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# Legal agreements on smart contract platforms in European systems of private law

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## 8 Social impact paragraph

The intended audience of this dissertation can be split into two groups: technologists with an appreciation for the law, and lawyers with an appreciation for innovative technologies. In light of this split in intended audience, the impact of this research will show a similar split between commercial practice one the one hand, and the legal debate on the other hand:

1) First of all, the practical implications of the legal analysis are aimed at commercial practice. This includes all programmers, technologists, geeks, start-ups, and even big-tech companies working on blockchain and smart contract technology. Such entities might want to give legal recognition to their implementation of this technology, as well as creating a degree of legal certainty and protection for their intended clients. They will find recommendations on how to do so in this dissertation.
2) Secondly, the added value of this research is aimed at a broader technology-law community. This scope is broader, because the intended audience is not limited to legal scholars alone. The intended impact includes the judge confronted with the interpretation, vitiation, and enforcement of smart contracts, the bailiff looking to seize assets on a distributed ledger, and the policy-maker intending to regulate this rapidly evolving landscape. Last but not least, this dissertation intends to contribute to the academic debate.

With regard to the academic debate, this dissertation rejects a notion that is often accepted, ie. that the technology is inherently radical and binary in nature. The 'code is law'-creed reflects this well.[1162] This research shows that the truth is much more nuanced and that the European legal systems are relatively well-prepared. The technology is, in other words, not as unhinging to the law as one might think. Rather than considering code to be supplanting the law, one should consider how law can adjust in order to effectively curb the undesirable side-effects of technology. Similarly, technology and those working with the technology have an obligation to be mindful of the law, the obligations it imposes upon them, and the spirit thereof.

Recently, after finishing the research, the European Commission announced the new European Data Act proposal.[1163] An aim of this proposed Data Act is to promote the interoperability of smart contracts.[1164] One perspective taken by the Data Act aligns with the conclusions of this research. This conclusion is the idea that smart contracts are first and foremost technical concepts and is reflected in Article 2(16) of the Data Act proposal. It should be noted that this is the first definition of smart contracts in the Acquis. With the European Commission's plan to stimulate and streamline interoperability of smart contracts, this research comes at the right

[1162] See Lessig 2009, it should be noted that this tenet is often taken out of context and used to present a view that is remote from the initial author's ideas.
[1163] Commission, 'Proposal for a Regulation of the European Parliament and of the Council on harmonised rules on fair access to and use of data (Data Act)' COM(2022) 68 final.
[1164] Recital 80 of the Data Act proposal.

time. It will help show when a smart contract is a legal agreement and that most smart contracts are not legal agreements. However, it will show that smart contracts that are not legal agreements, are still very likely to be legally relevant in formation, interpretation, and vitiation of the actual legal agreement, as well as in determining jurisdiction and applicable law.

This research is not primarily doctrinal in nature. Its purpose is to create an impact that is not exclusively academic. The aim is to provide answers to questions that individuals might have. In order to do so, this research has formulated a framework that flows as a common thread throughout this dissertation. It provides clear and concrete tools for judges, lawyers, bailiffs, and other practitioners. It is hoped that a person confronted with a dispute regarding a smart contract, either as a judge, a lawyer, or an enforcement officer, is able to use this framework to determine the type of smart contract in question. Determining the type of smart contract will help a practitioner to discover the manner in which the law affects the smart contract in question. The manner in which a smart contract is affected by vitiation is different depending on whether it is a legal agreement, it is part of a legal agreement, it exists subservient to a legal agreement, or there is not a legal agreement at all. This research, and the smart contract framework it has created, already generates social impact as this framework has been included in the European Law Institute's Principles of Blockchain Technology and Smart Contracts.[1165] This research will help practising lawyers apply the applicable law to these new technologies.

Additionally, this dissertation provides an overview of lacunas that implementation of the technology creates in French, German, Dutch, and English contract law. Thereby it creates an overview for policy makers attempting to future-proof their systems of contract law. While, generally speaking, the systems of law are well-prepared, some lacunas might nonetheless exist. Legal systems, for example, that focus on the 'true internal intention' of contractual parties will struggle with legally binding smart contracts, systems in which ownership passes upon agreement will struggle with consequences of immutable smart contracts, immutable smart contracts affected by mistake are difficult to undo if a legal system wants to do so with retroactive effect, and the pseudonymous nature of a network means that some connecting factors used in the private international law acquis are unknown and unknowable. With the European Commission pushing for interoperability, and markets experimenting with legally binding smart contracts, legislators and policy-makers might attempt to fill those gaps. This research outlines those gaps and gives suggestions on how these might be filled

Lastly, it is not just the gaps and lacunas that are relevant: there are large areas of the law that are well-prepared for a 'smart contract'-reality. This research shows that the law fits relatively well with this new technology. It provides not only an overview of the gaps, but also an overview of the areas that fit well. This overview is aimed at commercial practice. It shows the manner in which the technology has to be implemented, which design-choices have to be made, and what aspects of the law must be taken into account. This research takes a practical

[1165] Principle 2, ELI Principles on Blockchain Technology, Smart Contracts and Consumer Protection (Vienna, 2022).

approach and provides guidance for programmers, start-ups, geeks and those striving to have their work recognized by the law, provide legal effect, and provide legal protection to end-users.