Reflections on Computer Science, Society and Ethics 4
Ethics III:
Ethical concepts in times of global challenges

Wolfgang Hofkirchner
IMC Krems, 25 May 2021

Contents

1 Using ethics as guideline

Ethical approaches

– *Deontological ethics*: about **duties**.
Virtue ethics: about **virtues** (Aristotle).
No scientific understanding of the origin of the motives of moral action.

– *Consequentialist/utilitarian ethics*: about **consequences**.
No scientific understanding of the significance of the collective whole.

– *Ethics from systems (emergentist/evolutionary ethics)*: about the **interplay** of the **subjective enactments of social agents** (individual motivation) and the **objective functions of social systems** (the collective whole).

2 Ethical concepts

2.1 Dignity and weighing human lives against each other (1/1)

- Ferdinand von Schirach: Terror

https://www.youtube.com/watch?v=iVVXTtiZqzc

2.1 Dignity and weighing human lives against each other (2/2)

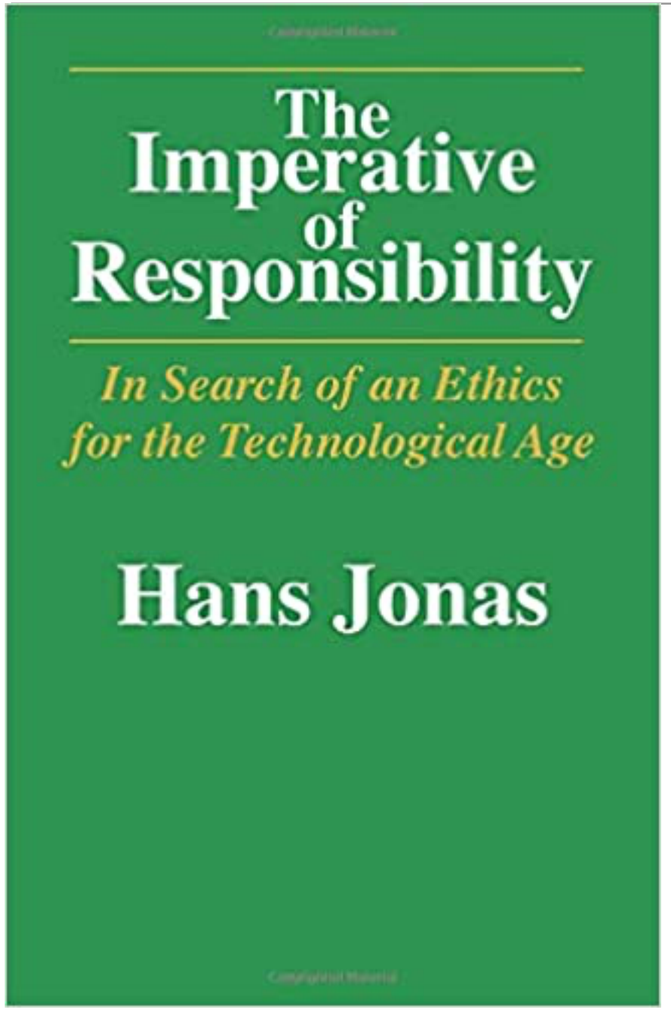
In that play, the theatre or TV audience sits in judgement on a fictive Major of the German military forces who, in an unauthorised act, shot down a **civil airplane with 164 passengers in order to save the lives of 70.000 people in a Munich arena** into which the airplane was supposed to be downed by a terrorist in control of the machine. The majority of the audiences voted for an **acquittal** of the accused Major – namely, **63 per cent of the playgoers** in 2.472 performances from October 2015 until January 2020 and **87 per cent of the television viewers** of the movie at German, Austrian and Swiss TV stations on 18 October 2016 (Simanowski 2020, 19-20). Such a decision would be in violation of the **constitution of the German Federal Republic that forbids to offset one number of casualties against another number of casualties**.

