

Möllers TMJ and Van der Linde K (eds), *On the Fourth Industrial Revolution—Legal Perspectives from Germany and South Africa 2024*

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The book is the product of a longstanding cooperation agreement between the Law Faculties of the University of Johannesburg and the University of Augsburg in Germany. Over the years, this collaboration has given birth to four such joint publications. These books draw on the expertise in a variety of fields in each of the faculties around a central theme. In this case, the central theme is legal perspectives on the Fourth Industrial Revolution in a comparative study between German and South African law. Of course, German law can hardly be studied and described free from European law, which is intertwined with it.

The central topic is highly relevant with the breathtaking speed at which digitisation, and now also artificial intelligence (AI), are invading every aspect of our lives. The editors describe the Fourth Industrial Revolution as ‘the digitalization of business and industry,’ which accords with the general understanding of what the term encompasses. One would therefore expect the contributions in this book to address this topic from a variety of disciplinary perspectives. Several excellent chapters engage directly with this theme, as expected. However, quite a number of the contributions have little, if anything, to do with the impact of digitisation on the law in business and industry and instead seem to reflect the individual interests or research areas of the contributors. The title is therefore somewhat misleading; despite the overall quality of the contributions, it promises more than the book delivers. Nevertheless, all the chapters address highly relevant topics concerning the modern economy and the workplace.

There are two problems with collaborative books like this. Firstly, the pool of expertise available from only two law faculties is limited to the expertise and interests of the participants. This is evident from the strong contributions of all participants, although quite a few do not engage directly with the central theme. The book is therefore best

described as an anthology showcasing the overall strength and excellence of research in both faculties. Each of the peer-reviewed contributions would not have been amiss in any respected legal journal. Secondly, unlike journal articles, which are more widely published and read, compilations of this kind in book form tend to reach a far smaller audience.

The book opens with an introductory chapter describing the background to the project and the realisation of digitisation and AI in the workplace and business environment, as well as the challenges digitisation poses for the law, which is often slow to respond to rapid change. In the second part of the introduction, the editors discuss the various approaches and justifications of comparative legal projects, indicating that the underlying approach in this book is the functional approach. According to this approach, the method is independent of national legal doctrine taking into account not only legal rules but also social reality. The approach also uses the theory of legal spheres to define the topics to be researched and discussed. This method searches for similarities and differences in the social, economic, cultural, historic and ecological contexts of each legal system. The authors ultimately argue that, since both South Africa and Germany are democracies based on strong fundamental rights, a strong constitution and constitutional court, this shared foundation provides a valuable basis for comparative analysis across a range of disciplines. The introduction also contains a short description of each contribution but fails to explain how each contribution fits into the main theme.

The book is structured so that each section begins with a contribution on a specific topic by an Augsburg participant, followed by a response from a Johannesburg colleague. The first topic relates strongly to the central topic of the Fourth Industrial Revolution. Bendikt Buchner and Maximilian Schnebbe discuss the use of wearables in the workplace. They argue that digital assistance systems or wearables such as augmented reality glasses and smartwatches can provide employees with valuable assistance in the workplace enhancing safety and productivity. At the same time, the use of such systems involves the processing of personal data, sometimes of a very sensitive nature engaging data protection regulations. They provide an excellent overview of the applicable German and European legislation and the challenges wearables pose. They also provide valuable guidance on how the use of wearables can be introduced while complying with data protection law.

The second chapter provides a South African perspective in response to the Augsburg contribution. Letlhokwa G Mpedi's in-depth analysis includes a description of the use and purpose of wearables in the workplace. It also analyses the safety hazards and social and psychological risks involved in this process. The analysis then turns to the legal issues involved, most notably, privacy and data protection provisions. The essay finally provides guidance to employers on the legal use of wearables and the importance of balancing the rights of employers and employees in this context.

The next contribution by Martin Maties addresses the issues of overtime in labour law. This involves two issues: first, whether the overtime was authorised, and second, whether the overtime should be remunerated. The discussion considers the legal protection offered by the German Working Hours Act and the interaction with general contract law. The author concludes that the framework for overtime under the Act has not yet been fully worked out and does not address remuneration, which has to be determined from the lawful provisions of the employment contract.

