the Specialist of the Future, Volume 2

 Springer

transition from 2023 to 2024

From

The World of Games: Technologies for Experimenting, Thinking, Learning (2023)

to

Scenarios, Fictions, and Imagined Possibilities in Science, Engineering, Education (2024)

- ❖ *The World of Games* – highlights the Where and How professional culture can be developed
- ❖ *Fictions and the Imagination of Possibilities* – highlights the Why and What competencies can be cultivated

for example

The Where and How of *The World of Games*:

- ❖ Moot court in legal education, Model-UN for international relations
- ❖ Role-playing in language education
- ❖ Simulations of systems (trade and economic exchange, complex machinery)

Playfully, one learns aspects of the subject matter (rules, how things work, stimulus-response patterns).

And playfully one becomes socialized or habituated, acquires professional culture and practice.

The game is a site for learning some facts of the world.

for example

The Why and What of *Fictional Worlds*:

- ❖ I play a game and then I play it again, with some rule changed
- ❖ I learn zero-sum games (for each gain, there is a loss – there are always winners and losers), I develop cooperative games (win-win)
- ❖ I don't know what will happen, so I play through different scenarios

Playing loosens the mind, opens up space for a critical and constructive attitude – an important cultural competence for specialists of the future?

It also provides a collective workspace for decision-makers.

not: The game is a site for learning some facts of the world.

but: By playing one learns that everything could be different.

alternatives

Hypothetical thinking is required to imagine alternative ways of approaching a topic.

So, here some alternative ways of thinking about the 2024 theme.

Scenarios, Fictions, and Imagined Possibilities or:

- The Truth of Fictions
- In a Subjunctive Mood
- The Art of the As-If
- Speculative Origins and Destinies

the truth of fictions (seemingly paradoxical)

- ❖ Shakespeare's Hamlet and Pushkin's Eugene Onegin — they are fictional characters and yet we still keep learning from them about human nature
- ❖ Some have argued (e.g., Martha Nussbaum) that it is through fiction that we acquire a moral education: imagination different ways of being a person.
- ❖ Philosophers discuss *fictionalism* in the sciences: Ideal gases, point-masses, isolated cause-effect relations, rational economic actors are assumed for understanding natural and social phenomena.
- ❖ For example, Nancy Cartwright on „physics as theatre“.

An entry-point for scholars of literature, popular culture, for economists and epistemologists.

in a subjunctive mood

- ❖ let's imagine: what if this is the case?
- ❖ let's rather imagine: what if this were the case?
- ❖ hypothetical thinking requires a linguistic competence which, some say, is vanishing from our language
- ❖ „how life might or would be if this is how it were“
- ❖ isn't the subjunctive mood an important resource for creative thinking, for scientists, engineers, administrators?
 - ❖ aphorisms
 - ❖ conjuring fantastic worlds
 - ❖ language beyond the literal, referring to the absent

An entry point for linguists, language teachers, engineering educators.

the art of the as-if

- ❖ an art of living - not in just one world
- ❖ philosopher Hans Vaihinger *The Philosophy of As-If* (1911) — most significantly: „we don't know whether we are free, but we must think and act as if we were“
- ❖ art historian Ernst Gombrich „Meditations on a Hobby-Horse“ (1963)
- ❖ delusional or liberating – how to live in a digital semiverse (following the reality-principle *and* the pleasure-principle)?

An entry-point for philosophers, artists, theorists of virtual reality, students of creativity.

speculative origins and destinies

the motivational power of stories

- ❖ myths of progress and mission
- ❖ fantastic engineering visions, catastrophic end-of-the-world scenarios – how to deal with incredible futures?
- ❖ *The Construction of the Robot in Language and Culture*
- ❖ *Mythologies*
- ❖ *Speculative Technology*

An entry-point for narratology, history and cultural studies of science, technology, and education.

Technology and Language

- Helmut Achenbach
- Larissa Aronson
- Renata de Assis-Fonseca
- Carrie Epperson
- Maria Gerschlager
- Natalia Ershova
- Ben Huh
- Tina Ingold
- Anna Katsouraki
- Shirley Krumholz
- Edward Kuylenstierna
- Eugene Kushnir
- Xiangmei Liu
- Carl Mitterauer
- Dmitry Mikhlin
- Alexander Moshonov
- Natalia Nijharova
- Ulrich Nordmann
- Andrey Pavlov
- Peter Peitz
- Walter Pilch
- Janin Mu
- Theresa von Sydow

1:1 Introductions

Technology and Language



Writing With Atoms. Written literally with atoms in a Japanese Kumpi fabric – would just a few real atomic bombs – instead of paper.