Furthermore, there are different majorities in different cultures. Asian values might be different. During the same period, **11 performances out of a total of 21 in China as well as 15 out of a total of 23 in Japan resulted in convictions**, whereas **all of 8 performances in Taiwan ended with acquittals** (Simanowski 2020, 40).

This difference in votes holds also for other examples (like the **Trolley Dilemmas**) and might have to do with the difference between **individualistic** and **collectivistic** cultures (Ahlenius and Tännsjö 2012, quoted in Simanowski 2020, 129).

Simanowski, R. 2020. Todesalgorithmus. Das Dilemma der künstlichen Intelligenz, Wien

2.2 The Imperative of Responsibility, Precautionary Principle (1/2)



- **Hans Jonas 1984**: *The Imperative of Responsibility. In Search of an Ethics for the Technological Age* (1979 in German)

2.2 The Imperative of Responsibility, Precautionary Principle (2/2)

– Kant's **categorical imperative**:
"*Act so that you can will that the maxim of your action be made the principle of a universal law*" (p. 10).

Addressee: the **individual** in her private conduct.

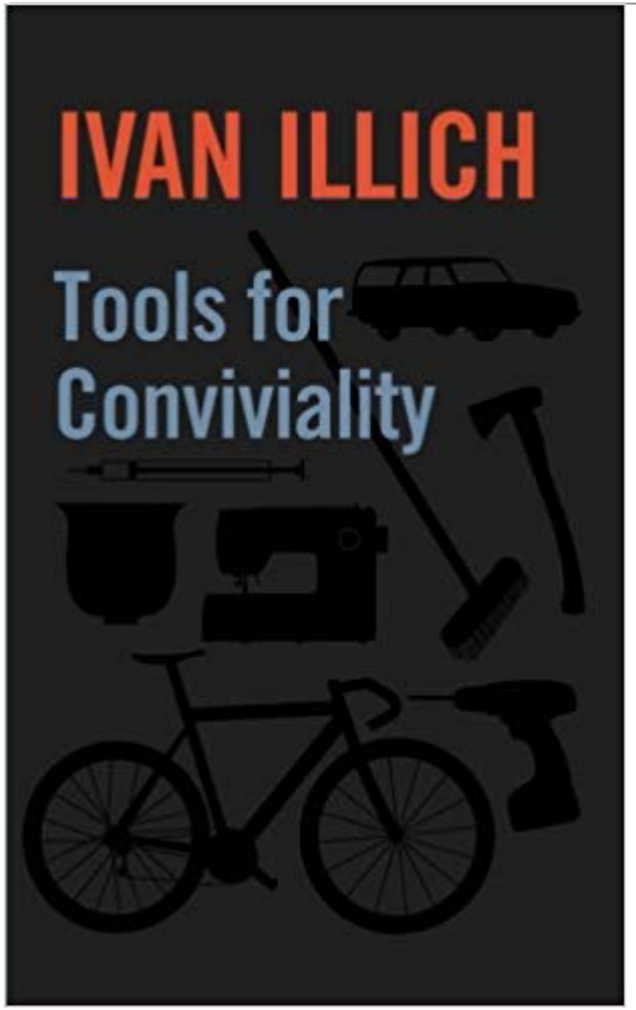
Subjective quality of one's own **self-determination**.
Extrapolates into an **ever-present order** of abstract compatibility.

– The new **imperative of responsibility** of Jonas:
"*Act so that the effects of your action are compatible with the permanence of genuine human life*" = "*Do not compromise the conditions for an indefinite continuation of humanity on earth*" (p. 11).
Addressee: public policy, actions of the **collective whole**.
Objective responsibility.

Extrapolates into a predictable **real future** as open-ended dimension of our responsibility.

