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From the Body Machine tot Embodied People
Dealing Responsibly with Ethical Issues in Tissue Engineering
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Introduction
Clinical applications of tissue engineering are being developed. Yet in between the practical work of engineers and the work of ethicists on issues like ‘informed consent’, the heart of the practice’s focus ‘the human body’ is lost. When engineers discuss the body, they consider it from an engineering perspective: the body is ‘machine-like’. Yet in daily life, patients live their bodies not as machine-like but as themselves. It is in this light, that the paper addresses the question ‘how can the field of tissue engineering take care for the body in all its aspects?’ The objective of this paper is to introduce the concepts ‘lived body’, ‘normative work’ and a wider than traditional concept of ‘professional responsibility’ as tools that will enable the tissue engineering practice to develop practices of responsibility that help design body prostheses that best improve the embodied life of patients.

Materials and Methods
One of us did a 4-year fieldwork study of a tissue engineering project of heart valves. This fieldwork consisted of interviews with engineers; participant observation and document analysis. She also interviewed some medical specialists working with heart valve implants. Next to this, she read overview articles, interviewed leading researchers in the field and visited their laboratories. For the critical analysis, we make use of a phenomenological perspective on ‘the body’[1] to indicate why a mechanistic vision of the body is too limited for the tissue engineering practice. Moreover, to develop the concept of practices of professional responsibility, we combine recent literature in engineering ethics [2-3], science and technology studies[4] with a pragmatic model of social learning[5].

Results
Our fieldwork indicates that in tissue engineering seemingly technological decisions (cell choice, developing standards etc) often have normative implications for people as ‘lived bodies’. We call it normative work: for as we show these activities are no neutral, technical activities but affect the opportunities for people as lived bodies in specific ways. We argue that ‘professional responsibility’ for normative work in TE should not be limited to issues of functionality and safety of TE body parts, but includes the way TE affects how people might experience and live their bodies.

Discussion and Conclusions
To take this responsibility seriously, engineers should systematically learn about the effects of their normative work on lived bodies. They should develop practices of responsibility that enable them to be in touch with the results of experiments with bodies as machines and with the results of their work for lived bodies.

References

Disclosures
Authors have nothing to disclose.