

living style of the rich, shows that, from a sustainability perspective, this is irrelevant.

Regarding 2: Some presentations showed that there is room for making the German system more efficient by more experimentation. Currently, essentially one set of regulations applies to the whole country, and providers are bound to comply with laws. Hence, no risky tests or tests of a variety of systems are conducted (Andreas Lösch, Christoph Schneider). This could be changed. Also, it could be considered to provide more scope for new solutions, such as leaving it up to the players how to save energy, thus using the market as a discovery process in the sense of Hayek and Schumpeter.

Regarding 3: Any global scheme for increasing the prices of fossil fuels would make renewables more competitive. In his presentation, the author of these lines proposed to pursue a permit scheme instead of a tax scheme because the burden would be set in relation to the savings objective and would thus become smaller when approaching the goal (the text is available, like all other abstracts, in the Book of Abstracts). In order to create public demand for such a scheme, it has been proposed to redistribute its revenues on a per capita basis to the world population. This could be accompanied by a scheme of positive and negative income taxes. Taxes should also be imposed on rents earned on the basis of the scarcity of resources. This would mean globally more levelled incomes, which creates a strong motivation for a global policy change into this direction. Such a global shift towards permits would integrate the results of the efforts of sustainability enthusiasts in Germany and other countries into an ecologically effective scheme.

Notes

- 1) The Book of Abstracts and a number of presentations are available at: <http://www.energy-trans.de/conference-2013/index.php>.
- 2) *Grubb, M.*, 2004: Technology Innovation and Climate Change Policy: An Overview of Issues and Options. In: Keio Economic Studies 41/2 (2004), pp. 103–132

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Transhumanism: at the Rim of Science

Report from the Conference “The Posthuman: Differences, Embodiments, Performativity”, the 5th Beyond Humanism Conference

Rome, Italy, September 11–14, 2013

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1 Visions in Technology Assessment – Introducing Remarks

Following its name, Technology Assessment (TA) apparently deals with technologies. But as indicated by the difference between technique and technology, a technology is a system that includes much more than just a specific artifact. The way it is used, the motives of its use, its design and the ways it is promoted are elements of a technological system. At the earliest stages of a new technological system, there may be only ideas of its possible design and use. These ideas are expressed in visions of our future, and in some of them technology plays an important or even a core role. Some technological visions seem to be less and some seem to be more far-fetched. However, visions raise hopes, fears and expectations in society (Simakova/Coenen 2013), they influence decisions of politicians, entrepreneurs and stakeholders and thereby shape technological development. As decision makers and citizens, we may even need these visions if we want to answer the question how we want to live in the future in terms of technological development (Grunwald 2012). If TA aims to critically evaluate the potential impact of technologies, then it must consider the assessment of technological visions as a part of its approach. This assessment can include evaluation of the values underlying the visions, critical assessment of the explicit goals, plausibility of the prospects, and observations and description of the promoters and their further political and social activities aimed at the realization of the visions (McCray 2013). Transhumanism is an example of such an extreme technological vision. It has attracted public attention at the latest since the debate about Converging Technologies (CT) (Coenen 2006) and increasingly

enters today's mainstream discourse. The transhumanist vision is much older than the debate on CT (Heil 2010). The vision appears in various versions and forms. They have in common that they envision a future which brings about an expansion of our physical and mental boundaries as compared to today. They imply that we can and must strive to achieve these goals by continuously developing and applying new technologies and fostering their convergence (More 2013a; Various 2013). To find out more about transhumanism, we have attended the "5th Beyond Humanism Conference" in Rome.

2 Post- and Transhumanism – What's the Difference?

Attending a conference about a technological vision, one can find that the vision itself is subject to an ongoing process of critique and evaluation. When speaking about transhumanism, you always speak about a certain form of it at a certain stage of development. Therefore, it is not that easy to shed light on the actual difference between transhumanism and posthumanism. This would help explain why, at the beginning of this report, we spoke about transhumanism while the title of the conference was "The Posthuman: Differences, Embodiments, Performativity".

