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The Future of Company Law: Decentralized Autonomous Organization (DAO)

**The Existing Legal Wrappers and A New Form
Recommendation**

*A Comparative Perspective from Civil Law and
Common Law*



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Geçmiş ve gelecek tüm çalışmalarımın eşsiz destekçileri

Annem Nurhan CANTÜRK

ve

Babam Mümtaz CANTÜRK'e

To the unique supporters of my all previous and future works,

My mother Nurhan CANTÜRK

and

My father Mümtaz CANTÜRK

Den einzigartigen Unterstützern all meiner bisherigen

und zukünftigen Werke,

meiner Mutter Nurhan CANTÜRK,

und

meinem Vater Mümtaz CANTÜRK

FOREWORD

With great pleasure and pride, I introduce this remarkable dissertation titled "The Future of Company Law: Decentralized Autonomous Organization (DAO) – The Existing Legal Wrappers and A New Form Recommendation" by Barış C. Cantürk. This dissertation represents an impressive and comprehensive academic achievement that addresses very dynamic, practically important and complex challenges of contemporary company law — the legal implications and regulatory framework of Decentralized Autonomous Organizations (DAOs).

In an era where blockchain technology and decentralized systems continue to transform substantial parts of the global economic landscape, the need for legal scholarship that bridges traditional legal concepts with emerging digital innovations has never been greater. The dissertation of Mr. Cantürk is a pioneering effort in that regard, offering a thorough comparative analysis from both civil and common law perspectives while also presenting forward-thinking regulatory proposals.

Against this background, Barış C. Cantürk's work demonstrates exceptional academic rigor, clarity of thought, and innovative reasoning. His meticulous research not only identifies the gaps and challenges in existing legal frameworks but also proposes a comprehensive new code tailored to the unique nature of DAOs. The interdisciplinary nature of this study, which blends legal theory with cutting-edge technology, showcases the author's ability to navigate complex and evolving legal landscapes.

I am confident that this work will significantly contribute to both academia and the practice of law, serving as a valuable resource for scholars, practitioners, and policymakers alike. It is my honor to have supervised this dissertation and to present it as a noteworthy addition to the growing body of literature on blockchain and company law.

Munich, March 2025

Prof. Dr. Boris P. Paal, MJur (Oxford)

2nd PREFACE

This preface has been prepared for the book's publication in Türkiye. Although not incorporated into this preface to avoid repetition, all acknowledgements in the first preface remain valid.

This book was first published by *Nomos*, one of the world's leading legal publishing houses, and made internationally available from Germany. However, as refer to difficulties of access to the book from Türkiye under current circumstances, as well as the academic demand, I decided to publish it also in Türkiye. To serve this purpose, *Filiz Kitabevi*, one of Türkiye's renowned legal publishing houses, has undertaken the publication and distribution of this edition. I would like to extend my gratitude to Mr. Dane and to all the dedicated staff of *Filiz Kitabevi* for their collaboration.

It is essential to emphasize the following explanations regarding this edition published for the abovementioned purpose. This dissertation was submitted to the Leipzig University, Faculty of Law in August 2024. So, it had been prepared in accordance with the legislation in force as of August 2024. Certain regulatory changes may have occurred either by the time of the defence in February 2025 or thereafter. However, Leipzig University PhD Regulation does not allow for the incorporation of any *-non-grammatical or similar-* changes in the book edition of the dissertation. For this reason, in the *Nomos* edition, such matters were only indicated, where appropriate, by cautionary footnotes. The present edition by *Filiz Kitabevi* keeps the same text as the said edition by *Nomos* in July 2025. An update is planned *-should there be sufficient demand-* for a future Turkish edition of the book.

Additionally, I would like to express my sincere gratitude to my esteemed *Doktorvater* Prof. Dr. Boris P. Paal, M.Jur. (Oxford) both for his support and for permitting me to include the Foreword in this edition.

Finally, I believe it is by no means redundant to reiterate, regardless of the number of prefaces, the following acknowledgment from the first preface:

" (...) a dissertation means "dedication" and "resilience" in addition to systematic and hard work, a truth I have come to realize firsthand. However, this is true not only for a Doktorand but also for their family, especially if s/he is blessed with a family as supportive as mine. Although we were (...) physically separated, I always felt their presence by my side. To my precious mother and father, whom I would

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choose deliberately as my parents if I had a choice, I extend my heartfelt gratitude, appreciation, and thanks. As a humble expression of my gratitude, this dissertation is dedicated to them, from their child who strives to be worthy of these two wonderful people.”

