Introduction

SABINE GLESS AND HELENA WHALEN-BRIDGE

Chatbots and search systems provide us with access to essential information. Automobiles and driving assistants share steering wheels with human drivers on public roads. Robot vacuums navigate and map our homes. These examples illustrate how robots play a central role in our daily lives, often in ways that we no longer question. This book examines the regulation of some of these human–robot interactions.

The book uses the term "robot," rather than a concept such as AI system, in order to focus on the common understanding of a robot as an automated machine that can execute specific tasks with speed and precision but with little or no human intervention, as it is partly this degree of autonomy that raises issues in human–robot interactions. Our working definition of robot is broad, and it embraces the description in Sara Sun Beale and Hayley Lawrence's chapter, that of an "engineered machine that senses, thinks, and acts," as well as the definition offered in Chapter 8 by Emily Silverman, Jörg Arnold, and Sabine Gless, who refer to a system "capable of sensing information in their environment, processing it, and ultimately deciding autonomously whether and how to respond." Definitions for the new generations of robots to come are now part of the regulation negotiations regarding the use of the complex technologies referred to collectively as artificial intelligence (AI), e.g., in the EU AI Act, which proposes that AI is "software that is developed with one or more of [certain] approaches and techniques … and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with." The degree to which a robot functions independently can of course vary, as Janneke de Snaijer discusses in her chapter on medical robots. However, such discrepancies do not interfere with the common understanding of a robot as a gadget capable of carrying out a complex series of actions automatically.

Robots are commonplace in many of our activities, but when harm is brought about in human–robot interaction, who or what is responsible? When robots perceive aspects of an alleged crime, can they be called as a sort of witness? How do courts explain the role of the new actor in a legal

case? Despite the central role that robots play in our activities, law is tailored to human actors, and legal systems seem little prepared for robots. This volume addresses some of the questions raised by the need to acknowledge the appearance of robots in the legal context. The volume comprises three Parts, each with its own more detailed introduction. Part I addresses substantive law, including the issues raised by attempts to impose criminal liability when human–robot interaction causes harm, or to specifically exclude such responsibility for the use of certain AI systems. Part II addresses procedural issues, such as evidentiary problems arising from using data generated by robots monitoring humans during cooperation, and issues of reliability and privacy. How should we understand robots, and how do legal authorities conceptualize this actor and explain it to the public? Beyond the standard fare of substantive and procedural law, and given the conceptual quandaries posed by robots, Part III includes chapters on narrative and rhetoric. To assist readers in envisioning the new issues raised in different contexts, most chapters are also accompanied by illustrations of chapter themes, provided by the team of Kamil and Bartosz Mamak, and developed jointly with chapter authors.

Robots are here, even if we don't notice some of them, and they pose a host of issues for society and the justice system. This volume is offered in order to suggest ways to frame the relevant questions and think about the answers. But much more needs to be done, and there is considerable room for future contributions.