Louis Koen responds to this exposition with a discussion of the provisions of the South African Basic Conditions of Employment Act 75 of 1997 and its interplay with the common law of contract, very similar to the previous chapter. He demonstrates that despite the dominance of the Act, the common contract law has had a persistent influence on the interpretation and application of the Act in relation to the issue of overtime. The author also compares the South African position with the German position. He concludes that the Act provides a balanced approach to the rights and obligations of both employers and employees under the threshold income level, and that the German approach may offer valuable lessons for employees above the threshold.

The next contribution considers the effect of globalisation on the protection of human rights. Sina Fontana argues that many companies now choose to operate overseas to save costs and even evade domestic regulation of labour law. Host countries with low human rights and labour rights protection are loath to raise standards lest the transnational companies withdraw and locate elsewhere more favourable. She indicates that private companies are not directly bound by international law and that transnational companies can only be held responsible indirectly by the increasing pressure of international law on countries to ensure that their companies abide by human rights. She analyses the applicable international law as well as the German approach to the issue. She concludes that a shared responsibility between states and companies can only be achieved through a multilayered system of law and that companies are increasingly being held responsible through the home and host states' duty to protect.

David Bilchitz takes issue with Fontana's approach in the next essay, arguing that she too readily accepts the perspective that absolves corporations from direct responsibility for human rights transgressions under international law. Instead, he argues that from an analysis of fundamental rights, it is clear that transnationals have direct obligations flowing from those rights. In the second part of the paper, he explains why an indirect approach to fundamental rights protection is undesirable and unlikely to solve the responsibility problem.

The next contribution deals with sustainable development. Martin Kment analyses the European Union (EU) Taxonomy Regulation for sustainable development as part of the implementation of the so-called Green Deal. The Taxonomy Regulation is aimed at promoting climate and environmental protection and implementation by 2030. The taxonomy creates a uniform classification system for determining the sustainability of

economic activities. This should create a positive environment for private investment within the EU. The essay concludes with a summary of the current shortcomings of the taxonomy and a positive outlook on its impact.

In response, Monray Botha considers the South African Green Finance Taxonomy in comparison with the EU Taxonomy Regulation. He concludes that, like the European Regulation, the South African taxonomy has similar shortcomings and has likewise generated controversy in the energy sector regarding the role of nuclear energy. He argues that despite the taxonomies developed in both regimes, the sustainability, economic and environmental classification conundrum persists and needs an urgent solution.

Anna Henriette Weininger tackles the thorny issue of the lengthy administrative proceedings in environmental law and proposes solutions in light of the Fourth Industrial Revolution. She demonstrates that there is an ongoing battle between the tardy administrative proceedings and the need for rapid and agile responses to climate change and its prevention. The slow procedures are hampering the development of solutions in Germany, and there are no quick or simple remedies given the constraints of binding European law. She suggests that one potential approach is to examine emerging technological advances in industry and apply these within government agencies. She considers the role of AI, the internet of things, virtual and augmented reality and blockchain technology in finding innovative solutions.

In response, Sikhulile Ngcobo takes up the theme of AI in assessing the solutions for similar lengthy administrative procedures in South Africa's environmental impact assessment processes. She argues that AI could be used to speed up administrative processes without compromising integrity and accuracy. In the discussion, she demonstrates how this could work in practice. The essay is aligned with the title of the book and provides an innovative approach to the current problems.

Thomas MJ Möllers and Lisa Wolf demonstrate how both South African and German law sometimes import European and Anglo-American legal solutions in the law of contract that do not easily fit into their respective legal systems. German law is increasingly influenced by European law with measures such as the Sale of Goods Directive and the Digital Content Directive, which are aimed at the proper functioning of the internal European market. These measures strive for full harmonisation by creating a uniform legal framework for all member states. They conclude that the measures are problematic in various ways and that the European legislature should improve its legislative techniques to avoid imprecision, clashing dichotomies and gaps.

In response, Charl Hugo and Cayle Lupton argue that the South African law of sale, especially in the international context, needs reform. This should take place by legislative reform rather than on a case-by-case basis through judicial decisions. The legislative reform should be guided by comparative and international law, but take

account of South Africa's unique social, legal and political context. They argue for the adoption of the Vienna Sales Convention for the International Sale of Goods and the UNCITRAL Model Law on Electronic Transferable Records. The essay concludes with some suggestions on the way in which consumer law may be developed.

