## PHD THESIS SUMMARY

## Data "ownership" rights in the context of 21st-century challenges - Big Data, Artificial Intelligence, Internet of Things

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The dissertation addresses the issue of determining the ownership of data. In response to this question, a hypothesis is proposed regarding the inadequacy of the current legal framework and the necessity of implementing changes that will enable data to be recognized as a fully-fledged subject of property rights. The objective, therefore, is to devise a universal model of legal protection for data that will address the issues associated with the most significant challenges of the 21st century, including Big Data, the Internet of Things, and Artificial Intelligence, as well as other long-standing concerns such as the ownership of digital files. Furthermore, it is of paramount importance to develop a model that will guarantee the protection of future data holders' interests, irrespective of the trajectory of modern society and technology.

The methodology is founded upon dogmatic research, with a specific emphasis on the analysis of existing legal regulations and the integration of insights from other disciplines, including information sciences. A significant aspect of the research is the examination of case law that substantiates the assertion of specific proprietary rights to data. In order to ascertain the extent of protection afforded, it is necessary to consider the manner in which the law is applied in practice, rather than relying solely on the provisions set out in legislation. The considerations are primarily conducted at the level of international and European acts, with an emphasis on incorporating complementary national solutions, wherever feasible. The work employs comparative methods with the objective of studying the legal nuances of both common law regimes and civil law states. In order to facilitate the analysis, the most representative cases were selected based on a comprehensive review of case law and relevant literature. From a common law perspective, the work considers primarily the law of the United States and the United Kingdom, with occasional reference to the legal orders of countries such as New Zealand, Singapore, and India. When relevant, the United States is examined from the standpoint of particular state regulations, which predominantly encompass California and New York. Conversely, civil law countries are discussed in the context of European Union law and selected national jurisdictions, including Germany and Poland. The dissertation is structured into five chapters, each corresponding to a distinct phase of the research process.

The initial chapter provides an in-depth examination of the technical complexities associated with contemporary IT phenomena. First and foremost, it elucidates the essential distinction between data and information. Concurrently, it illuminates the pivotal role that data plays in the information society. Moreover, it decodes the fundamental principles underlying pioneering solutions in domains such as sensor-equipped and networked devices (Internet of Things), the management of large data sets (Big Data),

and the utilisation of such data to power algorithms capable of performing tasks that would otherwise require human intelligence (Artificial Intelligence).

The second chapter presents the concept of the European Digital Single Market and elucidates its significance with respect to data ownership. It is of the utmost importance that a fundamental legal framework be established to allow technology to develop without broader concerns about infringement of intellectual property rights, inter alia. This is of paramount importance for the optimal functioning of the digital economy. The dissertation, therefore, presents a legal framework for such solutions, with particular attention paid to the concept of safe harbors. Concurrently, it engages in a comprehensive examination and debate surrounding the proposal to establish a data producer's right within the European Union. To facilitate comprehension of the principles governing the interpretation and application of EU law, which are pivotal elements in subsequent chapters, the chapter initially elucidates the fundamental tenets that inform the interpretation of such legal norms.

The objective of the third chapter is to provide an answer to the question of contemporary data access rules. To this end, it examines the most significant forms of access with a potentially broad scope of application, as set forth in legal instruments such as the General Data Protection Regulation, the Open Data Directive, the Data Governance Act, and the Data Act, among others. Furthermore, the dissertation outlines alternative methodologies for facilitating data access, including the application of competition law, licensing agreements, and criminal law. Additionally, it highlights the crucial role of non-legal measures and initiatives in influencing the accessibility of data, particularly in comparison to the evolving legal frameworks that may eventually be utilized in practice or not.

The final two chapters constitute the core of the dissertation. The chapters address the question of which exclusive rights are most effective in protecting data ownership. The fourth chapter is dedicated to an examination of the fundamental principles of property rights as established in classical civil law norms. The discussion commences with an analysis of international norms derived from legal instruments such as the Universal Declaration of Human Rights and the European Convention on Human Rights, which define property as any interest held by an individual in a given asset. Furthermore, the ownership of data as carriers of information must also consider the rights of individuals whose personal interests are commercialized within data. Consequently, the passage emphasizes the protection of privacy, image, and other personal interests that may affect data ownership. Ultimately, it aims to address the question of whether data ownership can be defined in terms of substantive law, from the perspective of both common law and civil law legal systems.

The fifth chapter is devoted to the topic of intellectual property, which is complementary to the conventional understanding of the right of ownership of tangible assets. In light of the necessity to protect intellectual property on a global scale, the formation of such legislation is largely influenced by international treaties and agreements. It is therefore essential to clarify these assumptions in order to facilitate an effective analysis of data protection in this domain. This analysis of intellectual property rights is conducted with a view to examining the most commonly used legal regimes. Consequently, it

encompasses copyright, related rights, sui generis database protection, unfair competition law, and selected aspects of industrial property law. In conclusion, it becomes evident that a novel approach is required when examining intellectual property, particularly in light of the growing complexity surrounding the protection of so-called "overlapping intellectual property rights."

The dissertation concludes with a summary of the major findings reached in each chapter. It is of the utmost importance to develop model legal solutions that safeguard data from both a classic and an intellectual property perspective. The rationale for data protection can be found in the long-standing contributions of prominent thinkers and jurists, including John Locke, Immanuel Kant, George Hegel, Johann Fichte, and Rudolf von Jhering. It is crucial to acknowledge, however, that this does not imply that all data should be subject to property rights. It is important to note that not all elementary particles are subject to property rights. For example, the free air or the open sea are not subject to property rights. It is neither necessary nor advisable to create new regulations specifically for data protection. In principle, it is possible to extend the classical norms of property law to such goods as are suitable for protection. However, it should be noted that intellectual property is a distinct and complementary area, which should guarantee the protection of any representation of information, regardless of whether or not it meets the criteria of originality or novelty.

In particular, the work concludes with an emphasis on the fundamental purpose of the law, which is to serve the needs of society and to safeguard the protection of universally recognized values. In light of the fact that society expects the aforementioned categories of assets to be protected, an approach that prescribes narrowing the protection of digital assets solely to the benefit of one social group is entirely unjustified. The Internet community offers a more straightforward assessment: "If buying isn't owning, then piracy isn't stealing." However, it would be a fallacious assumption to view the amendment of the regulatory framework as a consequence of the inherent deficiencies of the existing system. Rather, it should be regarded as a reflection of the extent of its development. As Fryderyk Zoll Jr observed as early as 1931, "The higher the level of legal development is, the more goods an individual can master."