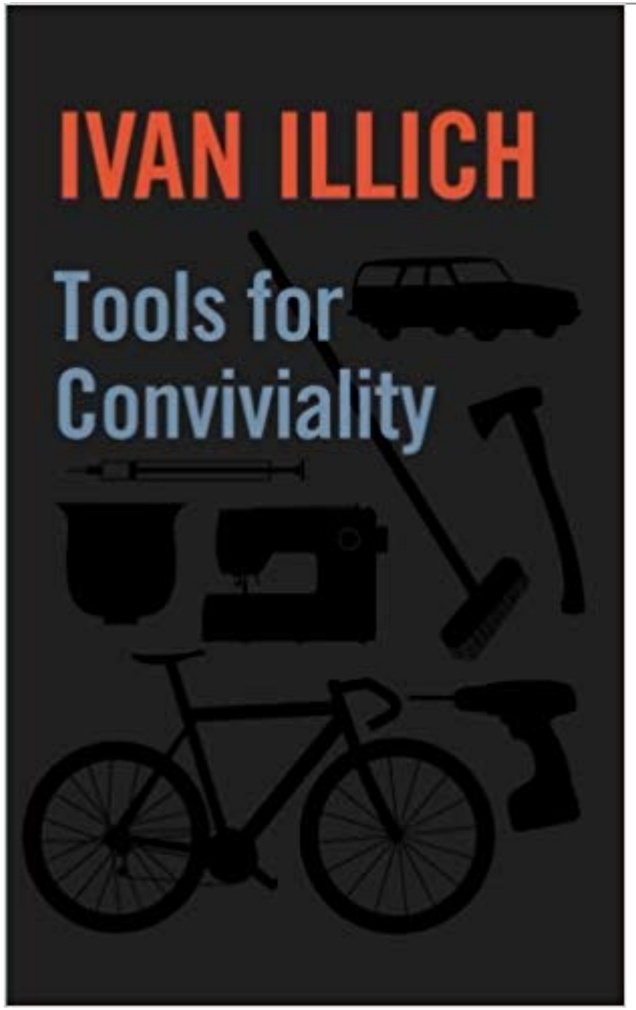
- **Precautionary Principle**: "Prevalence of the Bad over the Good Prognosis" (p. 31).
  Condition: there are good reasons to assume the probability of worst cases higher because an irreversible tipping point might otherwise be passed.

2.3 Convivialism (1/3)



- **Ivan Illich 1973**: *Tools for Conviviality*.
  In this book, he submits “the concept of a multidimensional balance of human life which can serve as a framework for evaluating man's relation to his tools. In each of several dimensions of this balance it is possible to identify a natural scale” (p. x). “Once these limits are recognized, it becomes possible to articulate the triadic relationship between, persons, tools, and a new collectivity. Such a Society, in which modern technologies serve politically interrelated individuals rather than managers, I will call ‘convivial.’ [...] I have chosen ‘convivial’ as a technical term to designate a modern society of responsibly limited tools” (p. xii).

2.3 Convivialism (2/3)



‘Convivial’ has Latin origins and means the quality of living together in the manner of dining together (convivor) of hosts (convivatores) and guests (convivae) at common feasts (convivia). It shall not mean “tipsy jollyness” but “eutrapelia (or graceful playfulness)” – going back to one of the virtues of Aristotelian ethics elaborated by Thomas Aquinas, which is associated with “friendship or joyfulness” (p. xiii).

2.3 Convivialism (3/3)

- **Convivialist International 2020**: *The second convivialist manifesto – Towards a post-neoliberal world: convivialist principles*

CONVIVIALIST INTERNATIONAL

https://online.ucpress.edu/cs/article/1/1/12721/112920/THE-SECOND-CONVIVIALIST-MANIFESTO-Towards-a-Post

2.4 Homeland Earth

- **A Campaign to Promote Planetary Awareness 2021-**

HOMELAND EARTH

TERRE PATRIE

https://www.homelandearth.com

Reflections on Computer Science, Society and Ethics 4
Ethics IV:
Ethical technology design concepts in times of global challenges

---

Wolfgang Hofkirchner
IMC Krems, 25 May 2021

Contents

1 Building up the Global Sustainable Information Society (1/2)

As with any technology, the impact of IT on the social system is **ambivalent** as it can **increase** or **reduce frictions in the achievement of synergy**:

– On the one hand, it can be instrumentalised for purposes detrimental to the reclaiming of the commons for all and thus **hamper conviviality**; it can,
• quantitatively, **reinforce existing social dysfunctions** or,
• qualitatively, **spawn new social dysfunctions**.