According to Jaime del Val, one of the members of the Advisory Board of the conference, who shared with us his understanding of transhumanism in a personal conversation, transhumanism focusses on the use of technology to better our lives. The transhumanist, according to del Val, supports the idea of the general desirability of technological means and processes. And also the desirability of improving our physical condition seems to be part of the transhumanist idea. From the transhumanist perspective, posthumanism aims to achieve a desirable state of existence (Broderick 2013).

In contrast to this, posthumanism and the related variant metahumanism do not take these values for granted. Stefan Sorgner and Jaime Del Val presented their concept of metahumanism in more detail in their talks "Beyond Trans- and Posthumanism" and "The Human: A Failed Evolution" at the beginning of the conference. Post- and metahumanists conceive our state of being – our existence – as an ongoing process of improvement (Sorgner/del Val undated). Posthumanism is

therefore a methodological timetable rather than a vision of a technological future. Grounded on a constructivist approach, posthumanism seeks to uncover the constructed basis of our values and categories in order to overcome them and relieve us of their normative force. This could be done with a specific focus on technology like Donna Haraway did it in her exaggerated "Cyborg Manifesto", a deconstruction of gender categories (Haraway 1995). In Haraway's demonstration, the cyborg stands for the ideal of overcoming gender barriers and the social pressure on women to reproduce. Though references on technology can be found in posthumanism, they are not necessarily a part of this vision. Feminists have been dealing with posthumanist and transhumanist approaches for a while now (Bostrom 2005, p. 23).

The deconstruction of gender identities and the removal of physical boundaries by technological means from a feminist perspective were issues of the presentations of Malia Womack and Marija Selak, amongst others. Following their line of argumentation, one can interpret species and their moral status as constructions to be questioned and criticized. The challenges and benefits of trans- and posthumanism on animal ethics were the topics of two complete sessions with, amongst others, Matthew Lerberg, Arianna Ferrari and Lene Koch speaking. Besides these issues, the conference also dealt with post- and transhumanism and their interconnection with art, the implicit moral and social questions of the moral status of a posthuman being and the ethics of enhancement. However, it would go beyond the scope of this report to give a comprehensive picture.

3 Conceptions and Forms of Trans- and Posthumanism

Progress in science inspires our imagination, which is manifested in science-fiction movies and a wide range of literature that is neither scientific nor completely fictional. Our envisioning of more or less plausible future scenarios also influences the progress of science (Nerlich 2005). Several presentations at the conference dealt with these interconnections. For example, Sandor Klapcsik's talk was about Philipp Dick's novel "A Scanner Darkly". In this novel, a kind of fantasy story takes place in the protagonist's mind. This

is described with cinematic metaphors suggesting that something like a movie is going on in his head. This scenery can be linked to transhumanist ideas, such as uploading the mind, human-brain interfaces and augmented reality. Klapcsik did this unpretentiously and easily.

The presentation by Benedetta Liorsi addressed the issue of “Posthumanism and Anorexia in David Mitchell and Douglas Coupland Novels”. “Posthumanism as a Utopia in Poul Anderson’s ‘Call Me Joe’” was the title of Agnieszka Malek’s talk. Some of these comparisons seem to be more, some less far-fetched and artificial. Comparative literature shows that the visions of trans- and posthumanism include metaphors and unconscious associations. These analyses help to understand current expectations regarding technological development. Nevertheless, especially transhumanists want to do more than describe possible futures or tell fictional stories about technological improvement. For Julian Savulescu and John Harris, two well-known enhancement promoters, enhancing mankind is a moral obligation. Others, like Max More, advocate a liberal research agenda and the “proactionary principle”, a reversal in the burden of proof concerning the benefits of new technologies (More 2013b, p. 264). Some transhumanists became active and established institutes, such as Nick Bostrom and David Pearce, who founded the World Transhumanist Association. Others engaged in research trials with new technologies, like the keynote speaker of the conference Kevin Warwick.