Aqilah Sandhu deals with data protection in the EU against the backdrop of the Fourth Industrial Revolution for data as an essential raw material for its growth and development. She traverses the dense landscape of binding European regulations and directives on the topic. She demonstrates that the EU does not only want to regulate data but also transform the national economies, governance structures, workplaces and education systems to cope with digitisation and to use digitisation in a novel form of governance. The so-called EU Digital Compass aims to provide guidance in the digital transformation process with four targets: digital skills, digital infrastructure, digital business and digital public services. This fascinating in-depth analysis concludes with the desire of both the EU and the German government that digitisation should not take place at the expense of European values and the central focus on human beings and their dignity.

Nkululeko Buthelezi and Michele van Eck explore the digital industrial revolution from the perspective of its use as a tool for socio-economic development. The essay begins with an analysis of the Presidential Commission on the Fourth Industrial Revolution Report and the proposals contained in it with a focus on socio-economic development. This is compared with the digital transformation strategies and objectives of the EU. They demonstrate that the South African response to the digital revolution has been slow and fragmented and is struggling to keep up with the constant developments. They highlight some of the positive aspects of the recommendations in the Report and conclude that although valuable insights may be gained from the European developments, South Africa's approach should take into account the country's unique challenges.

Tim Gutmann addresses the sensitive area of big data in medical research. While medical data plays an important role in the innovation and performance of healthcare systems, it also involves thorny issues on data protection. Such data has been under-used in Europe so far. The European Commission has developed a strategic response to improve the situation. The proposed European Health Data Space Regulation aims to provide a uniform approach to the use of health data for research, development and healthcare and is critically analysed in some detail. The author concludes that health data law remains a difficult area to properly regulate due to its unique challenges and that developing a genuine ecosystem of medical data would require greater integration of the private and public healthcare sectors, driven by market forces rather than regulation.

Georg Borges and Michele van Eck also discuss the European Regulation but with reference to the South African approach to the protection of medical data. They argue

that the Regulation, described as disruptive for proposing that health data should be regarded as a public good, is contradictory to data protection. The centralisation of health data will, according to them, create new dangers for privacy protection. The Protection of Personal Information Act 4 of 2013 and the National Health Act 61 of 2003 are examined to assess whether they are sufficient to protect personal data in the current context. They argue that further protection is needed and that European regulations may provide guidance in this regard.

Dawie de Villiers investigates the challenges and trends in the application of the Promotion of Access to Information Act 2 of 2000. He argues that access to information is a topic somewhat neglected both in the curriculum and in research. He also compares the right of information and the right to privacy, which are conflicting rights. He concludes that there is a great need for information infrastructure in South Africa, similar to the situation in Germany and Europe. He adds that there is a large gap between the right to information in theory and in practice, with the latter sadly lacking substance. He proposes that attention be continuously paid to developments in other jurisdictions to help improve South Africa's own regime.

The final essay is a collaborative effort between Hennie Strydom (Johannesburg) and Stefan Lorenzmeier (Augsburg). They analyse the legal and political issues arising from the war in Ukraine and its impact on the EU and South Africa. They argue that the war not only affects legal orders but also has a significant impact on Africa's grain supply. They describe the relationship between the EU and Ukraine based on their comprehensive association agreement, a relationship that is one step short of full membership. They demonstrate that the South African issues differ with the difficulties relating to the international arrest warrant for the Russian president and South Africa's alleged neutral stance in the conflict. South Africa's conduct in the United Nations General Assembly has largely left it isolated due to its abstentions from condemning Russia's war of aggression against Ukraine. They conclude with a summary of the challenges Europe faces in considering Ukraine's membership application during a time of war and offer a critique of South Africa's unprincipled approach in claiming neutrality and non-alignment.

A book review of an anthology of essays like this is difficult, as one is largely limited to describing the various contributions and making generalisations about the work as a whole, without a real opportunity to engage critically with each individual contribution. The book, as indicated earlier, lacks a coherent theme as only about half of the essays address the theme of the impact of the Fourth Industrial Revolution on the law in South Africa and Germany.

That said, the contributions are all of a high standard, well researched and argued and offer much food for thought. The topics are engaging in their own right and make for interesting reading, even if they do not strictly align with the theme one might have expected. Some of the essays would have been better served by publication in specialist

legal journals rather than in a book whose topic they do not clearly relate to and where they will probably remain largely hidden from a wider audience. Due to its wide variety of topics, the book will appeal to quite a broad audience, not only academics but also students and policymakers.