Abstract

New technologies result in innovation and improvement of existing processes through the stimulation of economic growth and an opportunity to create new paradigms across all sectors of business and industry. Today, the growing significance of technological advances worldwide is becoming considerably stronger than in the past. These rapid changes have become visible in our everyday lives by increasing efficiency both privately and professionally and by making life more comfortable. But at the same time, new technologies make us more dependent than ever before and influence the behaviour of individuals. Soon, we will not be the only ones who can take part in decision-making processes. Within the next few decades, or even earlier, engineers and scientists will develop highly intelligent and fully autonomous next-generation robots capable of pursuing ever more complex tasks, currently only able to be completed by people, and adapting to unstructured environments. This new era of human-robot interactions may challenge our values and call into question our own self-understanding and our perceptions of our own appearance. The world is changing: the upcoming era requires a completely new mindset and a comprehensive strategy to build new systems that will redefine ethical values, legal frameworks and business models.

In this paper, I will explore some of the most prominent legal, regulatory and ethical considerations that arise as a result of the emergence of autonomous machines. I will give my views on the current risks and benefits of the upcoming new human-robot coexistence, including a deep analysis on the most salient questions of liability, legal personhood and moral code for machines. My aim is to highlight the importance of these upcoming developments which, in the light of new digital socio-economic changes, cannot be addressed individually. In addition, I will explain why a constructive dialogue and intensified cooperation between lawyers and scientific experts is so crucial in order to create an effective legal and ethical framework, which will be required in order to fully embrace the benefits of the new robotic age that we imminently face.