– On the other hand, it inheres a potential that can smoothen out exclusions from the commons and **help manufacture conviviality**; it can not only,
• quantitatively, **mitigate** or,
• qualitatively, **eliminate existing, and prevent new, social dysfunctions** but also **bring about new social functions** beneficial to all.

1 Building up the Global Sustainable Information Society (2/2)

Thus, design **can be selected**.
Ethics shows:
a) not everything that is feasible is desirable – we needn't do it;
b) what is desirable needs also to be feasible.

We can design technologies such that they become **building blocks for the Global Sustainable Information Society**.

We can
(1) **resist** the (destructive) design of applications that do not comply with conviviality as well as
(2) **insist on** the (constructive) design of applications that do comply with conviviality.

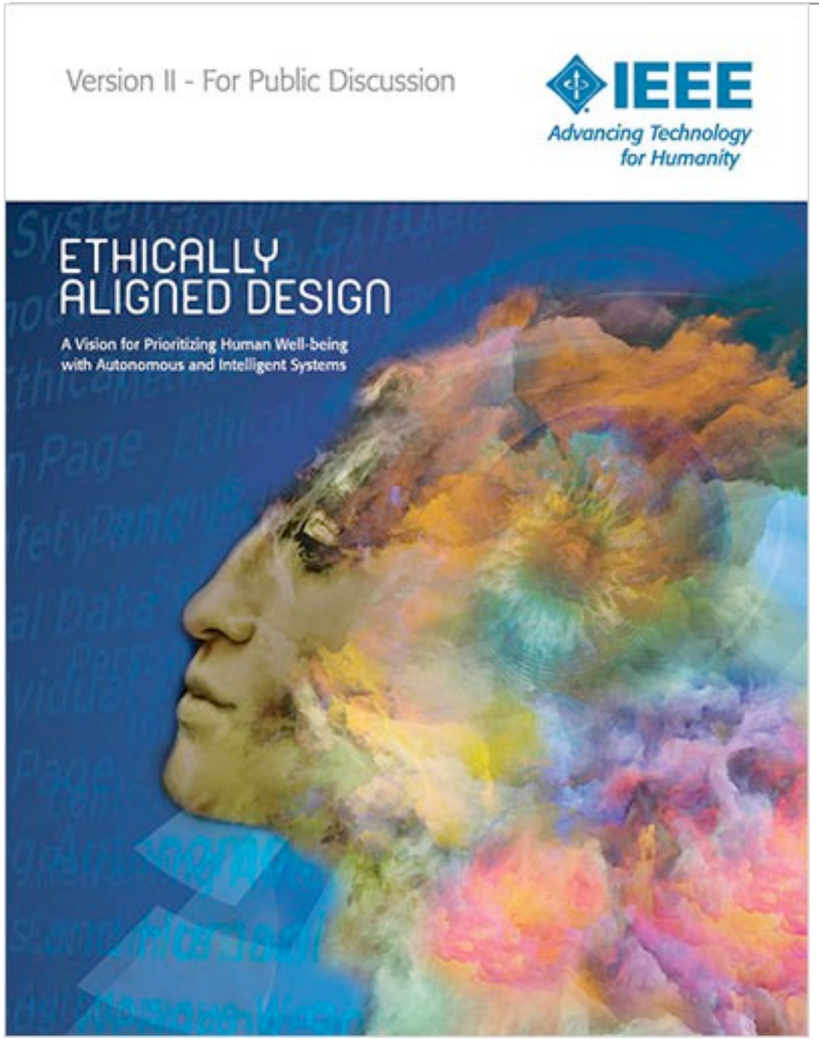
2 Ethical technology design concepts

2.1 ICTS Connecting Global Citizens, Global Dialogue and Global Governance. A Call for Needful Designs

- **Wolfgang Hofkirchner, José María Díaz Nafría, Peter Crowley, Wilfried Graf, Gudrun Kramer, Hans-Jörg Kreowski, and Werner Wintersteiner 2019**
  in: ICAI 2019, CCIS 1051