Gaziosmanpasa, Istanbul, Türkiye / September 2025

Dr.iur. Barış C. Cantürk

1st PREFACE

This dissertation, as refer to Picasso, is the result of not just a few years but a long educational journey. However, writing a thesis far from the family and loved ones entails numerous emotional challenges, including a lot of longing, even it has some advantages in terms of concentration. At the very least, it means being physically separated during birthdays, holidays, Mother's Days, Father's Days and countless good and bad moments that could not be shared.

Nevertheless, firstly and most importantly, I extend my deepest gratitude to Prof. Dr. Boris P. PAAL, MJur (Oxford), who has truly been a *Doktorvater* to me from the very beginning of this dissertation to the present. Contrary to general practices worldwide, and despite his extremely busy schedule, he graciously met with me weekly to monitor the progress of the dissertation. He provided opportunities for collaboration on joint articles, symposium proceedings, and legal opinions, which is a unique privilege. Prof. PAAL has supported me academically, provided guidance, and been a constant source of emotional support during times of stress, confusion, and chaos. Although my gratitude to him is too immense to be confined to words, it can be summarized as follows: I am profoundly fortunate and deeply thankful that he included me in the broad *PAAL Family* and truly became my *Doktorvater*.

I also would like to thank all my teachers, professors and colleagues who have supported me throughout my educational journey and career. However, I have to separately thank for this doctorate program period for Prof. Dr. S. Anlam ALTAY and Doç. Dr. Zafer İÇER.

I express my heartfelt gratitude to the University of Leipzig, the Faculty of Law, the Law Library and the Campus Library for providing a conducive working environment and generous access to resources. Furthermore, I owe a special mention to Mr. REUTTER from Studentenwerk Leipzig and Dr. FABRICIUS from the Welcome Center of the University of Leipzig for offering a genuinely comfortable living environment and assisting with bureaucratic processes. I also thank the Educational Office of the Embassy of the Republic of Türkiye in Berlin and their staff for their positive attitudes, particularly during bureaucratic processes.

Throughout almost all of my educational life, I have been supported by various awards and scholarships from various institutions at many different levels, such as study, research and language courses, based on academic success. Since this

dissertation is a result of such a long journey, I feel that I have to extend my gratitude to them once again. In this regard, I thank the Republic of Türkiye Prime Ministry, the Scientific and Technological Research Council of Türkiye and the German Academic Exchange Service. Additionally, I would like to express my profound gratitude to the Republic of Türkiye, for the precious support under the YLSY Study Abroad Programme. I hope that this dissertation and my future works will contribute significantly to both humanity and my beautiful country.

I also have to acknowledge two precious people whose paths crossed with mine as a result of my research and teaching assistant career, and who added immense value to my life through their friendship. I am grateful to my esteemed professor, Dr. iur. Gökmen GÜNDOĞDU for his unwavering support, guidance and friendship. As for my dear “brother” Dr. Bertaç Ş. ŞAHİN, I may only say this to present my feelings: I think referring to him as my only “brother” is sufficient to convey what he means to me.

Lastly, and most importantly, as Prof. ALTAY noted, a dissertation means “dedication” and “resilience” in addition to systematic and hard work, a truth I have come to realize firsthand. However, this is true not only for a *Doktorand* but also for their family, especially if s/he is blessed with a family as supportive as mine. Although, we were and are physically separated, I always felt their presence by my side. To my precious mother and father, whom I would choose deliberately as my parents if I had a choice, I extend my heartfelt gratitude, appreciation, and thanks. As a humble expression of my gratitude, this dissertation is dedicated to them, from their child who strives to be worthy of these two wonderful people.

Leipzig, Germany / August 2024

Bariş C. CANTÜRK

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ABBREVIATIONS

aF	:	alte Fassung (previous version)
AG	:	Aktiengesellschaft (Joint-Stock Company)
AI	:	Artificial Intelligence
AJP	:	Aktuelle Juristische Praxis
AktG	:	Aktiengesetz (German Stock Corporation Act)
Amendment Law	:	the Law Amending the Turkish Capital Markets Law
AML	:	Anti-Money Laundering
AO	:	Anonim Ortaklık (Joint Stock Company)
AoA	:	Articles of Association
AoO	:	Articles of Organization
Art.	:	Artikel (article)
Aufl.	:	Auflage (edition)
BaFin	:	Bundesanstalt für Finanzdienstleistungsaufsicht (German Federal Financial Supervisory Authority)
BBLLC	:	Blockchain-based LLC
BGB	:	Bürgerliches Gesetzbuch (German Civil Code)
BGH	:	Bundesgerichtshof (German Federal Court of Justice)
BGHZ	:	Entscheidungen des Bundesgerichtshofs in Zivilsachen (Decisions of the Federal Court of Justice in civil law)
BKR	:	Zeitschrift für Bank- und Kapitalmarktrecht
BoD	:	Board of Directors
Bs.	:	bası (edition)