- Ulrich Nordmann and Doris Bylica
- Ulrike Sonntag
- Joseph Wilson
- Walker Trumble
- Chandrina Christensen
- Christopher Sonnen and Alexandre Kazakou
- Tatiana Karasik
- Viktoria Korotkova and Sergei Karlin
- Inna Bolgova
- Thomas Frey

2:1 The Word as a Technical Artefact


Technology and Language



- Lin Cheng
- Stjepanek Wu
- Jana Romanova and Polina Babitskaya
- Kevin Liggieri and Marco Tamborini
- Hiroaki Inagaki, Hui Jiang, Lin Cheng
- Markus Sebald and Xun Li
- Markus Caselberg
- Larissa Illmann
- Theresa von Sydow
- Leon Pezzini
- Doris Bylica
- Barbara Hauer
- Yun Li

3:1 The Construction of the Robot in Language and Culture

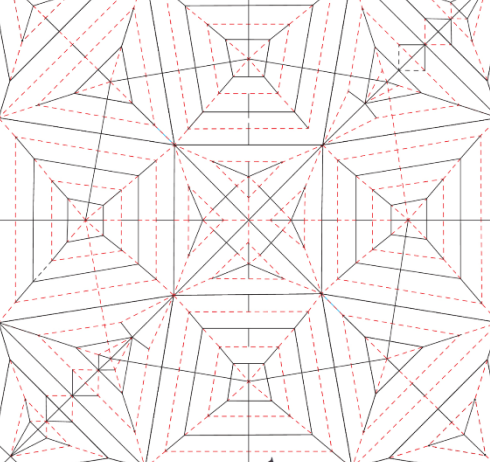
Technology and Language



- Katsuko Ikenouchi
- Paola Di Stefano
- Teodoro Muñoz
- Wariko Smith
- Doris Bylica and Jairo Zamora
- Yuan Zhang
- Terja Rasmikhina
- Iliriana Budu and Maria Bogdanova
- Marion Lamberti
- Kristof Schwarz
- Ulrich Nordmann, Kristof Schwarz, Marion Lamberti

3:4 Mimesis and Composition


Technology and Language



- Julia Berganti and Andrea Danti
- Soledad Wu and Xun Li
- Beang-Lan
- Sebastian Franz
- Marin Khabibullina and Anna Kozlov
- Polina Babitskaya
- Baragh Mirzadeh
- Lisa Barchiesi
- Leon Pezzini

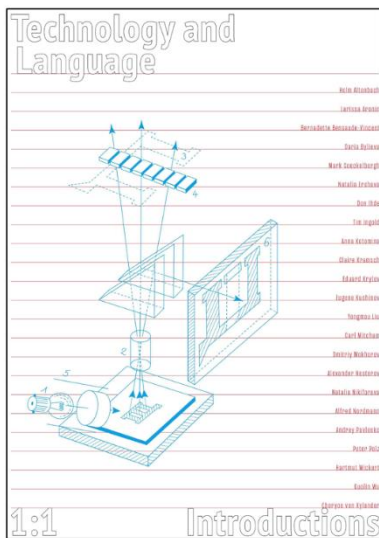
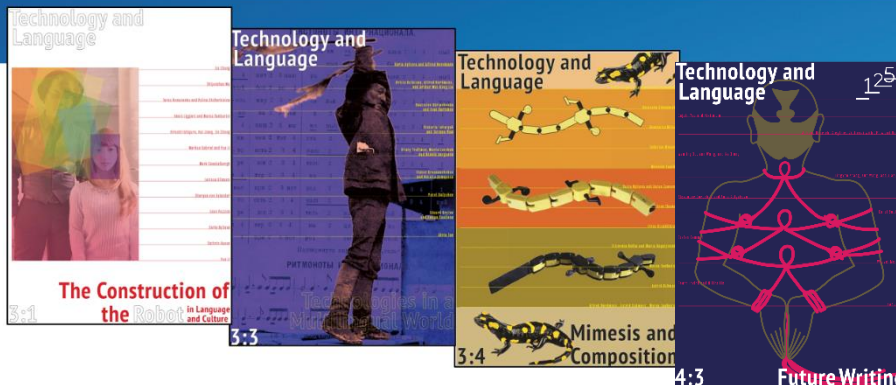
4:1

Technology and Language



- James McGuire and Natalia Nikiforova
- Nikolai Erdos
- Walker Trumble
- Carl Mitterauer
- Gerard Sibma
- Konstantin Artyuk
- Tara Berkana
- Natalia Nikiforova
- Jana Sontag
- Milica Kostov and Lindsey Kerschbair
- Michael Kerker
- Kevin Liggieri
- John Wittingdale

4:2 Mythologies



SUBJECT AREAS

- 1 art, literature, digital culture studies
- 2 history and philosophy of technology
- 3 education and communication, professional culture
- 4 principles of construction and design
- 5 semiotics, technology, and the order of things
- 6 social relations in the technosphere
- 7 anthropology and technology, human-machine interactions

CALL FOR PAPERS/FUTURE ISSUES

- 5:1 Hermeneutics of Technology
- 5:2 ChatGPT and the Voices of Reason, Responsibility, and Regulation
- 5:3 Speculative Technology

EDITORS

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