https://link.springer.com/chapter/10.1007%2F978-3-030-32475-9_33

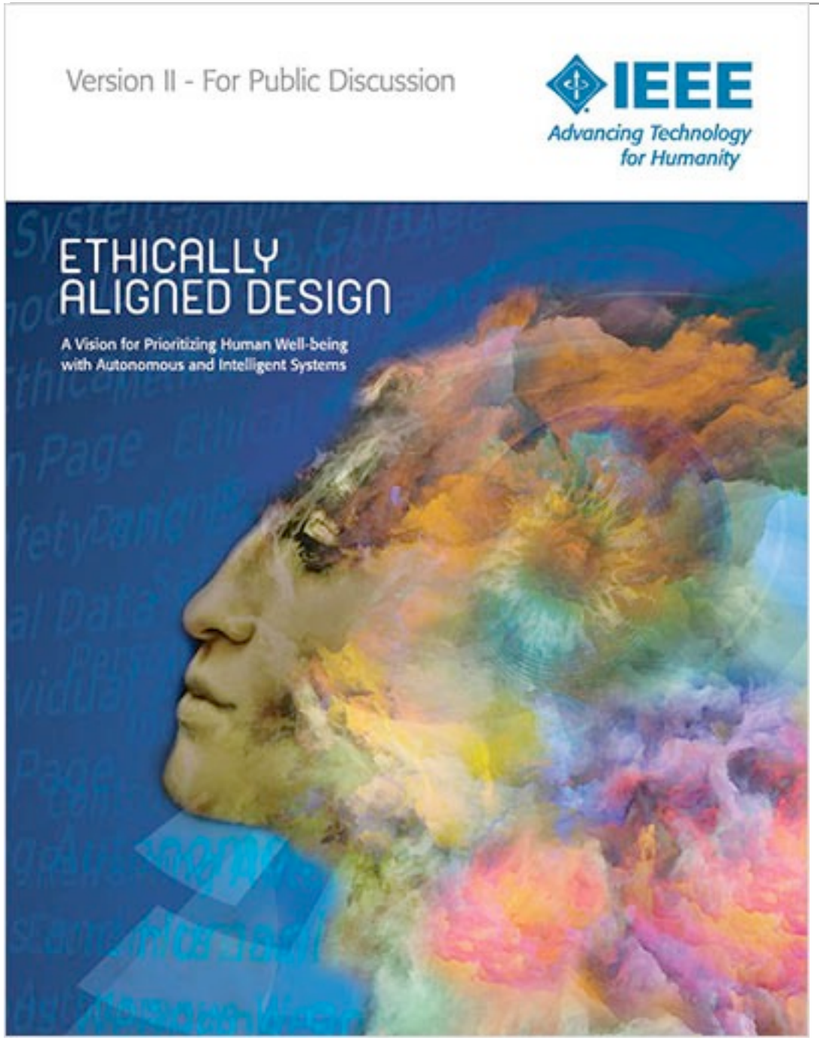
2.2 IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems: Ethically Aligned Design (1/2)