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BTC	:	Bitcoin
Central Bank	:	The Central Bank of the Republic of Türkiye
Cf.	:	confer (compare)
CFT	:	Combating the Financing of Terrorism
CFTC	:	Commodity Futures Trading Commission
CMB	:	Capital Markets Board of Türkiye
COALA	:	The Coalition of Automated Legal Applications
Corp	:	Corporation
DAC	:	Decentralized Autonomous Corporation
DAO	:	Decentralized Autonomous Organization
DApps	:	Decentralized Applications
DLT	:	Distributed Ledger Technology
DLT Pilot Regime	:	Pilot Regime for market infrastructures based on Distributed Ledger Technology and amending Regulation
DOs	:	Decentralized Organizations
e.g.	:	exempli gratia (for example)
EBI	:	European Banking Institute
ECFR	:	European Company and Financial Law Review
Ed.	:	Editor
Eds.	:	Editors
Edt.	:	edition
eGbR	:	eingetragenen GbR (registered GbR)
ESMA	:	European Securities and Markets Authority
et al.	:	et alia (and others)
et seq.	:	et sequentia (and the following)
ETH	:	Ether
EU	:	European Union

EUR	:	Euro
EuZ	:	Zeitschrift für Europarecht
eWpG	:	Gesetz zur Einführung elektronischer Wertpapiere (German Electronic Securities Act)
FATF	:	Financial Action Task Force
FCA	:	Financial Conduct Authority
FINMA	:	Swiss Financial Market Supervisory Authority
GA	:	General Assembly
GbR	:	Gesellschaft bürgerlichen Rechts (Ordinary Partnership)
GDPR	:	General Data Protection Regulation
GmbH	:	Gesellschaft mit beschränkter Haftung (Limited Company)
GmbHG	:	Gesetz betreffend die Gesellschaften mit beschränkter Haftung (German Limited Company Act)
GP	:	General Partnership
GUI	:	Graphical User Interface
HGB	:	Handelsgesetzbuch (German Commercial Code)
Hrsg.	:	Herausgeber (Editor)
i.e.	:	id est (that is)
ICO	:	Initial Coin Offering
ID	:	Identity Document
IPO	:	Initial Public Offering
IT	:	Information Technology
JSC	:	Joint Stock Company (AO and AG)
JZ	:	Juristen Zeitung
KAGB	:	Kapitalanlagegesetzbuch (German Capital Investment Law)
KG	:	Kommanditgesellschaft

KryptoWTransferV	:	Kryptowertetransferverordnung (German Crypto-Assets Transfer Regulation)
KWG	:	Kreditwesengesetz (German Banking Act)
KYC	:	Know Your Client
LAO	:	Limited Liability Autonomous Organization
LLC	:	Limited Liability Company
LLP	:	Limited Liability Partnership
LLPA	:	Limited Liability Partnership Act 2000
LP	:	Limited Partnership
LPA	:	Limited Partnership Act 1907
Ltd	:	Limited Şirket (Limited Company)
LTD	:	Limited Company (Ltd and GmbH)
MB	:	Management Board
MiCA	:	Markets in Crypto-assets and amending Regulations
MiFID II	:	Markets in Financial Instruments and amending Directive
MiFIR	:	Markets in Financial Instruments and amending Regulation
Model Law	:	Model Law for Decentralized Autonomous Organizations
MoPeG	:	Das Gesetz zur Modernisierung des Personengesellschaftsrechts (the Modernization of the Partnership Law)
NDCal	:	US District Court for the Northern District of California
nF	:	neue Fassung (new version)
NFT	:	Non-Fungible Tokens
NZG	:	Neue Zeitschrift für Gesellschaftsrecht
OECD	:	Organisation for Economic Co-operation and Development
ohG	:	offene Handelsgesellschaft