Apparently, envisioning our future is one of a whole set of activities of transhumanists striving for a posthuman future. Whatever transhumanism is, it is more than a science-fiction story of a possible world. Following the title of Patrick McCray’s recent book, we could call this set of activities “visioneering” (McCray 2013). Some kind of “visioneering” activities could also be observed in Rome. Stuart Calimport, for instance, introduced his concept of the “Quantified Self” in his presentation on the “Human Menome Project”. Calimport’s professional background is in biomedicine and bioinformatics. He explained that the “Human Menome Project” that he co-founded aims at mapping the so-called Menomes, an unspecified entity that subordinates objects like institutions, organizations, people, and movements. The key to

assessing the Menomes lies in collecting and measuring as much data as possible. Calimport described the way he did that as follows. He counted the number of his daily ideas, measured his heart frequency and so forth. According to him, this data is required to identify relations between certain parameters and eventually achieve the improvement of our Menomes through this knowledge. Apparently, this approach lacks methodological groundwork as the meaning of data is not clearly defined, and the question is how to measure things like confidence and peace. But Calimport is quite a character and he promotes his ideas with conviction. The “Beyond Humanism Conference” is a place for networking and advertising his project. Politicians like Giuseppe Vatinno – a member of the Italian Parliament advocating transhumanism –, social actors like Calimport and artists engaged with each other in the spirit of an alleged common idea of improving mankind. Besides Calimport, the keynote speaker and cybernetics professor Kevin Warwick promoted himself as a pioneer in a new field of science. In his presentation, he said he was one of the first to be implanted with a transmitter chip. This gave him the nickname “Captain Cyborg”. Warwick’s metaphors like “a big step in technological evolution” are emphatic and seem promising. In general, these innovations are less “groundbreaking” than they are usually presented. More often, they remain futile gadgets which never find their way to the market. Warwick nevertheless fulfills the expectations of the media and the public at the rim of science. This ensures him and his research the necessary attention.

4 Concluding Remarks

Trans- and posthumanism are dynamic visions. They are constantly changing in content and shape. At the “5th Beyond Humanism Conference” in Rome, we gained an insight into these visions and their current interpretations by a refreshingly young and interdisciplinary group of scientists. Some of the presented issues were old and slightly redundant. The issue of “playing God” and Hans Jonas’ theme of “the right of ignorance” have often been discussed before, and there are hardly new insights. Analysis of the moral and epistemological status of a person, e.g. from the philosophical

perspective, seems to be more profitable and innovative than the ones presented. A general critique and clarification of the terms “ontology” and “constructivism” would have been helpful. The obligatory reductionist or functionalist approach to neuroscience presented by John Grady also deserves an update. Nevertheless, the semantic analysis of the term “perfection” by Johann Roduit is worth being reconsidered (Roduit et al. 2013).

It should also be mentioned, that the growing industry of video games and their virtual contents and settings attracted attention at the conference. Although the development of video games is so closely linked to research in Artificial Intelligence (AI), it is neglected as a topic by the social sciences. The program was framed by photo exhibitions and art pieces creating a casual and convenient atmosphere. We were introduced with Transhumanism 2.0, a new form of transhumanism after the hype around nano- and converging technologies. In contrast to the exclusive form of transhumanism of the 1990s of some eccentric AI researchers and engineers, such as Eric Drexler and Ray Kurzweil, this is a mainstream transhumanism mostly recognized and promoted by scientists of the humanities and social sciences. It is reflected and expressed in various social and cultural dimensions, such as entrepreneurship, art and politics. Observing the integration of trans- and posthumanism into society, the side activities of the “visioneers” and the transformation of the visionary narratives in more detail will be an ongoing challenge for vision assessment.

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