- **Overview**

https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/ead_brochure_v2.pdf

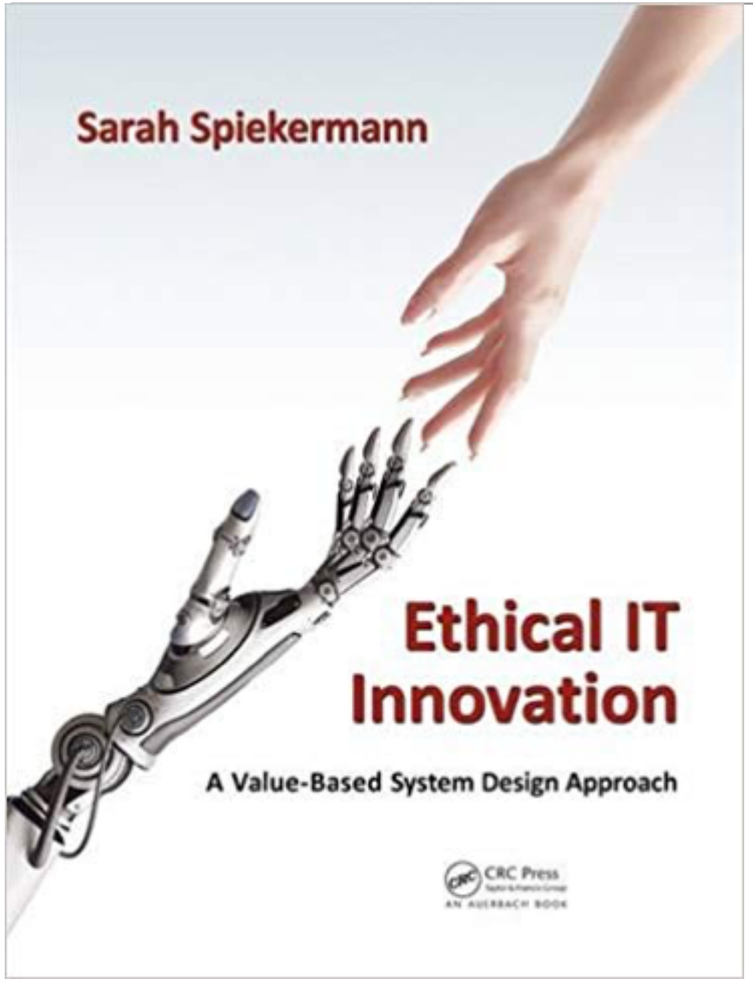
2.2 IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems: Ethically Aligned Design (2/2)



- The section on **Classical Ethics in A/IS** bears on philosopher Rafael Capurro's considerations of **"the uncritically applied anthropomorphistic approach toward A/IS"** that **"erroneously blurs the distinction between moral agents and moral patients"**, a distinction between **"natural self-organizing systems and artifcial, non-self-organizing devices"**. Such **"devices cannot, by defnition, become autonomous in the sense that humans or living beings are autonomous"** (p. 195). The terminology used is only metaphoric, since "[t]his is how language works and how humans try to understand their natural and artificial environment." But "the difference must be maintained, especially as A/IS begins to resemble human beings more closely" (p. 196).

https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/ead_classical_ethics_ais_v2.pdf

2.3 Ethical IT Innovation, Digitale Ethik (1/2)



- **Sarah Spiekermann 2016**: *Ethical IT Innovation. A Value-Based System Design Approach*

  She is professor at the Institute for Management Information Systems, Vienna University of Economics and Business. She wrote a handbook on ethical design of IT.

https://books.google.at/books?id=WI3wCgAAQBAJ&printsec=frontcover&dq=spiekermann+ethical+it+design&hl=de&sa=X&ved=2ahUKEwib4ImgrNDwAhW0_rsIHY_9ARAQuwUwAHoECAAQCQ#v=onepage&q=spiekermann%20ethical%20it%20design&f=false