OP	:	Ordinary Partnership
OR	:	Obligationenrecht (Swiss Code of Obligations)
PoS	:	Proof of Stake
PoW	:	Proof of Work
pr.	:	paragraph
PrivLC	:	Private Limited Company
PubLC	:	Public Limited Company
Rn	:	Randnummer (paragraph)
Rz	:	Ranziffer (paragraph)
SB	:	Supervisory Board
SDCal	:	US District Court for the Southern District of California
SDFla	:	US District Court for the Southern District of Florida
SDNY	:	US District Court for the Southern District of New York
SE	:	Societas Europe
SEC	:	Securities and Exchange Commission
Securities Act	:	Securities Act of 1933
Securities Exchange Act	:	Securities Exchange Act of 1934
SoD	:	the Statutes of the DAO
TCC	:	Turkish Commercial Code numbered 6102
TCM	:	Token Container Model
TCO	:	Turkish Code of Obligations numbered 6098
TL	:	Turkish Lira
TMK	:	Turkish Civil Code numbered 4721
TVTGT	:	the Law on Tokens and Trusted Technology Service Providers
Tx	:	transaction
UA	:	Unincorporated Association

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UK	:	the United Kingdom
UKCA	:	UK Companies Act 2006
ULPA	:	Uniform Limited Partnership Act
UNCITRAL	:	United Nations Commission on International Trade Law
UNPA	:	Unincorporated Non-Profit Association
UPA	:	Uniform Partnership Act
US	:	the United States
v.	:	versus
vs.	:	versus
WEF	:	World Economic Forum
WpHG	:	Wertpapierhandelsgesetz (Securities Trading Law)
WpIG	:	Wertpapierinstitutsgesetz (Investment Firm Act)
WpPG	:	Wertpapierprospektgesetz (Securities Prospectus Law)
XRP	:	Ripple
ZAiT	:	Zahlungsdiensteaufsichtliche Anforderungen an die IT (Circular on Supervisory Requirements for IT at Payment Services Providers)
ZdiW	:	Zeitschrift für das Recht der digitalen Wirtschaft
ZGR	:	Zeitschrift für Unternehmens- und Gesellschaftsrecht
ZuFinG	:	Zukunftsfinanzierungsgesetz (Future Financing Act)

The Future of Company Law: Decentralized Autonomous Organization (DAO)

The Existing Legal Wrappers and A New Form Recommendation

A Comparative Perspective from Civil Law and Common Law

ABSTRACT

The proliferation of blockchain-related technologies influence all sectors and daily human life. All of these developments, and their integration into human life, naturally raised questions, issues, and debates. As a result, the legal field has also been affected. Hence, this dissertation aims to analyse one of the main issues of both legal and technology field, namely Decentralized Autonomous Organization (“DAO”). More precisely, in this work, the relationship between DAO and traditional company law across various jurisdictions will be examined.

For this purpose, this dissertation is divided into three chapters. In the first chapter, general introduction to blockchain will be provided, via examining the basics of blockchain, legal developments on this era and legal nature of the fundamental notions related to it. Subsequently, the second chapter will meticulously address the application of existing company law regimes of Civil and Common Law to DAOs, in addition to new legal wrappers. Finally, the last chapter introduces the New Code which aims to propose compact, comprehensive, and unique regulatory recommendation, which addresses the issues underscored throughout this dissertation.

ZUSAMMENFASSUNG

Die Verbreitung von Blockchain-Technologien beeinflusst alle Sektoren und das tägliche Leben der Menschen. All diese Entwicklungen und ihre Integration in den Alltag haben natürlich Fragen, Probleme und Diskussionen aufgeworfen. Infolgedessen wurde auch das Rechtsgebiet beeinflusst. Diese Dissertation hat daher das Ziel, eines der Hauptthemen sowohl des Rechts- als auch des Technologiebereichs zu analysieren, nämlich die dezentrale autonome Organisation (“DAO”). Genauer gesagt wird in dieser Arbeit die Beziehung zwischen DAO und dem traditionellen Gesellschaftsrecht in verschiedenen Rechtsordnungen untersucht.

Zu diesem Zweck ist diese Dissertation in drei Kapitel unterteilt. Im ersten Kapitel wird eine allgemeine Einführung in die Blockchain gegeben, indem die Grundlagen der Blockchain, rechtliche Entwicklungen in diesem Bereich und die Rechtsnatur der damit verbundenen grundlegenden Begriffe untersucht werden. Im zweiten Kapitel wird sodann die Anwendung bestehender Gesellschaftsrechtsregime des Zivil- und Common Law auf DAOs sowie neue rechtliche Rahmenbedingungen eingehend behandelt. Schließlich wird im letzten Kapitel der Neue Code vorgestellt, der kompakte, umfassende und einzigartige regulatorische Empfehlungen vorschlägt, die die in dieser Dissertation hervorgehobenen Probleme adressieren.