

Dimensions and Dilemmas of Digitalization: Challenges of The 4th Industrial Revolution

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Media have always been subject to change. An essential part of these changes has been the fact that no older media have never been completely extinguished, but have had to change and transform in relation to new media. This observation (aka “Riepel’s Law” or Marshall McLuhan’s “Rear-view mirrorism”) has been valid through various technological developments until so far. The era of the so-called Fourth Industrial Revolution is already in a full swing. In addition to technological progresses that advance significantly and constantly, a growing and unstoppable phenomenon is inherent in our daily life: digitalization has gained momentum.

For communication, media and also journalism, this development simply and necessarily equals change. In addition to traditional media such as print, radio and television, digital media (convergence) such as internet-based, online, mobile and social media as well as machines and their interaction with people shape human life increasingly. This evolution affects not only the production of content, but also the habitus of consumption. Consequently, it also creates new challenges for media professionals, since the old rules of producer vs consumer are substituted by “prosumer” roles such as crowdsourcing. This also leads to the call for new business models such as crowdfunding.

Moreover, social and cultural aspects emerge in digital public spheres. An appropriate self-presentation and the visibility of own content are crucial to attract attention within an unlimited flood of information in the post-digital era. This unlimited amount of data leads to other challenges for communication, media and also journalism: big data. Information and investigated data sets have to be treated, presented and visualized in a comprehensive way and according to legal frameworks and responsible ethical standards.

In the field of media, for instance, innovative approaches such as data and immersive journalism have already opened up new ways of perceiving reality and society. In the field of communication in general, digitalization can pave the way to give voices to the voiceless and to support digital inclusion of minorities of all kinds. In this context, we are still facing problems of authentication of content and sources as well as of identification of originators of content and sources.

However, interpersonal communication and interaction patterns are accompanied by human-machine communication and interaction opportunities that might break the boundaries between biological and automatic, physical and virtual (public) spheres. Currently, we witness a transfer from “algorithmization” to robotic or artificial intelligence in all parts of individual and societal life. For instance, there is a current debate in the U.S. whether or not so-called “artificial humans” should be granted human rights, including freedom of opinion and expression.

But the Fourth Industrial Revolution does not only offer opportunities and challenges for media systems. There are also problems that have to be solved in the near future: it is to question to what extent we need (maybe on an international or global level) adequate and updated political, economic, legal and regulatory frameworks in order to guarantee transparency and accountability.