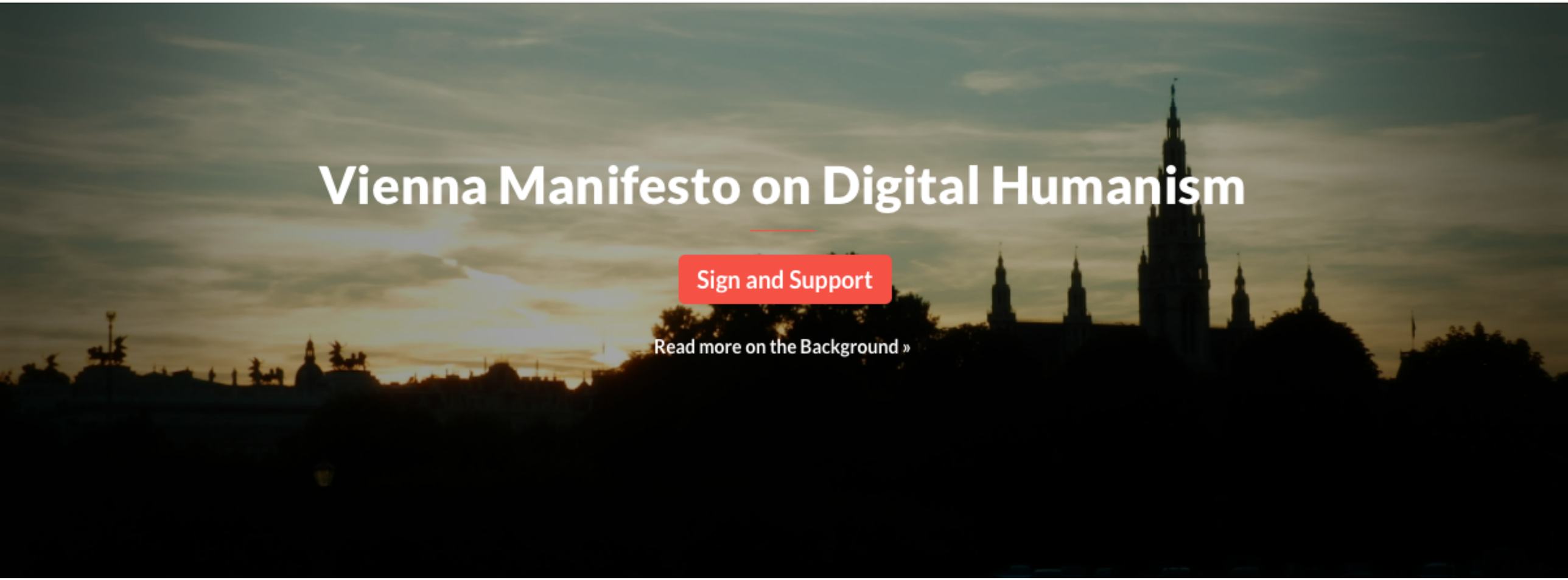
2.3 Ethical IT Innovation, Digitale Ethik (2/2)

- **Sarah Spiekermann 2019**: *Digitale Ethik. Ein Wertesystem für das 21. Jahrhundert*

  Book in German: "A value system for the 21st century"

https://books.google.at/books/about/Digitale_Ethik.html?id=RVI1DwAAQBAJ&printsec=frontcover&source=kp_read_button&redir_esc=y#v=onepage&q&f=false

2.4 Digital Humanism (1/3)



https://www.informatik.tuwien.ac.at/dighum/index.php

2.4 Digital Humanism (2/3)

- **Julian Nida-Rümelin, Nathalie Weidenfeld 2018**: Digitaler *Humanismus. Eine Ethik für das Zeitalter der Künstlichen Intelligenz*

  The book is in German.
  It provides an ethics for the age of AI.

2.4 Digital Humanism (3/3)

- **IS4SI Summit 2021 Workshop**

https://sites.google.com/view/is4si2021/calls-for-submissions#h.x690h81ly5ue

2.5 FuturICT

In 2013, two **FET (Future Emerging Technologies) Flagship** projects won the competition for being funded by the EU, each of which in the range of 1 billion € for 10 years:
– the **Human Brain** project for modelling the human brain activity in neuroscience, and
– the **Graphen** project for a new material in nano material science.

- Whereas projects of that kind could promise a punctual impact of research only, the funding of another project might have changed our lives on a much larger scale:
  – The **FuturICT** project proposal on the collaboration of informatics, social sciences and systems theory.

http://www.hofkirchner.uti.at/wp-content/uploads/2013/01/SUMMARY20FuturICT20Proposal20820Nov.pdf